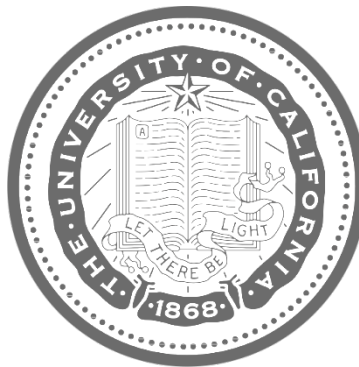


Taxpayer Subsidies for US Films with Tobacco Imagery

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Executive Summary

Forty-one US states and several countries compete for big-budget Hollywood film projects by offering valuable public subsidies. In 2008, states offered an estimated total of \$1.3 billion to motion picture producers. On average, individual states now cover 24 percent of production costs for commercial feature films.

Because an estimated 1.1 million current adolescent smokers in the US were recruited to smoke by tobacco imagery in films, about 350,000 of whom will ultimately die from tobacco-induced diseases, this report estimates the size of recent public subsidies for youth-rated (G/PG/PG-13) films with tobacco imagery. It explores making tobacco imagery a determinant factor in eligibility for public film subsidies so that these awards no longer work in contradiction to public health.

A survey of the 147 films released to US theaters in 2008, each among the top ten box office earners in at least one week, finds two-thirds of US-developed, youth-rated film projects with tobacco imagery were filmed in the US, a rate typical of all films released by US studios over the past decade. Filmed in a dozen states now offering subsidies, these 35 movies contributed 71 percent of the 11.4 billion tobacco impressions delivered to US theater audiences by youth-rated films in 2008.

Based on this film sample and on film industry production cost data, states awarded an estimated \$830 million in public subsidies to films with tobacco, including \$500 million to youth-rated films with tobacco. For comparison, the states budgeted \$719 million for all tobacco control in 2009. More than half of states subsidizing films (22/41), including New York and California, spend or earmark more money for commercial film subsidies than for anti-tobacco programs. An estimated 62 percent (\$830 million/\$1.3 billion) of state film subsidies go to smoking films.

To qualify for a subsidy, film projects must meet detailed eligibility standards. Eligibility rules should be modernized to add two criteria congruent with widely endorsed policies to reduce the film industry's role in promoting youth smoking:

- Youth-rated (G/PG/PG-13) feature films with any tobacco imagery or reference will not qualify for subsidy unless, in the judgment of the program administrator, the tobacco depiction accurately reflects the dangers and consequences of tobacco use or is necessary to show the smoking of an actual person or real historical figure, as in a documentary or biographical drama.
- Regardless of rating, producers of films with any tobacco imagery or reference must warrant in a legally binding manner that no one associated with the production has received any consideration or entered into any agreement in regard to the tobacco depiction in that production.

For accountability and transparency, subsidy programs should be required to make public reports on tobacco status, eligibility determinations and subsidy awards for individual film projects.

Public subsidies for motion picture production

Since 1998, when Canadian subsidies began to lure film and TV production from California and New York to Vancouver and Toronto, America's motion picture industry has taken advantage of growing competition among states and nations offering ever-larger production "incentives." Studios now balance offers from North America and Europe. As a result, for the last decade, about one-third of feature film projects developed by US studios are shot outside the United States.¹

In recent years, states have also started bidding for film production. By 2009, 41 states, the District of Columbia and Puerto Rico offered a total of \$1.3 billion in tax credits and cash rebates on film production spending. Fifty-eight percent (24/41) of these states launched a new subsidy program or boosted the subsidy awards of an older program since 2008 (Appendix A).

Basic state film subsidies range from 9-10 percent of production spending (Montana, Colorado) to as high as 40-50 percent (Michigan, Iowa), with a current national average of 24 percent.² Program details vary considerably from state-to-state, but a project is typically eligible for subsidy if it spends at least \$250,000 and most of its filming days in a particular state.

Most states subject their subsidy programs to an annual cap or budget appropriation, from a low of \$200,000 in Virginia to a high of \$350 million (for FY 2009-10) in New York. Some states, including Connecticut, Louisiana and Illinois, place no limit on program spending. "Transferable" tax credits are common; out-of-state producers can sell them on the open market to state residents and companies looking to reduce their state tax liabilities.³

Legislation requires most film subsidy programs to self-report their economic impact or submit to periodic audits, but methodologies differ. Policy analysts and policymakers debate whether film production subsidies are of net benefit to individual states or the best use of economic development resources.⁴

¹ Wright, Claire. Hollywood's disappearing act: International trade remedies to bring Hollywood home. 15 September 2005. Berkeley Electronic Press Legal Series. Working Paper 782. Consulted at law.bepress.com/expresso/eps/782 on 5 August 2009.

² Qualifying production expenses include equipment, locations, transportation, and wages. Film distribution and advertising costs do not qualify. Many states make tax credits transferable; that is, production companies can sell their tax credits to corporations that want to reduce their state tax liabilities. Besides earning credits, productions are exempt from 4-8% state sales tax.

³ Louisiana offers to cash out its 30% transferable tax credits for 85¢ on the dollar. See: Egan, Jack. "Bayou state's film slate booms." *Variety* (10 September 2009). Consulted at www.variety.com/article/VR1118008412.html?categoryid=3722&cs=1&nid=2567 on 10 September 2009.

⁴ See, for example:

Albrecht, Greg (2005). Film and video tax incentives: Estimated economic and fiscal impacts. Louisiana Legislative Fiscal Office (March 2005). Consulted at lfo.louisiana.gov/files/revenue/FilmVideoIncentives.pdf on 10 September 2009.

Film and video production employment nationwide grew 12 percent from 1999 to 2008, but craft and service jobs that state incentives aim to attract fell 5 percent and average real wages for these skilled workers slid 28 percent.⁵ From 2001 to 2008, while New York raised its subsidy from 10 to 30 percent, the state lost 6,000 film production jobs. Over the same period Connecticut, Louisiana and New Mexico, three aggressive subsidy states, together gained more than 5,400 film jobs.⁶ Such data suggest the possibility that states are merely competing against each other for shares in a low-growth sector. Meanwhile, their public treasuries have become an important source of financing for the film industry.

Public subsidies and kids' movies with tobacco

How much public subsidy now goes to producers of youth-rated movies with smoking? To estimate the answer, we surveyed the 147 top-grossing films released to US theaters in 2008 (Appendix B). Overall, 59 percent included tobacco imagery:

- 18 percent (5/28) of films rated G/PG,
- 65 percent (50/77) of PG-13 films, and
- 76 percent (32/42) of R-rated films.

Where films were made

Of all the films in the sample, 37 percent (55/147) were youth-rated films that featured tobacco imagery. Reflecting longer-term trends in the global dispersal of

Cobb, Kathy (2006). Roll the credits ... and the tax incentives. Federal Reserve Bank of Minneapolis. Consulted at www.minneapolisfed.org/publications_papers/pub_display.cfm?id=1309 on 10 September 2009.

Saas, D.R. (2006). Hollywood east? Film tax credits in New England. New England Public Policy Center at the Federal Reserve Bank of Boston. Policy Brief 06-3. Consulted at www.bos.frb.org/economic/neppc/briefs/2006/briefs063.pdf on 10 September 2009.

Cieply, Michael (2008). States' film production incentives cause jitters. New York Times (12 October 2008). Consulted at www.nytimes.com/2008/10/12/us/12incentives.html on 10 September 2009.

Popp, A.V. and Peach, J. (2008) The film industry in New Mexico and the provision of tax incentives: A report submitted to the Legislative Finance Committee of the State of New Mexico (26 August 2008). Consulted at www.nmlegis.gov/lcs/lfc/lfcdocs/film%20credit%20study%20TP&JP_08.pdf on 10 September 2009.

Van Den Berg, David (2009). Silver screen subsidies: Is hoping to land the next Hollywood hit a sound economic development strategy? Federal Reserve Bank of Richmond. Region in Focus (Spring 2009). Consulted at www.richmondfed.org/publications/research/region_focus/2009/spring/pdf/feature2.pdf on 10 September 2009.

⁵ US Bureau of Labor Statistics. State and Area Employment, Hours, and Earnings from the Current Employment Statistics Survey. Motion picture and video production. Series IDs CEU5051211001, -006, and -030. Extracted at data.bls.gov/cgi-bin/dsrv?ce on 17 September 2009. Real wages (2008) calculated at data.bls.gov/cgi-bin/cpicalc.pl.

⁶ US Bureau of Labor Statistics. Quarterly Census of Employment and Wages: Location quotient calculator for NAICS 51211: motion picture and video production. Calculated at data.bls.gov/LOCATION_QUOTIENT/servlet/lqc.ControllerServlet on 10 September 2009.

US film production, 64 percent (35/55) of these US-developed, youth-rated films with tobacco were made in the US: California, Connecticut, Georgia, Hawaii, Illinois, Louisiana, Maryland, Massachusetts, New Mexico, New York and North Carolina (Table 1). All except California provided film subsidies in 2008. (California activated its own \$100 million per year tax credit program in 2009.)

Table 1 US-developed, youth-rated films with tobacco, by production location, 2008			
Location	PG	PG-13	Percent
California		9	16%
Other States	2	24	47%
Subtotal US	2	33	64%
UK and Europe	2	10	22%
Canada		4	7%
Other	1	3	7%
Subtotal Non-US	3	17	36%
Total	5	50	100%
Data in Appendix C			

Shares of tobacco incidents and impressions

The 64 percent of these films shot in the US accounted for 70 percent (795/1,120) of all youth-rated tobacco *incidents* in the 2008 film sample. They account for 71 percent (8.1 billion/11.4 billion) of all the tobacco impressions⁷ that youth-rated movies delivered to theater audiences of all ages in 2008 (Appendix C).

Tobacco incidents in youth-rated films, by location

Of the seven youth-rated films in the sample with the most tobacco incidents (>50 tobacco incidents each), five were filmed in the US: Louisiana (*W.* and *The Curious Case of Benjamin Button*), Illinois (*Nothing Like the Holidays*), New York (*Definitely, Maybe*) and North Carolina (*Leatherheads*). Two were filmed in Europe: Germany (*Valkyrie*) and Spain (*Vicky Cristina Barcelona*).

What state subsidies cover

In 2008, no top-grossing film was produced in a non-subsidy state, except California. With California launching its own subsidy program, virtually any feature film with a production budget exceeding \$250,000 shot in the United States is now eligible for a tax credit or rebate. The state subsidies offer to cover, on average, 24

⁷ Tobacco impressions = tobacco incidents per film X paid admissions per film. Admissions are calculated as the film's domestic box office gross (www.imdbpro.com) divided by the average ticket price for the year (www.nato-online.org).

percent of each project's production expenses.⁸ As states compete, the percentage-size of subsidies has ratcheted upward and programs have been revised to cover more production costs: the trend is toward including all so-called "negative costs" incurred in-state (i.e., the costs to produce a master of the finished film, excluding distribution and marketing costs) in calculating public subsidies.

Subsidies for youth-rated films with smoking

Aside from rare public disclosures by producers themselves, state film commissions and revenue agencies treat production companies' fiscal information as confidential and do not publicly report how much individual productions are awarded. (Louisiana reportedly granted *The Curious Case of Benjamin Button*, a PG-13 Warner Bros. film with smoking, \$27 million.⁹) Absent hard figures for every youth-rated film with tobacco, the total public subsidy devoted to these films must be estimated from the latest available production cost data for wide-release films from major studios and their affiliates.

Assuming the average *production* cost for the large-budget films most likely to succeed at the box office is \$60 million¹⁰ and (based on 2008 film data) 35 of these films each year are youth-rated films with smoking, eligible for an average of 24 percent in state tax credits or rebates, states are estimated to award about \$500 million a year in subsidies for youth-rated movies with smoking (Appendix C).

Subsidies to R-rated films with smoking

It can also be estimated that states spent \$330 million in subsidies on US-produced, R-rated films with smoking, for a total of \$830 million in domestic subsidies for smoking films (about 60 percent of the \$1.3 billion in film subsidies available domestically). In 2008, R-rated films with smoking, made in the US, delivered another 4 billion tobacco impressions to US theater audiences (Appendix D). The states' subsidies for smoking films of all ratings surpasses the \$719 million states appropriated for tobacco prevention and control programs in 2009.¹¹

Subsidies for US-developed films made outside the US

Calculated on the same production-cost basis, subsidies granted by Canada, the UK, and Europe provide another \$250 million to US-developed, youth-rated films

⁸ Calculated from the tax credit or rebate percentages specified in all available state incentive program descriptions. See Appendix A.

⁹ National Public Radio (3 December 2008) "Louisiana seduces filmmakers with tax breaks." Consulted at www.npr.org/templates/story/story.php?storyId=97750550&ps=rs on 6 August 2009.

¹⁰ Using the most recent published data, we averaged the 2007 negative cost of MPAA member (\$71 million) and MPAA subsidiary/affiliate releases (\$49.2 million). MPAA, 2007.

¹¹ State expenditures from Campaign for Tobacco-Free Kids (2009). FY 2009 rankings of funding for state tobacco prevention programs. Consulted at www.tobaccofreekids.org/reports/settlements/2009/staterankings.pdf on 6 August 2009.

with smoking, for a total public subsidy of about \$750 million to PG and PG-13 films with smoking, reaching top box office status in the US and released worldwide.

Impact on states' adolescent populations

About 44% of adolescent smoking initiation has been attributed to exposure to onscreen smoking.¹² Applying this attributable risk fraction to the population of adolescent smokers (12-17), it is estimated that more than 1.1 million current adolescent smokers were recruited to smoke by their exposure to films with tobacco imagery. Of these adolescent smokers, about 350,000 will ultimately die from tobacco-induced diseases. (See estimated impact by state in Appendix E.)

Policy implications

About half of youth smoking initiation in the US is attributed to exposure to movies with smoking.^{13,14} Cumulative exposure to all sorts of tobacco depictions in films predicts adolescent smoking initiation. Depictions of smoking by both “good guys” and “bad guys” recruit new teen smokers.¹⁵ State tobacco control programs have allocated substantial resources to addressing this channel of recruitment. Since 2002, public health experts have pressed major studio distributors and their parent companies to rate future films with smoking “R,” which would give producers and studios a market incentive to keep smoking out of future youth-rated films, and to adopt other measures to reduce health harm, such as certifying that productions are no longer taking payoffs from the tobacco industry.¹⁶

In more than half of states with film subsidy programs (22/41), the film subsidy program cap, appropriation or 2008 expenditure exceeded the state's 2009 appropriation for tobacco prevention (Appendix A). For example, estimated on a production-cost basis, New York State's 30 percent film subsidies for four average films from major studios or their affiliates will cost more than the state's tobacco control program (\$72 million vs. \$68 million). California's new 20 percent tax credit, authorized at \$100 million per year, exceeds its \$78 million tobacco control budget

¹² Revised 2/15/10. Attributable risk is 0.44 (95% CI 0.34-0.58). Millett C, Glantz SA (2010) Assigning an 18 rating to movies with tobacco imagery is essential to reduce youth smoking. Thorax (in press). This new estimate uses information from additional studies to update the previous attributable risk of 0.52 (95% CI 0.30-0.67) from Dalton MA, Sargent JD, Beach ML, Titus-Ernstoff L, Gibson JJ, Ahrens MB, Tickle JJ, Heatherton TF (2003) Effect of Viewing Smoking in Movies on Adolescent Smoking Initiation: A Cohort Study. The Lancet 362(9380):281-285. With more data, the margin of error has been reduced from ± 0.18 to ± 0.12 .

¹³ Dalton, Sargent et al. (2003).

¹⁴ Glantz, S.A. Smoking in movies: A major problem and a real solution. The Lancet 2003;362(9380):281-285. Available at www.smokefreemovies.ucsf.edu/pdf/Glantz-Lancet-comm.pdf.

¹⁵ Tanski, S., Stoolmiller, M., Dal Cin, S., Worth, K. Movie character smoking and adolescent smoking: Who matters more, good guys or bad guys? Pediatrics 2009;124:135-143.

¹⁶ World Health Organization (2009). Smoke-free movies: From evidence to action. Consulted at www.who.int/tobacco/smoke_free_movies/en/ on 5 August 2009.

for 2009. At \$90 million in awards, Connecticut's film-video subsidy swamps that state's tobacco control funding by a ratio of more than ten to one. Georgia's 2008 film subsidies surpass 2009 tobacco control spending by sixteen to one; in Illinois, the ratio is four to one.

States subsidize most tobacco impressions on screen

The survey of 2008 films shows that states subsidize the tobacco impressions most likely to reach and harm young people. That year, 68 percent (11.4 billion/ 16.8 billion) of all tobacco impressions delivered to US theater audiences came from youth-rated films. Films subsidized by a dozen US states delivered 71 percent (8.1 billion/11.4 billion) of these youth-rated impressions, the balance coming from US-developed films shot in other countries.

Nearly half (8.1 billion/16.8 billion) of all tobacco impressions delivered to US theater audiences in 2008 by films of all ratings came from *youth-rated* films made in the US and eligible for state subsidies. Seventy-two percent (12.1 billion/ 16.8 billion) of all tobacco impressions from both *youth-rated* and *R-rated* films were delivered by films shot in states now offering production subsidies (Table 2).

Table 2 | Tobacco impressions delivered by US-developed films, by production location and rating, 2008 (millions)

Location	Youth-Rated (G/PG/PG-13)	R-Rated	Total in Location	% in Location
United States	8,080	3,984	12,064	72%
Outside US	3,332	1,420	4,752	28%
Total in Rating	11,412	5,404	16,816	100%
% in Rating	68%	32%	100%	

Data in Appendices C and D

Policies to prevent public subsidy of tobacco imagery in youth-rated films

Film producers are by no means automatically entitled to public subsidies. They must apply for them and meet a state's particular requirements, which are often quite stringently designed to minimize abuse of these programs. Eligibility procedures in different states require applicants to submit shooting scripts, production budgets, and day-by-day production schedules for state review before shooting begins; prove the residency of crew members; contribute to local educational and training programs; and supply the state with certified accounts after production. States may require producers and directors to be interviewed, in person, by program staff before an eligibility ruling. Many states require an acknowledgment in the film's final credits; some specify precise wording or size.

Most states disqualify certain kinds of media productions from subsidies, such as: news, weather, and sports programs; reality shows and daytime TV; political

commercials and digital gambling projects. All except Louisiana and Puerto Rico specifically disqualify obscene material, the definition referring either to a state statute or to the federal age-recording requirements for performers in sexually explicit material (18 USC § 2257).

States often allow for administrative discretion in the final decision about which films to subsidize, based on general economic benefits to the state or, as in Texas and Utah, how the film portrays the state's citizens. In Georgia, "NC-17¹⁷ or unrated movies may not qualify at the sole discretion of the [Georgia Film Office]."¹⁸ Also, projects "determined not to have positive marketing value for the State and which are deemed not beneficial to the State of Georgia's branding initiatives and goals" may be denied use of the "Georgia Entertainment Promotion" logo and the additional 10 percent tax credit that goes along with it. Florida offers a bonus 2 percent tax credit to "family friendly" films, as determined by "review of the script and an interview with the director." Florida states:

Family-friendly productions are those that have cross-generational appeal; would be considered suitable for viewing by children age 5 and older; are appropriate in theme, content, and language for a broad family audience; embody a responsible resolution of issues; and do not exhibit any act of smoking, sex, nudity, or vulgar or profane language.¹⁹

Three policy recommendations for state subsidy programs

State film production subsidy rules, regulations or statutes should be modernized to reflect the scientific evidence of substantial and widespread harm to young people from exposure to films with tobacco imagery and the documentary evidence of decades of collusion between the US film industry and the tobacco industry to promote smoking and tobacco brands through film.^{20,21} In line with more extensive policy proposals endorsed by major national and international health organizations and agencies, the objectives of policy recommendations specific to film subsidy programs are to:

¹⁷ "NC-17" is a rating, rarely awarded by the Motion Picture Association of America (MPAA), prohibiting admission to anyone 17 or younger. The more common "R" rating admits moviegoers 17 or younger "accompanied by a parent or adult guardian." For an explication of MPAA ratings, see mpaa.org/FlmRat_Ratings.asp.

¹⁸ Georgia Entertainment Industry Investment Act, Chapter 159-1-1.03 (1)(b)(xiii). Consulted at www.georgia.org/SiteCollectionDocuments/Industries/FMDE/6-2-09%20%20Rules%20and%20Regs%20for%20Public%20Comment_Final.pdf on 7 August 2009.

¹⁹ Florida Entertainment Industry Financial Incentive Program, Title XIX § 288.1254(4)(f). Consulted at www.flsenate.gov/statutes/ on 7 August 2009.

²⁰ Lum, K.L., Polansky, J.R., Jackler, R.K., Glantz, S.A. Signed, Sealed and Delivered: Big Tobacco in Hollywood, 1927-1951. Tobacco Control 2008;17:313-323. Available at www.smokefreemovies.ucsf.edu/pdf/SignedSealed.pdf.

²¹ Mekemson, C., Glantz, S.A. How the tobacco industry built its relationship with Hollywood. Tobacco Control 2002;11:i81-i91. Available at www.smokefreemovies.ucsf.edu/pdf/MekemsonMovies.pdf.

(1) deny future public subsidies to feature films with any tobacco imagery (with two categorical exceptions) that will be exhibited to audiences 17 or younger, creating a powerful voluntary market incentive for producers to keep future youth-rated films free of such imagery;

(2) require applicants for public film subsidies to certify, under penalty, that tobacco depictions in films of any rating are not in the film because of third-party influence; and

(3) increase program transparency and accountability by publicly reporting the production companies and film projects granted eligibility and awarded public subsidies.

Recommendation #1

Disqualify for public subsidy: Any motion picture production that depicts or implies tobacco use to be marketed or exhibited to US viewers 17 and younger unaccompanied by a parent or adult guardian, except if (in the judgment of the program administrator) the presentation accurately reflects the dangers and consequences of tobacco use or is necessary to represent the smoking of an actual historical figure, as in a biographical drama or documentary film.

Projects intended for national distribution identify their target market as part of the business plan, a key step in acquiring financing. Some states already require that applicants have a signed distribution deal. Producers know the MPAA rating the film needs to achieve projected income and they work with the writer and director to calibrate content that bears on rating: language, sexuality, violence, drug use and more.²²

Producers of films with tobacco imagery should be required to declare if the film will be exhibited without restriction to audiences 17 and younger. Film projects with smoking whose exhibition will restrict access, as the MPAA's R-rating does, will be unaffected by this eligibility policy update.

Public statutes need not refer explicitly to the MPAA's R-rating to achieve the objective. (As quoted earlier, however, Georgia does refer to the MPAA's "NC-17" rating, and to "unrated" films, in the context of a discretionary decision.) Film projects could be required to obtain an MPAA rating as a condition for the subsidy award, which often occurs in the following tax year in any case. If a film with smoking is marketed with a rating lower than an "R," the tax credit could be voided and sanctions imposed for misrepresentation.

²² Despite the MPAA's May 2007 statement that it was taking "all" tobacco into account in its ratings, no film has been up-rated for tobacco and tobacco use is not included in the MPAA rating descriptor for most nationally-distributed PG-13 films with smoking. See: Polansky, J.R., Titus, K., Glantz, S.A. (2009) Two years later: Are MPAA's tobacco labels protecting movie audiences? UCSF Center for Tobacco Control Research and Education. Available at www.escholarship.org/uc/item/5sr9w2s1.

Recommendation #2

Certify no pay-offs: No person or entity participating in or in any way associated with the development, production, financing, distribution, exhibition, marketing or any other exploitation of this motion picture in any medium has received anything of value (including money, merchandise, advertising, publicity or any other opportunity, consideration or incentive of whatever nature), nor entered into any agreement, understanding or other arrangement with respect to any of the foregoing, in connection with any use, depiction or appearance of or reference to any products containing tobacco in this motion picture or the marketing or exploitation thereof.

As a condition of eligibility, producers of all motion picture productions with tobacco imagery, regardless of market or rating, should be required to provide a sworn affidavit with the language above. With false statements subject to penalty and disqualification, the affidavit signed by the applicant for the tax credit or rebate should be made part of the public record. This statement, in an abbreviated form, has been adopted by Time Warner's studio subsidiary, Warner Bros., and appears in the final credits of select films.

Recommendation #3

More transparency: Offering \$1.3 billion in public subsidies for motion picture production is significant public policy, but the applicants, their business details and the size of awards made by each state are not transparent. Because the tax credits awarded by these programs are usually transferable, program beneficiaries include residents and corporations who buy the tax credits from out-of-state producers to reduce their in-state income tax liabilities. Program reporting requirements vary from state to state. To increase accountability and transparency, programs at a minimum should *publicly* report at least annually, in addition to information the state may require to evaluate the economic benefit of the program, the following information:

- (1) applicants' names, business entities, and working titles of feature film projects granted eligibility, and the date eligibility was granted;
- (2) tobacco status of each eligible project;
- (3) production status of each eligible project (i.e., pre-production, in production, post-production, MPAA-rated, released); and
- (4) value of the tax credit or rebate ultimately awarded each project, if any.

Conclusion

Based on 2008 film data, US states allocate an estimated \$830 million to subsidize production of films with tobacco imagery. For comparison, this surpasses the \$719 million that states state appropriated in 2009 programs to avert teen smoking initiation. Of the \$830 million, \$500 million subsidizes youth-rated (PG and PG-13) films with smoking. In 2008, youth-rated films shot in the US delivered about half of all the tobacco impressions encountered by US theater audiences. Another \$330 million subsidizes US production of R-rated films with smoking.

An estimated 1.1 million current adolescent smokers were recruited to smoke by their exposure to tobacco imagery on screen; about 350,000 of these smokers will ultimately die from tobacco-induced diseases. Public subsidies for youth-rated films with smoking are in direct conflict with public policies funded to prevent teens from starting to smoke.

States already place strict requirements on film productions to qualify for public subsidy. To these should be added straightforward eligibility requirements to ensure: (1) film projects rated G, PG and PG-13 with smoking do not qualify for public incentives except if the presentation accurately reflects the dangers and consequences of tobacco use or is necessary to represent the smoking of an actual historical figure, as in a biographical film or documentary; (2) publicly subsidized film projects are not also influenced by the tobacco industry; and (3) these programs transparently report the projects granted eligibility, their tobacco status, their progress and the public benefits awarded to each project.

Currently, two public policies are in conflict. There is a national consensus that smoking should not be promoted to youth. The Centers for Disease Control and Prevention has repeatedly cited movie smoking as a major factor in youth smoking rates²³ and has made countering media portrayals of smoking a strategic priority.²⁴ The U.S. Institute of Medicine²⁵ and National Cancer Institute²⁶ have each spotlighted the harm done by movie smoking.

²³ US Centers for Disease Control and Prevention (2002) Trends in Cigarette Smoking Among High School Students — United States, 1991-2001. *MMWR* May 17, 2002 / 51(19);409-412. (2004) Cigarette Use Among High School Students — United States, 1991-2003. *MMWR* 53(23);499-502. (2005) Tobacco Use, Access, and Exposure to Tobacco in Media among Middle and High School Students — United States, 2004. *MMWR* 54(12):297-301. (2006) Cigarette Use Among High School Students — United States, 1991-2005. *MMWR* 55(26);724-726. (2008) Cigarette Use Among High School Students — United States, 1991-2005. *MMWR* 55(26);724-726.

²⁴ CDC (2009) Office on Smoking and Health Strategic Plan for 2010.

²⁵ Institute of Medicine. Ending the tobacco problem: A blueprint for the nation. Washington, DC: National Academies Press. 24 May 2007.

²⁶ US National Cancer Institute (2008) Monograph 19: The role of the media in promoting and reducing tobacco use. Bethesda, MD: US National Institutes of Health. Available at <http://www.cancercontrol.cancer.gov/tcrb/monographs/19>.

Major national health groups endorse an R-rating policy to eliminate smoking in future youth-rated films and the other evidence-based measures, as have the New York State Department of Health and Los Angeles County Department of Health Services.²⁷ Internationally, the World Health Organization supports adult-rating future smoking scenes, showing anti-smoking spots before films with smoking, certifying no payoffs in the film production chain, and ending tobacco brand display on screen.²⁸

Meanwhile, other branches of state government are subsidizing youth-rated movies with smoking with hundreds of millions of scarce taxpayer dollars. Whatever the calculated economic cost-benefits of competing for film production jobs, no analysis of costs or benefits from film subsidies has considered the national and global health cost of underwriting Hollywood films proven to recruit adolescents to smoke. The modest policy recommendations made here will restructure the incentives for US film producers and studios and reward them to keep smoking out of the movies that kids see most.

²⁷ Endorsements at www.smokefreemovies.ucsf.edu/solution/index.html.

²⁸ World Health Organization. Smoke-free movies: from evidence to action. Geneva, Switzerland: World Health Organization. 1 June 2009. www.who.int/tobacco/smoke_free_movies/en/

Appendix A: Film production subsidies, US state-level (and select non-US)

STATE	Title	Effective Year	Subsidy	Annual Cap, or 2008 Appropriation or Expenditure	Tobacco Prevention Spending 2009
Alabama	Act 2009-144	2009	25% tax credit against purchases; 35% rebate of AL payroll	\$5 million (increases to \$10 million in 2011)	\$2.3 million
Alaska	Film Production Tax Credit Program (3 AAC 188)	2009	30% transferable tax credit + 10% for Alaska res. wages + 4% rural and off-season)	\$20 million	\$9.2 million
Arizona	A.R.S. §41-1517	2009	20% or 30% tax credit	\$60 million (increases to \$70 million in 2010)	\$21.3 million
Arkansas	Digital Product and Motion Picture Industry Development Act (Act 816 of 2009: A.C.A. § 15-4-2001 et seq.)	2009	15% rebate of production costs + 10% of AR payroll	No data	\$16.9 million
California	California Film & Television Tax Credit Program (Revenue & Taxation Code Section 17053.85)	2011 (qualifying productions now, awarding credits later)	20% tax credit for feature films, 25% for TV series and independent Films	\$100 million	\$78.1 million
Colorado	24-48.5, Colorado Revised Statutes	2009	10% of below-the-line costs	\$10 million	\$27.5 million
Connecticut	Public Act No. 07-236	2006	30% transferable tax credit on CT spend	\$90 million	\$8.3 million
Delaware	—	—	—	—	\$11.3 million
District of Columbia	Film DC Economic Incentive Grant Fund	2006	Lesser of 100% rebate of sales/use taxes or 10% of DC spend	No data	\$4 million
Florida	Entertainment Industry Financial Incentive Program, Title XIX § 288.1254	2007	15% or 20% rebate of FL expenses + 2% for smokefree "family friendly" films	\$10.8 million	\$60.2 million

STATE	Title	Effective Year	Subsidy	Annual Cap, or 2008 Appropriation or Expenditure	Tobacco Prevention Spending 2009
Georgia	Georgia Entertainment Industry Investment Act, Chapter 159-1-1	2008	30% tax credit: transferable 20% tax credit + 10% for "product placement" of a "promotional Georgia logo"	\$52 million	\$3.2 million
Hawaii	Act 88 H.R.S. § 235-17	2006	15% (Oahu) or 20% (other island) tax credit	\$15 million (est. 2007)	\$11.3 million
Idaho	Motion Media Rebate Program: HB 5982; I.C. 47 § 67-4728	2008	20% rebate of ID spend	No data	\$2.6 million
Illinois	Illinois Film Production Services Tax Credit Program: 14-1 § 528	2009	30% transferable tax credit on IL spend + 15% on wages to workers in disadvantaged areas	\$42.3 million (est.)	\$9.5 million
Indiana	Media Production Expenditure Tax Credit: IC 6-3.1-32	2008	15% tax credit on IN spend	\$5 million	\$16 million
Iowa	Film, Television and Video Project Promotion Program	2007	50% transferable tax credit; 100% income tax credit for in-state vendors	\$5 million (est.)	\$11.2 million
Kansas	—	—	—	—	\$2 million
Kentucky	—	—	—	—	\$3.7 million
Louisiana	Motion Picture Investor Tax Credit: R.S. 47:6007	2009	30% transferable tax credit + 5% tax credit on LA wages	\$100 million (est.)	\$8.5 million

STATE	Title	Effective Year	Subsidy	Annual Cap, or 2008 Appropriation or Expenditure	Tobacco Prevention Spending 2009
Maine	"Maine Attraction," MRSA §13090-L	2006	100% tax credit for production income + 10-12% wage rebate	No data	\$11.7 million
Maryland	"Maryland Film Production Rebate Fund," 83A § 5-18	2007	25% rebate of production spend	\$4.5 million (est.)	\$20.6 million
Massachusetts	M.G.L. c. 62, § 6(l), c. 63, § 38T and c. 64H, § 6(ww)	2007	25% tax credit on MA spend	\$113 million	\$13.5 million
Michigan	Michigan Business Tax Act (excerpt): Act 36 of 2007: MCL §208.1455	2008	40% tax credit (30% on non-MI res. wages) + 2% bonus in "core" communities	\$48 million	\$5.1 million
Minnesota	"Snowbake," MN Statutes, section 116U.26, Sec. 13	2006	15-20% rebate of production spend	\$1.25 million	\$21.5 million
Mississippi	Mississippi Motion Picture Incentive Program	2008	20% rebate of MS spend; 25% rebate of MS res. wages	\$20 million	\$10.7 million
Missouri	Film Production Tax Credit, Sections 135.750, RSMo	2008	32.5% transferable tax credit on MO spend	\$4.5 million	\$2.7 million
Montana	Big Sky on the Big Screen Act	2005 (amended 2007 and 2009)	9% tax credit on MT spend; 14% tax credit on first \$50k of MT wages	\$1.25 million	\$9.3 million
Nebraska	—	—	—	—	\$4 million
Nevada	—	—	—	—	\$4.1 million
New Hampshire	—	—	—	—	\$1.1 million
New Jersey	P.L. 2005, Chapter 345	2006	20% tax credit on NJ spend	\$10 million	\$10.2 million
New Mexico	Film Production Tax Credit: Section 7-2F-1 and 7-2F-2 NMSA 1978	2005 (amended 2007)	25% tax rebate on NM spend; 50% rebate of NM trainee wages	\$49.4 million	\$10.5 million

STATE	Title	Effective Year	Subsidy	Annual Cap, or 2008 Appropriation or Expenditure	Tobacco Prevention Spending 2009
New York	Empire State Film Production Credit	2009	30% tax credit on NY spend	\$460 million (\$350 million authorized 2009-10)	\$81.9 million*
North Carolina	Qualifying Expenses of a Production Company: GS 105-130.47	2006 (amended 2009)	25% tax credit on NC spend	\$25 million	\$18.5 million
North Dakota	—	—	—	—	\$4.1 million
Ohio	—	—	—	—	\$7.1 million
Oklahoma	Oklahoma Film Enhancement Rebate ("Compete with Canada Film Act"): Title 68-1-36A § 3264	Amended 2009	37% tax credit on OK spend	\$5 million	\$19.1 million
Oregon	Oregon Production Investment Fund: ORS 284.335 & 284.368; implementing ORS 284.367 & 284.368	2003 (amended 2008)	20% rebate on OR spend, 10%-16.2% rebate of below-the-line wages	\$7.5 million	\$9.1 million
Pennsylvania	Film Production Tax Credit: 72 P.S. § 8701-D (2007)	2008	25% transferable tax credit on PA spend	\$75 million	\$33.2 million
Puerto Rico	Law for the Development of the Film Industry: Act No. 362 of Dec. 24, 1999	1999	40% transferable tax credit on PR spend	\$15 million	
Rhode Island	RIGL § 44-31.2-5	2007	25% tax credit on RI spend	\$15 million	\$1.9 million
South Carolina	South Carolina Motion Picture Incentive Act	2008	30% rebate on SC spend, 20% rebate on wages	\$10 million	\$1 million
South Dakota	—	—	—	—	\$5.8 million
Tennessee	Visual Content Act of 2006, Chapter 916	2006	15-17% rebate on TN spend	\$20 million	\$6.1 million

STATE	Title	Effective Year	Subsidy	Annual Cap, or 2008 Appropriation or Expenditure	Tobacco Prevention Spending 2009
Texas	Texas Moving Image Industry Incentive Program: Gov't Code 4(F) § 485	2007 (amended 2009)	7.5-29.25% rebate on TX spend	\$21 million	\$12.6 million
Utah	Motion Picture Incentive Fund: Utah Code 9-2-21	2005 (amended 2009)	20% tax credit or cash rebate for UT spend	\$5.5 million (\$15.6 million authorized for 2010-11)	\$8.2 million
Vermont	—	—	—	—	\$6.1 million
Virginia	Governor's Motion Picture Opportunity Fund: § 2.2-2320	2006	Tax rebate "at Governor's discretion"	\$200,000	\$13.6 million
Washington	Motion Picture Competitiveness Program: WAC 130-20	2006 (amended 2008)	Up to 30% of WA spend	\$3.5 million	\$28.4 million
W. Virginia	West Virginia Film Industry Investment Act: 11 W.V.C. §11-13X, as amended by SB 610 (in effect June 2009)	Amended 2009	Up to 31% transferable tax credit on WV spend	\$10 million	\$6.7 million
Wisconsin	Film Product Accreditation Program: Comm 133.20; § 71.07(5)(h); § 560.206	2006	25% tax credit on WI spend	\$500,000	\$16.3 million
Wyoming	Film Industry Financial Incentive: W.S. 9-2-402 through 406	2007 (amended 2009)	12-15% rebate on WY spend	\$1 million	\$6.9 million
STATE TOTAL				\$1,331,400,000	\$718,700,000
<p>* Originally authorized. Actual budget reduced to \$68 million. Sources: State caps or 2008 appropriations — Survey of program descriptions, annual reports, policy analyses and news reports; "estimates" based on near-year data or program-reported, in-state production spending. States' tobacco prevention spending data: Campaign for Tobacco-Free Kids. Contact the authors for links to state film production incentive web sites and state statute URLs.</p>					

Film production subsidies, non-US (partial list)

Nation	Title	Effective Year	Subsidy	Annual Cap, or 2008 Appropriation or Expenditure	
CANADA					
Ontario	Ontario Film & Television Tax Credit, Ontario Production Services Tax Credit: Section 43.5 of the Corporations Tax Act (as amended), followed by Section 91 of the Taxation Act	2006 (amended 2009)	25% refundable tax credit of production spend, 35% refundable tax credit of eligible labor spend (40% for first prods, +10% for prod outside Toronto)	No data	
British Columbia	British Columbia Production Services Tax Credit	Amended 2009	41% tax credit on labor + remoteness bonuses. 15% digital/animated prod. credit	No data	
Quebec	Quebec Production Services Tax Credit	Amended 2009	25% tax credit on all expenses + 16% federal labor tax credits	No data	
UNITED KINGDOM	Film Tax Relief	2007	25% of production spend up to £20 million, 20% over	\$238 million	
GERMANY			20% rebate of Germany spend	\$79 million	
HUNGARY			20% of Hungary spend	\$18.8 million	
Annual subsidy data for UK, Germany Hungary: UK Treasury report, Screen Daily.com. UK and European subsidy programs are a partial list of such programs, for illustrative purposes.					

Appendix B: Top-grossing 2008 films

Title	Company	Rating	Tobacco?	Main Locations
College Road Trip	Disney	G	N	Connecticut
Montana/Cyrus: Best of Both Worlds	Disney	G	N	California
High School Musical 3	Disney	G	N	Utah
Horton Hears a Who	News Corp.	G	N	Connecticut, California
Kit Kittredge	Time Warner	G	N	Canada
Pirates Who Don't Do Anything	GE	G	N	Tennessee
Space Chimps	News Corp.	G	N	California
Tale of Despereaux, The	GE	G	N	UK
Wall-E	Disney	G	N	California
Expelled	*Rocky Mtn	PG	Y	Multiple
Express, The	GE	PG	Y	Illinois
Penelope	*Summit	PG	Y	UK
Speed Racer	Time Warner	PG	Y	Germany
Star Wars: The Clone Wars	Time Warner	PG	Y	Taiwan
Bedtime Stories	Disney	PG	N	California
Beverly Hills Chihuahua	Disney	PG	N	Mexico
Bolt	Disney	PG	N	California
Chronicles of Narnia: Prince Caspian	Disney	PG	N	New Zealand
Fireproof	*Goldwyn	PG	N	Georgia
Igor	Sony	PG	N	California
Journey to the Center of the Earth	Time Warner	PG	N	Canada, Iceland
Kung Fu Panda	Viacom	PG	N	California
Longshots, The	Sony	PG	N	Louisiana
Madagascar: Escape 2 Africa	Viacom	PG	N	California
Marley and Me	News Corp.	PG	N	Florida, California, Penn.
Meet Dave	News Corp.	PG	N	California, New York
Nim's Island	News Corp.	PG	N	Australia
Spiderwick Chronicles	Viacom	PG	N	Canada
21	Sony	PG13	Y	Massachusetts
American Carol, An	*Vivendi	PG13	Y	California
Australia	News Corp.	PG13	Y	Australia
Baby Mama	GE	PG13	Y	New York
Babylon A.D.	News Corp.	PG13	Y	France
Be Kind Rewind	Time Warner	PG13	Y	New Jersey
Boy in the Striped Pajamas	Disney	PG13	Y	Hungary
Bucket List, The	Time Warner	PG13	Y	California
Curious Case of Benjamin Button	Viacom	PG13	Y	Louisiana
Dark Knight, The	Time Warner	PG13	Y	Illinois
Definitely, Maybe	GE	PG13	Y	New York
Disaster Movie	*Lionsgate	PG13	Y	Louisiana
Doubt	Disney	PG13	Y	New York
Drillbit Taylor	Viacom	PG13	Y	California
Duchess, The	Viacom	PG13	Y	UK
Eye, The	*Lionsgate	PG13	Y	New Mexico
First Sunday	Sony	PG13	Y	Maryland
Fool's Gold	Time Warner	PG13	Y	Australia
Four Christmases	Time Warner	PG13	Y	California
Get Smart	Time Warner	PG13	Y	California
Ghost Town	Viacom	PG13	Y	New York

Title	Company	Rating	Tobacco?	Main Locations
Haunting of Molly Hartley	*Freestyle	PG13	Y	California
Hellboy II: The Golden Army	GE	PG13	Y	UK, Hungary
Incredible Hulk	GE	PG13	Y	Canada
Indiana Jones and...the Crystal Skull	Viacom	PG13	Y	Hawaii, Connecticut
Iron Man	Viacom	PG13	Y	California
Lakeview Terrace	Sony	PG13	Y	California
Leatherheads	GE	PG13	Y	North Carolina
Made of Honor	Sony	PG13	Y	UK
Mamma Mia!	GE	PG13	Y	UK, Greece
Max Payne	News Corp.	PG13	Y	Canada (Ontario)
Meet the Browns	*Lionsgate	PG13	Y	Illinois
Mummy...Dragon Emperor	GE	PG13	Y	Canada (Québec)
Nick and Norah's Infinite Playlist	Sony	PG13	Y	New York
Nothing Like the Holidays	*Overture	PG13	Y	Illinois
One Missed Call	Time Warner	PG13	Y	Georgia
Quantum of Solace	Sony	PG13	Y	UK, Italy, Chile
Secret Life of Bees	News Corp.	PG13	Y	North Carolina
Spirit, The	*Lionsgate	PG13	Y	New Mexico
Superhero Movie	Sony	PG13	Y	California
Traitor	*Overture	PG13	Y	Illinois
Transporter 3	*Lionsgate	PG13	Y	Hungary
Under the Same Moon	*Weinstein	PG13	Y	Mexico
Valkyrie	Sony	PG13	Y	Germany
Vicky Cristina Barcelona	*Weinstein	PG13	Y	Spain
Visitor, The	*Overture	PG13	Y	New York
W.	*Lionsgate	PG13	Y	Louisiana
Women, The	Time Warner	PG13	Y	Massachusetts
X Files: I Want to Believe	News Corp.	PG13	Y	Canada (BC)
You Don't Mess with the Zohan	Sony	PG13	Y	New York
10,000 B.C.	Time Warner	PG13	N	New Zealand
27 Dresses	News Corp.	PG13	N	New York, Rhode Island
Cloverfield	Viacom	PG13	N	California, New York
Day the Earth Stood Still	News Corp.	PG13	N	California, Canada (BC)
Eagle Eye	Viacom	PG13	N	Multiple
Family That Preys	*Lionsgate	PG13	N	Georgia, Louisiana
Forbidden Kingdom	*Lionsgate	PG13	N	China
Hancock	Sony	PG13	N	California
House Bunny	Sony	PG13	N	California
Jumper	News Corp.	PG13	N	Canada, Czech Rep.
Love Guru	Viacom	PG13	N	Canada
Mad Money	*Overture	PG13	N	Louisiana
Meet the Spartans	News Corp.	PG13	N	Louisiana
Never Back Down	*Summit	PG13	N	California, Florida
Nights at Rodanthe	Time Warner	PG13	N	North Carolina
Other Boleyn Girl	GE	PG13	N	UK
Prom Night	Sony	PG13	N	California
Seven Pounds	Sony	PG13	N	California
Shutter	News Corp.	PG13	N	Japan
Sisterhood...Traveling Pants 2	Time Warner	PG13	N	Connecticut
Step Up 2 the Streets	Disney	PG13	N	Maryland
Swing Vote	Disney	PG13	N	New Mexico
Twilight	*Summit	PG13	N	Oregon

Title	Company	Rating	Tobacco?	Main Locations
Vantage Point	Sony	PG13	N	Mexico
Welcome Home Roscoe Jenkins	GE	PG13	N	Louisiana
What Happens in Vegas	News Corp.	PG13	N	New York
Yes Man	Time Warner	PG13	N	California
Appaloosa	Time Warner	R	Y	New Mexico
Bangkok Dangerous	*Lionsgate	R	Y	Thailand
Bank Job	*Lionsgate	R	Y	UK
Body of Lies	Time Warner	R	Y	Maryland
Burn After Reading	GE	R	Y	New York
Cadillac Records	Sony	R	Y	Louisiana
Changeling	GE	R	Y	California
Death Race	GE	R	Y	Canada (Québec)
Deception	News Corp.	R	Y	New York
Doomsday	GE	R	Y	UK
Harold & Kumar...Guantanamo Bay	Time Warner	R	Y	Louisiana
Milk	GE	R	Y	California
Miracle at St. Anna	Disney	R	Y	Louisiana
My Best Friend's Girl	*Lionsgate	R	Y	Massachusetts
Pride and Glory	Time Warner	R	Y	New York
Punisher: War Zone	*Lionsgate	R	Y	Canada (Québec)
Rambo	*Lionsgate	R	Y	Thailand, Mexico
Religulous	*Lionsgate	R	Y	Multiple
Righteous Kill	*Overture	R	Y	Connecticut
Saw V	*Lionsgate	R	Y	Canada (Ontario)
Semi-Pro	Time Warner	R	Y	California, Michigan
Sex and the City	Time Warner	R	Y	New York
Sex Drive	*Summit	R	Y	Florida
Slumdog Millionaire	News Corp.	R	Y	India
Smart People	Disney	R	Y	Pennsylvania
Soul Men	Sony	R	Y	Louisiana
Stop-Loss	Viacom	R	Y	Texas
Strangers, The	GE	R	Y	South Carolina
Street Kings	News Corp.	R	Y	California
Tropic Thunder	Viacom	R	Y	California, Hawaii
Wanted	GE	R	Y	Illinois
Zack and Miri Make a Porno	*Weinstein	R	Y	Pennsylvania
88 Minutes	Sony	R	N	Canada (BC)
Forgetting Sarah Marshall	GE	R	N	Hawaii
Happening, The	News Corp.	R	N	Pennsylvania
Mirrors	News Corp.	R	N	Romania
Pineapple Express	Sony	R	N	California
Quarantine	Sony	R	N	California
Role Models	GE	R	N	California
Ruins, The	Viacom	R	N	Australia
Step Brothers	Sony	R	N	California
Untraceable	Sony	R	N	Oregon
<p>"Top-grossing:" Films ranked among the top ten in theatrical gross earnings for at least one week of 2008; source: BoxOfficeMojo.com. Tobacco Status: Breathe California. Locations: IMDbPro.com.</p>				

Appendix C: Top-grossing, YOUTH-RATED films with tobacco imagery, by production location (2008)

Production Location	Title	Company	Rating	US Tobacco Impressions (millions)	Percent of Youth-Rated Tobacco Impressions
California	American Carol	*Vivendi	PG13		16.4%
	Bucket List	Time Warner	PG13		
	Drillbit Taylor	Viacom	PG13		
	Four Christmases	Time Warner	PG13		
	Get Smart	Time Warner	PG13		
	Haunting of Molly Hartley	*Freestyle	PG13		
	Iron Man	Viacom	PG13		
	Lakeview Terrace	Sony	PG13		
	Superhero Movie	Sony	PG13		
Georgia	One Missed Call	Time Warner	PG13		<1%
Hawaii / Connecticut	Indiana Jones...Crystal Skull	Viacom	PG13		4.3%
Illinois	Dark Knight	Time Warner	PG13		4.5%
	Express, The	GE	PG		
	Meet the Browns	*Lionsgate	PG13		
	Nothing Like the Holidays	*Overture	PG13		
	Traitor	*Overture	PG13		
Louisiana	Curious Case of Benjamin Button	Viacom	PG13		32.6%
	Disaster Movie	*Lionsgate	PG13		
	W.	*Lionsgate	PG13		
Massachusetts	21	Sony	PG13		2.6%
	Women, The	Time Warner	PG13		
Maryland	First Sunday	Sony	PG13		<1%
North Carolina	Leatherheads	GE	PG13		4.3%
	Secret Life of Bees	News Corp.	PG13		
New Jersey	Be Kind Rewind	Time Warner	PG13		<1%
New Mexico	Eye, The	*Lionsgate	PG13		<1%
	Spirit, The	*Lionsgate	PG13		
New York	Baby Mama	GE	PG13		4.9%
	Definitely, Maybe	GE	PG13		
	Doubt	Disney	PG13		
	Ghost Town	Viacom	PG13		
	Nick and Norah's Infinite Playlist	Sony	PG13		
	Visitor, The	*Overture	PG13		
	You Don't Mess with the Zohan	Sony	PG13		
Various	Expelled	*Rocky Mtn	PG		<1%
Filmed-in-US SUBTOTAL				8,089	70.9%

Production Location	Title	Company	Rating	Specific Location	Percent of Youth-Rated Tobacco Impressions
Canada	Mummy: Dragon Emperor	GE	PG13	Québec	4.2%
	Incredible Hulk	GE	PG13	Ontario	
	Max Payne	News Corp.	PG13	Ontario	
	X Files: I Want to Believe	News Corp.	PG13	B.C.	
UK / Europe	Babylon A.D.	News Corp.	PG13	France	22.2%
	Valkyrie	Sony	PG13	Germany	
	Speed Racer	Time Warner	PG	Germany	
	Boy in the Striped Pajamas	Disney	PG13	Hungary	
	Transporter 3	*Lionsgate	PG13	Hungary	
	Vicky Cristina Barcelona	*Weinstein	PG13	Spain	
	Penelope	*Summit	PG	UK	
	Quantum of Solace	Sony	PG13	UK, Italy, Chile	
	Mamma Mia!	GE	PG13	UK / Greece	
	Duchess, The	Viacom	PG13	UK	
	Made of Honor	Sony	PG13	UK	
	Hellboy II: The Golden Army	GE	PG13	UK / Hungary	
Other	Australia	News Corp.	PG13	Australia	2.7%
	Fool's Gold	Time Warner	PG13	Australia	
	Under the Same Moon	*Weinstein	PG13	Mexico	
	Star Wars: The Clone Wars	Time Warner	PG	Taiwan	
Filmed-outside-US SUBTOTAL				3,322	29.1%
TOTAL				11,411	100.0%
Notes: Sources for production locations: Film commissions, imdbPro.com. Tobacco impressions = tobacco incidents per film X US paid admissions per film. Source for tobacco incidents: Breathe California. Paid admissions = US theatrical gross (www.IMDbPro.com) / avg. ticket price, 2008 (www.nato-online.org).					

**Appendix D: Top-grossing, R-RATED films with tobacco imagery,
by production location (2008)**

Production Location	Title	Company	Rating	US Tobacco Impressions (millions)	Percent of R-rated Tobacco Impressions
California	Milk	GE	R		31.2%
	Tropic Thunder (also HI)	Viacom	R		
	Semi-Pro (also MI)	Time Warner	R		
	Street Kings	News Corp.	R		
	Changeling	GE	R		
Connecticut	Righteous Kill	*Overture	R		2.5%
Illinois	Wanted	GE	R		1.7%
Florida	Sex Drive	*Summit	R		<1%
Louisiana	Cadillac Records	Sony	R		7.7%
	Miracle at St. Anna	Disney	R		
	Soul Men	Sony	R		
	Harold and Kumar Escape...	Time Warner	R		
Massachusetts	My Best Friend's Girl	*Lionsgate	R		3.7%
Maryland	Body of Lies	Time Warner	R		7.9%
New Mexico	Appaloosa	Time Warner	R		1.3%
New York	Pride and Glory	Time Warner	R		13.6%
	Burn After Reading	GE	R		
	Sex and the City	Time Warner	R		
	Deception	News Corp.	R		
Pennsylvania	Smart People	Disney	R		<1%
	Zack and Miri Make a Porno	*Weinstein	R		
South Carolina	The Strangers	GE	R		2.4%
Texas	Stop-Loss	Viacom	R		<1%
Filmed-in-US SUBTOTAL				3,984	73.8%
Canada	Death Race	GE	R	Québec	9.0%
	Punisher: War Zone	*Lionsgate	R	Québec	
	Saw V	*Lionsgate	R	Ontario	
UK / Europe	The Bank Job	*Lionsgate	R	UK	6.8%
	Doomsday	GE	R	UK	
Other	Slumdog Millionaire	News Corp.	R	India	10.3%
	Rambo	*Lionsgate	R	Thailand/Mexico	
	Bangkok Dangerous	*Lionsgate	R	Thailand	
Filmed-outside-US SUBTOTAL				1,411	26.2%
TOTAL				5,395	100.0%
Notes: Sources for production locations: IMDbPro.com. Tobacco impressions = tobacco incidents per film X US paid admissions per film. Source for tobacco incidents: Breathe California. Paid admissions = US theatrical gross (www.IMDbPro.com) / avg. ticket price, 2008 (www.nato-online.org).					

Appendix E: Estimated impact of exposure to films with tobacco imagery on 12-17 year olds, by state

State	Past-Month Smokers Ages 12-17 (1)	Smokers 12-17 Attributable to Movie Tobacco Imagery (2)	Estimated Eventual Tobacco-Induced Deaths Among Current Smokers 12-17 Attributable to Movie Tobacco Imagery (3)
Alabama	46,000	20,000	6,000
Alaska	6,000	3,000	1,000
Arizona	56,000	25,000	8,000
Arkansas	34,000	15,000	5,000
California	225,000	99,000	32,000
Colorado	40,000	18,000	6,000
Connecticut	29,000	13,000	4,000
Delaware	7,000	3,000	1,000
DC	3,000	1,000	<500
Florida	132,000	58,000	19,000
Georgia	82,000	36,000	12,000
Hawaii	7,000	3,000	1,000
Idaho	12,000	5,000	2,000
Illinois	112,000	49,000	16,000
Indiana	64,000	28,000	9,000
Iowa	29,000	13,000	4,000
Kansas	28,000	13,000	4,000
Kentucky	54,000	24,000	8,000
Louisiana	41,000	18,000	6,000
Maine	12,000	5,000	2,000
Maryland	42,000	18,000	6,000
Massachusetts	49,000	22,000	7,000
Michigan	95,000	42,000	13,000
Minnesota	51,000	22,000	7,000
Mississippi	24,000	11,000	3,000
Missouri	58,000	25,000	8,000
Montana	10,000	4,000	1,000
Nebraska	16,000	7,000	2,000
Nevada	21,000	9,000	3,000
New Hampshire	11,000	5,000	2,000
New Jersey	66,000	29,000	9,000
New Mexico	20,000	9,000	3,000
New York	130,000	57,000	18,000
North Carolina	79,000	35,000	11,000
North Dakota	6,000	3,000	1,000
Ohio	125,000	55,000	18,000
Oklahoma	40,000	18,000	7,000
Oregon	29,000	13,000	4,000
Pennsylvania	120,000	53,000	17,000
Rhode Island	10,000	4,000	1,000
South Carolina	43,000	19,000	6,000

State	Past-Month Smokers Ages 12-17 (1)	Smokers 12-17 Attributable to Movie Tobacco Imagery (2)	Estimated Eventual Tobacco-Induced Deaths Among Current Smokers 12-17 Attributable to Movie Tobacco Imagery (3)
South Dakota	8,000	4,000	1,000
Tennessee	64,000	28,000	9,000
Texas	200,000	88,000	28,000
Utah	16,000	7,000	2,000
Vermont	6,000	3,000	1,000
Virginia	68,000	30,000	10,000
Washington	52,000	23,000	7,000
West Virginia	17,000	8,000	2,000
Wisconsin	57,000	25,000	8,000
Wyoming	6,000	3,000	1,000
Total	2,558,000	1,126,000	360,000
Calculated columns rounded to nearest 1,000			

Appendix E Notes:

Note 1 | SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007. State Estimates of Substance Use and Mental Health from the 2006-7 National Surveys on Drug Use and Health. Estimated numbers in the population for Tables B.1 to B.24: (Online) Table 14. Cigarette Use in Past Month, by Age Group and State: Estimated Numbers (in Thousands), Annual Averages Based on 2006 and 2007 NSDUHs. Consulted at <http://www.oas.samhsa.gov/2k7/state/ageTabs.htm> on 23 October 2009.

Note 2 | Revised 2/9/10. Attributable risk is 0.44 (95% CI 0.34-0.58). Anderson A, Millett C, Polansky JR, Glantz SA (2010) Exposure to smoking in movies among British adolescents 2001-2006. Thorax (in press). This new estimate contains the previous attributable risk of 0.52 (95% CA 0.30-0.67) from Dalton MA, Sargent JD, Beach ML, Titus-Ernstoff L, Gibson JJ, Ahrens MB, Tickle JJ, Heatherton TF (2003) Effect of Viewing Smoking in Movies on Adolescent Smoking Initiation: A Cohort Study. The Lancet 362(9380):281-285. With more data, the margin of error has been reduced from ± 0.18 to ± 0.12 .

Note 3 | Tobacco-induced mortality among smokers is 32%. BRFSS Coordinators. Projected Smoking Related Deaths Among Youth — United States. MMWR 1996; 45:971-74. Recalculated 2/9/10 from Column 3.