

The New York Motion Picture & Media Industries: Piracy and the New York Economy

Prepared for the Motion Picture Association of America

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Piracy of motion pictures and video products costs the US motion picture industry billion of dollars in lost revenue and profit. However, these losses represent only a fraction of the impact of motion picture piracy on the US economy as a whole.

Within the United States, the State of New York contains more motion picture establishments and employs more motion picture workers than any other state – save one. The worldwide (and US) piracy of motion pictures directly harms the state’s motion picture firms and employees. However, the impact of motion picture piracy also damages many other sectors of the New York economy.

Combining national data on motion picture piracy with industry and state-specific multipliers from a well-established US government model, this study builds on an earlier study that provided comprehensive estimates of the overall impact of motion picture piracy on the US national economy. The earlier study, “*The True Cost of Motion Picture Piracy to the US Economy*,” was published in September 2006 by the Institute for Policy Innovation (“IPI”). That study, like this one, was prepared by Stephen E. Siwek, Principal, Economists Incorporated, Washington D.C.

In this study, the impact of motion picture piracy on the New York economy is measured by estimating the *increases* in economic output, jobs and employee earnings that would occur if piracy did not exist. To put these *increases* into their proper context, the study also presents timely estimates of the motion picture and media employment that *already exists* in New York State.

Summary of Principal Findings

- As a consequence of global and local piracy of motion pictures, the economy of New York State loses *\$3.72 billion* in total output annually.
- As a result of global and US piracy, the New York State motion picture industries including retailers lose *\$1.494 billion* in revenue annually.
- As a result of motion picture piracy, the economy of New York State loses *22,986 jobs*.
- Because of motion picture piracy, workers in New York State lose *\$903 million* in earnings annually.
- Because of motion picture piracy, the City and State of New York authorities lose at least *\$50 million* in sales tax revenue annually.
- In 2006, the motion picture and media industries in New York State directly employed *94,000 workers*.

I. The Impact of Piracy on the Motion Picture Industry in New York State

In 2004, the Motion Picture Association of America (“MPAA”) commissioned the firm of L.E.K. Consulting to provide an accurate and detailed assessment of the film industry’s worldwide losses to piracy. L.E.K. conducted the study and concluded that, “the major U.S. motion picture studios lost \$6.1 billion in 2005 to piracy worldwide.”¹ L.E.K. also found that the “worldwide motion picture industry, including foreign and domestic producers, distributors, theaters, video stores and pay-per-view operators lost \$18.2 billion in 2005 as a result of piracy.”²

The L.E.K. figures, large as they were, still did not capture the full extent of the problem of piracy. The L.E.K. estimates reflected only the direct losses to major motion picture studios and in some cases the associated losses sustained by downstream exhibitors and vendors of motion picture DVDs. The L.E.K. estimates did not capture the full impact of piracy on the economy as a whole.

If motion picture piracy were suddenly to disappear, there would be fewer pirated films to meet consumer demand. Many consumers of pirate films would then seek to purchase legitimate versions of the same films that they would have acquired illegally. Demand for legitimate films would increase and the market for legitimate films would expand.

With a larger potential market for legitimate films, profit seeking producers might decide to expand their production schedules to offer additional films, or more expensive films or both. More funds could be spent on inputs per film or on the production of more films. In either case, there would be greater demand for film inputs of all kinds. Moreover, as demand increased for film inputs, the upstream suppliers to those input producers would also experience an increase in demand for their products. These increases in demand would work their way through the economy as a whole.

¹ Siwek, Stephen E., *The True Cost of Motion Picture Piracy to the U.S. Economy*, Institute for Policy Innovation, Policy Report 186, September 2006, Appendix C, page 21. (Hereinafter, *Motion Picture Piracy study*).

² *Motion Picture Piracy Study*, Appendix C, page 21.

Economic models exist that can capture these interrelated effects. These models often rely on *input-output* tables that specify, in great detail, how specific industries interact with each other. Using input-output relationships, it is also possible to estimate the full impact of a given change in the demand for one product on the economy as a whole. One such model is the RIMS II model developed and maintained by the US Bureau of Economic Analysis (“BEA”).

Using the RIMS II model, the BEA derives industry-specific *multipliers*. The model produces “final demand” multipliers for output (in dollars), employment (in numbers of employees) and earnings of those employees (in dollars). Since the RIMS II model is regional in focus, it is also necessary to predefine a geographic region of interest. However, in this instance, a considerable amount of motion picture piracy occurs outside of US borders. The impact of that piracy is felt in areas where the *production* of more or more expensive films or both did not occur. For this reason, we allocate the effects of global piracy to the states where motion picture production already occurs. Thus, the multipliers used here are both state and industry specific.

Importantly, US-based motion picture piracy affects more than the production of movies in the US. US-based piracy also reduces legitimate sales to US based retailers who, absent piracy, would sell more legitimate video disks and DVDs. In order to capture the economic effects of piracy on motion picture retailers, we employ different state allocations and different multipliers from BEA. The losses from both types of piracy are combined to derive the total effects of piracy.

The estimated losses to the New York State economy from Worldwide Piracy are summarized on Table A-1. The specific calculations that support these estimates are described in Table A-2 through A-7.

The Impact of Piracy on the Motion Picture Industry in New York

A-1

Estimated Losses to the New York State Economy from Motion Picture Piracy

<i>New York State Industries</i>	<i>Loss in Total State Output</i> (in \$ billions)	<i>Loss in Employee Earnings</i> (in \$ billions)	<i>Loss in Total Employment</i> (number)
<i>Motion Picture Industries:</i>			
<i>Production/Distribution:</i>	\$ 3.1360	\$ 0.7352	17,246
<i>Retail:</i>	\$ 0.5853	\$ 0.1679	5,740
<i>Grand Totals:</i>	\$ 3.7213	\$ 0.9031	22,986

The Impact of Piracy on the Motion Picture Industry in New York

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I. Introduction:

- 1) In September 2007, the Institute of Policy Innovation ("IPI") released a study written by Stephen E. Siwek, Economists Incorporated, Washington D.C. The widely quoted study was entitled *The True Cost of Motion Picture Piracy to the US Economy*.

- 2) Using the Motion Picture industries own estimates of piracy losses and the RIMS II model that is maintained by the US Bureau of Economic Analysis ("BEA"), Mr. Siwek reached the following conclusions:
 - Motion picture piracy now results in lost output among all US industries of *\$20.7 billion annually* .

 - Motion picture piracy costs US workers *\$5.5 billion annually* in lost earnings.

 - Motion picture piracy costs jobs. Absent piracy, *141,030 new jobs* would have been added to the US economy.

 - Motion picture piracy costs governments at all levels *\$837 million in lost tax revenue*.

- 3) While these estimates were nationwide in scope, they relied on state-specific multipliers to assess the effects of piracy on US motion picture production/distribution and on US.-based retail industries.

The Impact of Piracy on the Motion Picture Industry in New York

A-3

II. Estimating the Impact of Piracy on Motion Picture Production.

- 1) The largest concentration of motion picture employment in the US is in the state of California. However, the *second largest concentration* of motion picture workers in the United State can be found in *New York State*.*
- 2) Absent piracy, it was assumed that both the number of US motion pictures produced and the average investment per motion picture would increase.
- 3) It was further assumed that this marginal increase in motion picture production would largely occur in the states where motion picture production occurs today.**
- 4) Accordingly, in the IPI study, the marginal effects of a reduction in global piracy were allocated to New York State.....
- 5) and thus could be seperately identified for this study.

* See IPI *Motion Picture Piracy* study, Appendix A, pages 14-15.

** Industry multipliers for the Motion Picture and Video Production Industry (NAICS 512111) are not available from the US Bureau of Economic Analysis. In the IPI study, state multipliers for the broader Motion Picture and Video Industry (NAICS 512100) were used to estimate the effects of eliminating piracy on US motion picture production.

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III. New York Losses from Piracy in Motion Picture Production

<i>Allocated Global Loss from Piracy*</i> <hr/> (in \$ billions)	<i>Loss in Total State Output</i> <hr/> (in \$ billions)	<i>Loss in Employee Earnings</i> <hr/> (in \$ billions)	<i>Loss in Total Employment</i> <hr/> (number)
\$ 1.206	\$ 3.136	\$ 0.735	17,246

* The Motion Picture Association estimated the total loss to US motion picture production as \$6.453 billion. Of this amount, 18.69% (\$1.206 billion) was allocated to New York based on US Census employment data for NAICS 5121.

The Impact of Piracy on the Motion Picture Industry in New York

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IV. Estimating the Impact of Piracy on Motion Picture Retail

- 1) US Motion Picture and Video Retail Industries are affected only by US piracy. Non-US piracy does not affect US video retailers.
- 2) US Motion Picture and Video Retail industries are far less geographically concentrated than Motion Picture Production Industries.
- 3) In the IPI report, approximately 16% of the total losses estimated for US retail industries were allocated to New York State. However, this estimate was part of an eight state sample designed to produce a representative set of national multipliers.
- 4) Data on customs seizures of counterfeit DVDs in New York City and New York State suggest that this nationwide allocation may have understated retail losses in New York if one wanted to view state-wide losses on a stand-alone basis. In this analysis, we apply an allocation factor of 33% for New York State.*

* According to "*Bootleg Billions*," a 2004 report by the City of New York, Office of Controller, the state of New York accounted for 69 and 49 percent of seizures of pirated videocassetts and pirated DVDs. The midpoint average between the 16% allocation used in the IPI report and the 49% seizure data is 33%.

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V. New York Losses from Piracy in Retailing of Motion Pictures

<i>Allocated US Retail Loss from Piracy*</i> (in \$ billions)	<i>Loss in Total State Output</i> (in \$ billions)	<i>Loss in Employee Earnings</i> (in \$ billions)	<i>Loss in Total Employment</i> (number)
\$ 0.288	\$ 0.585	\$ 0.168	5,740

* The Motion Picture Association estimate the total loss to US retailers of motion pictures as \$0.874 billion. Of this amount, 16.07% was allocated in New York in the IPI study. In this study, we assume a New York allocation factor of 33% or \$0.288 billion.

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VI. New York Sales Tax Losses from Piracy of Motion Pictures

	(\$ billions)
<i>Portion of Retail Piracy</i>	
Loss Borne by Retail Industries	\$ 0.288
 <i>Portion of Retail Piracy</i>	
Loss Borne by Production Industries*	\$ 0.349
 <i>Total Loss from Retail Piracy in New York</i>	
	<u>\$ 0.637</u>
 <i>Assumed New York**</i>	
State and Local Tax Rate	8.00%
 <i>Lost State and Local Sales Taxes</i>	
	\$ 0.051

* In the *Motion Picture Piracy* study, L.E.K. found that the US MPAA consumer loss of \$1.932 billion could be divided as between \$1.058 billion to the MPAA companies and \$0.874 billion to retail. The ratio of \$1.058 over \$0.874 is used to derive the production industry component of the New York retail losses from piracy.

**Assumes an average New York sales and use tax rate (City and State) of 8.00%.
See Press Release, Report of Office of New York State Comptroller, April 11, 2006.

Motion Picture and Media Employment in New York: 2006

New York is an important focal point not only for motion picture production but also for creation and distribution of other forms of visual media. New York supports high levels of employment in motion picture production, post-production, distribution and exhibition. In addition, New York has long served as the nation's center for radio and television broadcasting services. The New York area also provides employment opportunities in cable and subscription television services, various forms of Internet publishing and broadcasting, and cable and other television program distribution. New York also attracts independent artists, writers and performers. Estimates of the total number of motion picture and media industry employees that work in New York State are provided on Table B-1.

As shown in Table B-1, the motion picture and media industries in New York State employed approximately 94,000 people in 2006. The industries that are included in these totals are the motion picture and video industries, television broadcasting, cable and other subscription programming, internet publishing and broadcasting, cable and other program distribution and performing arts. The NAICS definitions of each of these industries are provided in the Appendix to this report.

The data used in these calculations were taken from the US Bureau of Labor Statistics ("BLS"). The BLS maintains up-to-date employment estimates by industry and by state or metropolitan area. As a result, it was possible to estimate industry-specific employment figures for New York for 2006. However, in certain instances, the BLS data is not disaggregated to five and six digit NAICS codes. For this reason, in some industries, it was necessary to subdivide the BLS employment figures from larger industry groups in order to derive appropriate estimates.

In the New York estimates, the BLS' employment data for the Motion Picture and Video industries, the Cable and Other Subscription Programming industries and the Cable and Other Program Distribution industries were not adjusted in any way. For the broadcasting industry, it was necessary to exclude radio broadcasting employees from the combined radio and television data published by BLS. Based on more detailed information from the US Economic Census for

2002, it was determined that approximately 69% of the combined employees were in fact television employees. The 69% factor was used to derive the estimated number of television broadcasting employees in New York State.

The internet publishing and broadcasting industry (NAICS 516) includes internet video broadcast sites and other forms of publishing and broadcasting. The value for New York State was estimated by reference to the state's share of all non-Internet publishing employment in the US. That ratio, 9.217% was then applied to the total US employment in NAICS 516 in 2006.

With respect to employment in the performing arts, only "independent" artists, writers and performers were potentially included as part of the New York media industries. This sub-category excludes employees of performing arts companies including operas, theater companies and musical groups. The value for New York State was derived again by reference to state specific data from the 2002 Economic Census. In that reference, approximately 13.89% of all performing arts employees in New York were "independent" artists, writers and performers. This factor was then applied to the total performing arts employment in New York in 2006.

**Motion Picture and Media Employment:
New York State
2006
B-1**

Series Id	NAICS Code	Description	Employees as Reported (in thousands)	Factor*	Employees Adjusted (in thousands)
SMU3600000505121001	5121001	Motion Picture and Video Industries	42.6	1	42.6
SMU3600000505151001	5151001	Radio and Television Broadcasting	25.5	0.6936	17.7
SMU3600000505152001	5152001	Cable and Other Subscription Programming	14.4	1	14.4
	5160001	Internet Publishing and Broadcasting	34.5	0.09217	3.2
SMU3600000505175001	5175001	Cable and Other Program Distribution	9.3	1	9.3
SMU3600000707110001	7110001	Performing Arts, Spectator Sports, and Related Industries	48	0.1389	6.7
Total			174.3		93.8
Total (Excluding NAICS Code 71)			126.3		87.2

*Adjusts totals to disaggregate motion picture and media industry employment.

Appendix: NAICS Definitions for Motion Picture and Media Industries

NAICS Code	Description	Definition
5121001	Motion Picture and Video Industries (5121)	This industry group comprises establishments primarily engaged in the production and/or distribution of motion pictures, videos, television programs, or commercials; in the exhibition of motion pictures; or in the provision of postproduction and related services.
5151001	Radio and Television Broadcasting (5151)	This industry group comprises establishments primarily engaged in operating broadcast studios and facilities for over-the-air or satellite delivery of radio and television programs. These establishments are often engaged in the production or purchase of programs or generate revenues from the sale of air time to advertisers, from donations and subsidies, or from the sale of programs.
5152001	Cable and Other Subscription Programming (5152)	This industry comprises establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis. The broadcast programming is typically narrowcast in nature (e.g., limited format, such as news, sports, education, or youth-oriented). These establishments produce programming in their own facilities or acquire programming from external sources. The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers.
5160001	Internet Publishing and Broadcasting (516)	Industries in the Internet Publishing and Broadcasting subsector group establishments that publish and/or broadcast content exclusively for the Internet. The unique combination of text, audio, video, and interactive features present in informational or cultural products on the Internet justifies the separation of Internet publishers and broadcasters from more traditional publishers included in subsector 511, Publishing Industries (except Internet) and subsector 515, Broadcasting (except Internet).

Appendix: NAICS Definitions for Motion Picture and Media Industries

5170001	Telecommunications (517)	Industries in the Telecommunications subsector include establishments providing telecommunications and the services related to that activity. The Telecommunications subsector is primarily engaged in operating, maintaining, and/or providing access to facilities for the transmission of voice, data, text, sound, and video. A transmission facility may be based on a single technology or a combination of technologies. Establishments primarily engaged as independent contractors in the maintenance and installation of broadcasting and telecommunications systems are classified in Sector 23, Construction.
5175001	Cable and Other Program Distribution (5175)	This industry comprises establishments primarily engaged as third-party distribution systems for broadcast programming. The establishments of this industry deliver visual, aural, or textual programming received from cable networks, local television stations, or radio networks to consumers via cable or direct-to-home satellite systems on a subscription or fee basis. These establishments do not generally originate programming material.
7110001	Performing Arts, Spectator Sports, and Related Industries (711)	Industries in the Performing Arts, Spectator Sports, and Related Industries subsector group establishments that produce or organize and promote live presentations involving the performances of actors and actresses, singers, dancers, musical groups and artists, athletes, and other entertainers, including independent (i.e., freelance) entertainers and the establishments that manage their careers. The classification recognizes four basic processes: (1) producing (i.e., presenting) events; (2) organizing, managing, and/or promoting events; (3) managing and representing entertainers; and (4) providing the artistic, creative and technical skills necessary to the production of these live events. Also, this subsector contains four industries for performing arts companies. Each is defined on the basis of the particular skills of the entertainers involved in the presentations.

About the Author

Stephen E. Siwek is Principal at Economists Incorporated, a research and consulting firm with offices in Washington D.C. and in the San Francisco Bay area. Active in research and consulting for over 30 years, Mr. Siwek specializes in the analysis of economic, financial, and accounting issues. He has testified as an expert witness before regulatory bodies and courts on more than 80 occasions.

Mr. Siwek has particular expertise in the economic analysis of the US motion picture industry and of the related US industries that depend on the effective protection of their copyrights. Since 1990, Mr. Siwek has published eleven studies on behalf of the International Intellectual Property Alliance (“IIPA”) that analyzed in detail the economic importance of the US “copyright” industries (including the motion picture industry) to the US economy. In these studies, Mr. Siwek quantified the substantial contributions made by the copyright-based industries to U.S. economic growth, employment and foreign trade.

Mr. Siwek has also been instrumental in furthering the efforts of the World Intellectual Property Organization (“WIPO”) to encourage other nations to measure the economic contribution of copyright-based industries in their own countries. In this regard, Mr. Siwek has been closely associated with the development of the WIPO “Guide” for the measurement of copyright industry contributions and he has directly assisted a number of foreign governments in the preparation of their own studies.

Mr. Siwek is also co-author of *International Trade in Films and Television Programs* (American Enterprise Institute/Ballinger Publishing Company, 1988) and *International Trade in Computer Software* (Quorum Books, 1993).

In 2005, Mr. Siwek authored an influential study entitled *Engines of Growth: Economic Contributions of the US Intellectual Property Industries* (Commissioned by NBC Universal, 2005). In that study, Mr. Siwek quantified the substantial contributions made by the IP sector as a whole to real US growth. Most recently, Mr. Siwek authored a widely reported study entitled, *The True Cost of Motion Picture Piracy to the US Economy*, (Institute for Policy Innovation, Policy Report 186, September 2006).

Mr. Siwek earned his undergraduate degree at Boston College and his M.B.A. at George Washington University.