

Counterfeit Goods and Their Potential Financing of International Terrorism

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Abstract

The production and sales of counterfeit products is an increasingly serious problem in the international trade market. Beyond issues of intellectual property theft and consumer safety, there is the notion that counterfeit sales directly fund terrorist organizations. I use a number of economic controls to analyze the effect of two proxies of annual counterfeit sales on two measures of international terrorism. My findings suggest inconclusive results as the effect of counterfeiting differs significantly between the two terrorism indexes.

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I. Introduction

Murder, rape, and robbery: these are the crimes that routinely grab headlines and attract the attention of media outlets, government authorities, and concerned citizens. Far less publicized are intellectual property crimes which often go largely unnoticed despite representing one of the most serious and pervasive crime industries in the world. One significant source of intellectual property crime is the counterfeiting of branded or luxury goods. According to the World Customs Organization, the international sales of counterfeit goods comprise a \$600 billion industry representing between 5-7% of total world trade.² Counterfeiting has become such a problem in the United States that Congress has even gone so far as to pass the “Stop Counterfeiting in Manufactured Goods Act” in 2006. In this paper, I will discuss the history and implications of the international criminal counterfeiting industry and focus on the larger issue of whether or not this market segment contributes to international terrorism. I will begin with a brief review of the many facets of this topic, continue to do an independent regression analysis of the correlation between counterfeiting and terrorism, and conclude by discussing the various difficulties and limitations in this area of study.

II. Economic Costs of Counterfeiting

Some types of counterfeit products are relatively common and widely-known in society. Luxury goods, for instance, are recognized as widely counterfeited due to the prevalence of fake designer handbags and wallets on sale in major US cities, and on display on the arms of many a faux-fashionista. Beyond luxury goods, counterfeits also account for a significant portion of pharmaceutical products, automotive and aviation parts, software, and video and music goods.³ While 10% of pharmaceutical drugs and luxury goods are thought to be counterfeit products, as much as one-third of software and music CDs are said to be fake.⁴

The harmful effects of counterfeit products vary widely and generally relate to the category of good. Pharmaceutical products represent the most dangerous type of counterfeit good, as false medicines are produced

2 The International Anticounterfeiting Coalition. <<http://www.iacc.org>>.

3 Vithlani, Hema. “The Economic Impact of Counterfeiting.” *Organization for Economic Co-operation and Development*, 1998. <<http://www.oecd.org/dataoecd/11/11/2090589.pdf>>.

4 Stevenson, Rachel. “Business Chiefs Demand Action to Tackle \$600bn Counterfeiting Crisis.” *The Independent*, 5 October 2005. <http://news.independent.co.uk/business/analysis_and_features/article317262.ece>.

without regard to safety of production methods or composition. End products may contain accurate ingredients in incorrect proportions or may be based on entirely wrong chemical compositions. The counterfeiting of medication can be a deadly crime and routinely results in fatalities of innocent consumers. This problem is especially prevalent in developing countries where false medications may outnumber genuine products three to one. All told, the costs of counterfeit medications amount to \$17 billion worth of losses for the legitimate pharmaceutical industry and an incalculable loss of life.⁵

Transportation parts and accessories are an equally dangerous market for counterfeiters to target. Fake auto parts, spare airplane pieces, and even spacecraft accessories may be of a far lower quality than parts subject to the exacting standards imposed by legitimate industries. In addition to the potential loss of life, fakes of these goods cost the automobile industry an estimated \$12 billion, cost airline manufacturers sales of over half a million products, and lead to a loss of an additional \$1 billion.⁶

Counterfeit consumer products such as software, music, and movies do not pose any perceptible public health or safety concern; however, they still do represent a serious problem for legitimate firms. Worldwide, 43% of user software is thought to be of illegal origin, with losses to legitimate firms in excess of \$11 billion. Exactly one-third of music CDs are counterfeit products, with losses to the recording industry of up to \$5 billion. Finally, an approximate \$1.2 billion loss is incurred annually by motion picture companies as a result of the sales of bootleg DVDs.⁷

Still, the most visible goods in the counterfeit market are without doubt luxury products. European and American clothing and accessory brands are constant targets of counterfeiters seeking to capitalize on insatiable consumer demand for status goods. Most notably, French and Italian designers such as Louis Vuitton or Gucci face significant competition from nearly identical fakes. LVMH, the parent company of Louis Vuitton, is said to employ 40 lawyers and 250 independent investigators and to spend in excess of \$20 million each year in efforts to fight increasing levels of

5 Vitlhani, Hema. "The Economic Impact of Counterfeiting." *Organization for Economic Co-operation and Development*, 1998. <<http://www.oecd.org/dataoecd/11/11/2090589.pdf>>.

6 Ibid.

7 Ibid.

counterfeiting of their products.⁸

While these societal and economic costs of counterfeit products are largely incontrovertible, one final effect of this crime industry is less definite: its support of international terrorism. Anti-counterfeiting organizations and luxury goods manufacturers are quick to suggest that counterfeit product revenues are directly funding terrorism. There is, however, only a small amount of hard data in support of this claim.

III. Literature Review

A great deal of research has been commissioned on the links between counterfeiting and terrorism. Most studies, however, are qualitative as opposed to quantitative and focus largely on anecdotal evidence in drawing connections between the two. An example of one such statistic is Interpol's 2004 seizure of \$1.2 million worth of counterfeit German brake pads. Later investigations of the products revealed that their proceeds were earmarked for supporters of the Lebanese terror organization Hizbollah. According to Interpol Secretary General Ronald K. Noble, "Linking the Hizbollah to counterfeit brake parts shows not only the link between terrorist financing and intellectual property crime, but also how intellectual property crime is not a victimless one – the potential danger to the public from this sort of criminal activity is too serious for governments and law enforcement to ignore."⁹

More specious connections to Hizbollah have been reported with counterfeiters based in Los Angeles County. Authorities have found case-specific evidence of these connections (in the form of Hizbollah flags, tattoos, and pamphlets) in the homes and on the persons of numerous convicted counterfeiters. In another incident, a woman found to be a retailer of counterfeit cigarettes was arrested in an airport en route to Lebanon with \$230,000 cash strapped to her body. While the reported reason for her trip was "vacation," authorities believed her to be funneling money to Hizbollah

8 Stevenson, Rachel. "Business Chiefs Demand Action to Tackle \$600bn Counterfeiting Crisis." *The Independent*, 5 October 2005. <http://news.independent.co.uk/business/analysis_and_features/article317262.ece>.

9 "Growing evidence of links between counterfeit goods and terrorist financing. Interpol highlights potential risk to public safety." *Interpol Media Release*, 6 April 2004. <<http://www.interpol.int/public/ICPO/PressReleases/PR2004/PR200412.asp>>.

militants.¹⁰

Some specific terrorist incidents also appear to have been funded by counterfeit operations. The FBI has compiled evidence that the terrorists who bombed the World Trade Center in 1993 financed their activities with counterfeit textile sales from a store located on Broadway in New York City. Three years later, the FBI confiscated 100,000 counterfeit products manufactured for sale at the summer Olympics. This operation funded an organization run by Sheik Omar Abdel Rahman, who was later sentenced to 240 years in prison for plotting to bomb historic landmarks in New York. Interpol has found that Chechen rebels fund their operations through the sale of pirated CDs and that paramilitary groups in Northern Ireland fund their operations by counterfeiting DVDs. Even Al Qaeda has been linked to the counterfeit industry through the sales of fake perfumes and shampoos.¹¹ Finally, according to New York City police commissioner Raymond Kelly, the sale of pirated CDs was responsible for funding the 2004 bombing of a Madrid train – an incident that resulted in the deaths of 191 people.¹²

The reason that terrorist organizations would fund themselves through counterfeiting is simple: fast, easy, plentiful cash. Counterfeiting and piracy are extremely easy industries to enter and would help terrorists maintain a certain level of anonymity. In addition, the profits from counterfeit sales significantly outweigh those of other illegal products. While the sales of cocaine might yield an entrepreneurial criminal a 100% profit margin, sales of pirated Windows software would earn a savvy counterfeiter profits of up to 900%.¹³

IV. Research Question, Regression Model, and Hypothesis

While it is relatively easy to provide historical data citing an observational link between counterfeiting and terrorism, it is much less straightforward to analyze the aggregate effects of the counterfeiting industry on international terrorist crimes in general. For this reason, this analysis will conduct an inquiry into the purported causal link between the two. The

10 Testimony of John C. Stedman, Lieutenant, County of Los Angeles Sheriff's Department. "Counterfeit Goods: Easy Cash for Criminals and Terrorists." *United States Senate Committee on Homeland Security and Governmental Affairs*, 25 May 2005. <http://hsgac.senate.gov/_files/TestimonyStedman.pdf>.

11 The International Anticounterfeiting Coalition. <<http://www.iacc.org>>.

12 "Counterfeit goods are linked to terror groups." *International Herald Tribune*, 12 February 2007. <<http://www.iht.com/articles/2007/02/12/business/fake.php>>.

13 The International Anticounterfeiting Coalition. <<http://www.iacc.org>>.

method of this inquiry will be an OLS regression with a dependent variable that measures the number of international terrorism incidents. Linear predictors will include the factor of interest – a measure of international counterfeiting – as well as a number of control variables.

The regression can be modeled formally as:

$$T_t = \beta C_t + \delta X_t + \varepsilon_t$$

where T represents international terrorist incidents in year t , C reflects the included measure of counterfeiting, and X is a matrix of additional control variables including a number of economic indicators. Log transformations of the terrorism and counterfeiting variables will also be used where appropriate to capture the elasticity between the two.

I predict that despite the many observational links between counterfeiting and terrorism, the empirical analysis will fail to provide any conclusive evidence of a causal link between the two. A lack of readily-available, reliable data makes it necessary to use proxies for the counterfeiting factor, and this shortcoming in measuring the variable of interest may inhibit the ability of the model to capture the true causal association.

V. Data Sources, Assumptions, and Potential Biases

Data on the dependent variable – number of international terrorist incidents – will come from two sources: the US Department of State and the RAND-MIPT Terrorism Incident Database, and will include values from years 1992-2005. Both sources are utilized to determine whether the subtle differences in data (mainly attributable to differences in definitions of the term “terrorist incident”) significantly alter the relationship between the dependent and independent factors of interest. In addition, the inclusion of both factors will hopefully hedge against potential biases associated with one particular agency’s motivation for reporting incidents. For instance, the RAND Database might be pressured to overreport incidents by donor organizations looking to attract attention to the problem of terrorism, and the Department of State might feel compelled to underreport incidents in an effort to show improvement resulting from new anti-terrorism initiatives.

Data on levels of international counterfeiting is, by comparison, much more difficult to procure. Since the counterfeiting industry is illegal and unregulated, precise statistics on number of counterfeits produced or sold simply do not exist. As a proxy for total number of counterfeits, this regression analysis takes into account the number of counterfeit products seized by the US Customs and Border Protection, as reported by end-of-year intellectual property rights seizure reports. This measure is, however, far

from ideal. Customs seizures would constitute an accurate proxy only if the border patrol captured an equal percentage of total fakes being imported into the country each year. Unfortunately, changes in policing strategies, import policies, and factors such as funding and political pressure likely cause fluctuations in the seizure rate, causing the proxy to be an imprecise measure. Ultimately, with no better measure of counterfeiting available, this regression must rest on the assumption of a stable capture rate.

As a check of the general validity of the seizures proxy, one additional factor is substituted for the independent variable of interest. This measure – referred to as world trade share – takes into account a very rough estimate of the aggregate yearly value of the counterfeit trade. The data for this control is generated from annual figures of aggregate world trade value (as reported by the World Trade Organization) and a 6% estimate of the trade share attributable to counterfeit goods (simply the mean of the 5-7% figure discussed earlier). While this control is also imprecise, it may provide interesting confirmation or refutation of the results obtained with the seizure statistics. World trade value figures are also more reliable than counterfeit values reported by companies suffering from intellectual property theft (such as LVMH) in that they avoid an almost certain overreporting bias.

Controls in the regression include GDP per capita and consumption per capita in the United States, since the seizures proxy is created from US Customs data. Figures on GDP and consumption per capita are also included for China (including Hong Kong) since China is the source of approximately 75% of annually traded bootleg products (see also: Appendix A, Figure 1). The two measures of economic controls are obtained from reports of the IMF. Finally, time-fixed effects are used to capture external variables that vary across years.

VI. General Findings and Regression Results

Table 1 – Summary Statistics of Variables of Primary Interest

Variable	Mean	St. Dev.	Min	Max	Observations
DOS Terrorist Incidents	334.917	81.300	205	440	12
RAND Terrorist Incidents	251.571	83.910	106	395	14
US Customs Seizures	3844.214	2179.844	1253	8022	14

A first interesting feature of the data is the marked difference between the Department of State (DOS) and Rand/MIPT (RAND) terrorism statistics. As shown in Table 1, the DOS index categorizes far more incidents as terrorism. This distinction between the two is the first of many differences which will be discussed.

Figure 2 – Scatterplot of Seizures vs. DOS

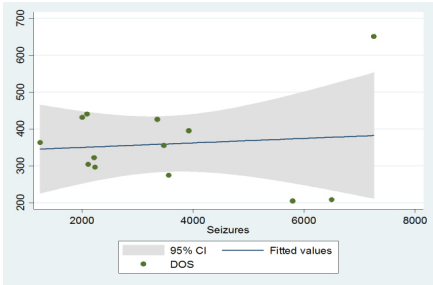


Figure 3 – Scatterplot of Seizures vs. RAND

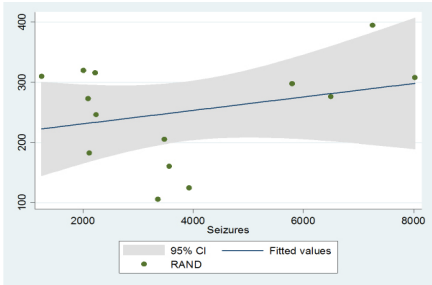


Figure 4 – Scatterplot of Seizures vs. lnDOS

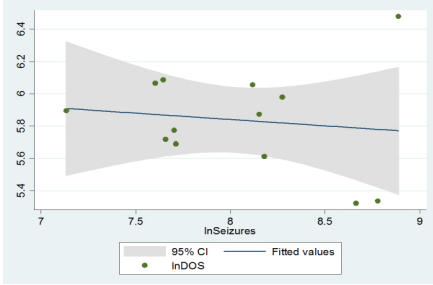


Figure 5 – Scatterplot of Seizures vs. lnRAND

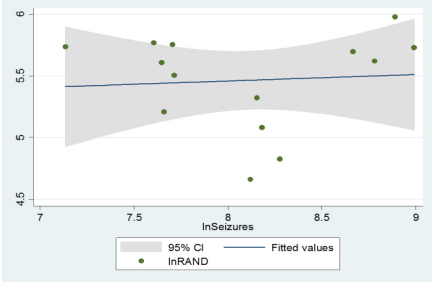
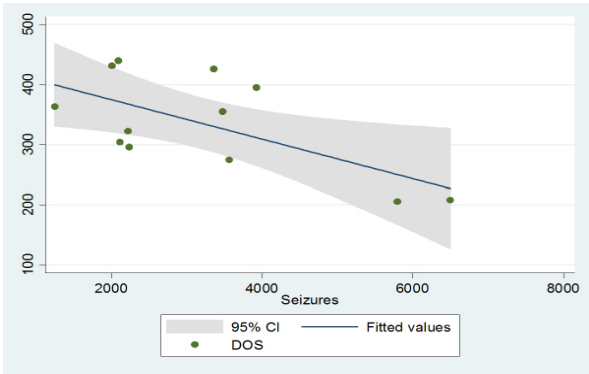


Figure 6 – Scatterplot of Seizures vs. DOS After Removing the 2004 Outlier



An initial regression of seizures on the two indexes yields interesting yet somewhat ambiguous results. Figures 2 through 5 show scatterplots of observed terrorism vs. seizures, along with simple regression lines and 95% confidence intervals of their slopes. Figures 2 and 4 suggest very weak or no association between number of customs seizures and terrorist incidents recorded by DOS. By contrast, Figures 3 and 5 seem to suggest that increases in seizures correlate to more terrorism, as recorded by RAND. Two additional important features of the data are revealed by the scatterplots. First, as seen in Figure 2, one large outlier (in the top right corner) seems to be significantly skewing the regression. This point represents the year 2004 in which recorded DOS incidents more than tripled from 208 to 651. Rather than an actual change in levels of terrorism, this discrepancy reflects a change in the Department of State's definition of "terrorist incident" to a much broader measure.¹⁴ After removing the outlier, there is a negative correlation between the variables, as shown in Figure 6. To avoid an errors-in-variable measurement bias, the 2004 outlier is removed from all regressions. Second, in each case, there is strong evidence for a linear relationship between the variables, allowing for formal regressions ignoring the possibility of alternate functional forms. The one relationship most nearly parabolic – $\ln Rand$ and $\ln Seizures$ (as shown in Figure 5) – is in fact determined to be best modeled by a linear regression after testing a model inclusive of the regressor $\ln Seizures^2$. The coefficient on this term is insignificant, and the adjusted R^2 of the regression decreases.

Results of the simple linear regression of seizures on the two indexes of terrorism are shown in Table 2. R^2 values vary widely between the four regressions, ranging from .339 to .873. While it is encouraging to see relatively high values, it is worrisome that a vast inconsistency exists between the regressions on DOS incidents and those on RAND. It seems highly suspect that the included regressors would account for between 34% and 57% of the variation in terrorist incidents recorded by the DOS index, but a much greater 84% to 88% of the variation in incidents recorded by RAND.

14 Urbancic, Frank C. and Travers, Russ. "Briefing on Release of 2006 Country Reports on Terrorism." *US Department of State*, 30 April 2007. <<http://www.state.gov/s/ct/rls/rm/07/83999.htm>>.

Table 2 – Regression Statistics of Effects of Seizures on International Terrorist Incidents

Variable	(1) DOS Terrorist Incidents	(2) RAND Terrorist Incidents	(3) ln DOS Terrorist Incidents	(4) ln RAND Terrorist Incidents
Customs seizures	-.048 (.038)	.055*** (.014)	-----	-----
ln Customs Seizures	-----	-----	-.442 (.541)	.768*** (.275)
US per capita real GDP	96.079 (139.431)	-78.642* (45.317)	.272 (.457)	-.541*** (.209)
China per capita real GDP	-318.319 (383.843)	39.036 (129.210)	-1.268 (1.324)	.462 (.594)
US consumption per capita	-5.698 (33.007)	-21.091 (14.671)	.017 (.137)	-.113* (.060)
China consumption per capita	130.893 (88.365)	50.667 (43.340)	.817 (.534)	.416*** (.161)
Year indicators?	Yes	Yes	Yes	Yes
Country indicators?	No	No	No	No
R ²	.566	.842	.339	.873

Notes: Heteroskedastically-robust standard errors are shown in parentheses below each coefficient. Significance at the 99% level is denoted by β^{***} , and at the 90% level by β^* .

The coefficients on the main independent variable are somewhat surprising. In regression (1), customs seizures are shown to have a negative (though insignificant) correlation to DOS incidents. By contrast, seizures have a positive correlation to RAND incidents, which is significant at the 99% level. Despite this significance, the coefficient is quite small, and the finding relatively difficult to interpret in a real world sense. Much more relevant are the results of regressions (3) and (4). The insignificant coefficient on *Seizures* in regression (3) shows that a 1% increase in levels of seizures corresponds to a .4% reduction in international terrorist incidents (as recorded by DOS). The coefficient in regression (4) reveals a .7% increase in RAND incidents for every 1% increase in Customs seizures (again significant at the 99% level.) While it may technically be appropriate to claim that the

regression results evidence a positive relationship between counterfeiting and terrorism – considering that the coefficients on the seizures proxy are only significant when positive – such a claim is not entirely straightforward. Instead, the distinction should be made that counterfeiting seems to increase RAND-defined terrorism, while decreasing or having no significant effect on DOS-defined incidents. Ultimately, this ambiguity makes it more or less impossible to put forth a confident claim about the effect of counterfeiting on aggregate international terrorism.

Results of the control variables in the model are equally unconvincing. There is a great discrepancy between the signs of correlations of economic factors to terrorism when comparing the two indexes. Ultimately, most of these coefficients are insignificant, and it cannot be claimed that they are statistically significantly different from zero.

Table 3 – Regression Statistics of Effects of World Trade Share on International Terrorist Incidents

Variable	(1) DOS Terrorist Incidents	(2) RAND Terrorist Incidents	(3) ln DOS Terrorist Incidents	(4) ln RAND Terrorist Incidents
World trade share	.001 (.001)	-.0008 (.0009)	-----	-----
ln World trade share	-----	-----	2.075 (1.651)	-1.576* (.926)
Economic controls?	Yes	Yes	Yes	Yes
Year indicators?	Yes	Yes	Yes	Yes
Country indicators?	No	No	No	No
R ²	.496	.755	.439	.847

Notes: Heteroskedastically-robust standard errors are shown in parentheses below each coefficient. Significance at the 90% level is denoted by β^* .

The inclusion of world trade share as a proxy for counterfeiting does very little to clear up the ambiguous results obtained using Table 2. Table 3 in fact shows opposite results – a negative correlation between counterfeiting (through the world trade share proxy) and RAND terrorism, and a positive correlation between counterfeiting and DOS terrorism. However, only regression (4) bears a significant coefficient, and evidences a 1.5% decrease

in RAND terrorism for a 1% increase in the estimated aggregate value of international counterfeit products. As in the regressions of Table 2, a very large portion of the variation in terrorist incidents is accounted for. The included regressors in Table 3 account for between 43% and 50% of the variation in DOS incidents, and between 75% and 85% of the variation in RAND incidents.

VII. Limitations to the Regression Model

A number of significant problems arise in this regression analysis that limit the extent to which results can believably be generalized to the real supply of international terrorism. As mentioned earlier, the lack of reliable data is the first serious shortcoming of the model. Data on the dependent factor – international terrorism – is surprisingly subjective and varies greatly depending on its source. US government data employs questionable methodology that leads to tripling of terrorism rates in response to changing definitions of the term “terrorist incident.” RAND index data is more conservative, using a generally stricter definition of terrorism, but may be subject to a number of oversights itself. In 2004, for instance, when the DOS statistics reported 295 terrorist incidents taking place in the war-stricken Kashmir region, RAND failed to find a single act of terrorism in the province. The distinction boils down to a debate over whether the insurgency in the region – manifested in recurring violence against unarmed non-combatants – is or is not international in scope. While DOS interprets the violence as contributing to Indian-Pakistani conflict and posing a threat to US and international security, RAND views the incidents as isolated within the region and inherently removed from international influence.¹⁵

While an errors-in-variable bias calls into question the validity of data on the dependent factor, data used for the independent variable of counterfeiting is subject to error simply in that the construction of the model may not be entirely accurate. The principle assumption on which the regression rests – that US Customs captures an equal percentage of total counterfeits each year – is likely not accurate. Rather, unmeasured factors such as changes in policing strategies, pressures from anti-counterfeiting groups, and even sheer luck most likely have significant bearing on Customs seizures for a given year. The world trade share estimate is similarly flawed in that the oversimplification of assigning 6% of annual world trade to counterfeit products is not entirely likely. In either case, the independent

15 Rheinheimer, Francis. “Terrorism Statistics Flawed.” *Center for Defense Information*, 12 April 2006. <<http://www.cdi.org/program/document.cfm?DocumentID=3391>>.

variable of interest is simply a proxy rather than a direct measure of the level of counterfeiting. Beyond the issues of data accuracy, this makes the analysis much less meaningful in terms of interpretation of the direct effect of the counterfeiting industry on terrorism.

In addition, one alternate theory might further confound the interpretation of the counterfeiting coefficients (under the seizures proxy). An argument could be made that counterfeits are produced in roughly equal quantities each year, and hence, increases in Customs seizures reduces the net sales and profits of the counterfeit industry. Under this theory, a negative—not positive—coefficient on *Seizures* would indicate the financing of terrorism through pirated goods. In reality, this hypothesis is probably not true. However, the most accurate measure of counterfeit goods sold may still somewhat benefit from the subtraction of captured products that will never make it to market.

A potentially large omitted variable bias constitutes the second main threat to the internal validity of the regression model. After the issues with data accuracy, the fact that few controls are included represents a main shortcoming of the analysis. Despite the fact that R^2 values are rather high, a number of important predictors are undoubtedly absent from the model. An example of one such important factor which can most likely never be fully quantified is social attitudes toward right of law and crime. This variable would undoubtedly influence counterfeits (on both the supply and demand sides) and also serve as a predictor of terrorism.

A final, more general limitation to this regression model rests on the question of whether a phenomenon such as terrorism can ever really be sufficiently explained. Deliberate acts of large-scale violence can partially be attributed to factors such as economic conditions, political strife, religion, and societal upbringing, but in another sense can only be linked to entirely irrational psychological aspects and behaviors unable to be explained by data compilation and OLS. Future studies might do better to avoid the psychological and focus instead on the purely economic variables that can be fully analyzed and accounted for. If there were a way to obtain detailed information on a factor such as the aggregate annual revenues of militant or terrorist organizations, then a regression might be able to link counterfeit profits to the funds backing terror groups. Unfortunately, with such limited perspective on the financial dealings of terrorists, no such analysis can currently be conducted. Very likely, the best solution lies somewhere between the realm of purely observational analysis and the type of study in this paper which searches for a link between the counterfeit trade and actual terrorism events.

VIII. Conclusion

The regression results of this analysis leave open much room for debate over the effect of the counterfeiting industry on international terrorism. Table 2 shows that if RAND figures are accurate, then counterfeits may indeed correlate with terrorism. If, however, DOS statistics are correct, then such a positive correlation may not exist.

This worrisome observed contradiction between indexes is unfortunately representative of data biases in general. Felix Salmon argues that the vast majority of counterfeiting statistics are fabricated, often in an attempt to pander to influential lobbying forces.¹⁶ According to Salmon, statistics reported by New York City Comptroller William C. Thompson Jr. make the far-fetched implication that one-third of all expenditures in the city go toward counterfeit goods on the black market. Regarding the value of annual counterfeits and the 5-7% figure concerning world trade share, Salmon reports that Peter Lowe, the assistant director of the International Chamber of Commerce's Counterfeiting Intelligence Bureau, regards the elusive initial source of the statistics as "lost in the mists of time."¹⁷

Ultimately, very little is certain in assessing the magnitude of the counterfeiting industry and the proposed connection between the industry and international terrorism. To create a stronger model with which to analyze the effect of any policy changes, obtaining more accurate, in-depth data is obviously of the greatest importance. Levitt and Venkatesh used detailed financial information provided by the incarcerated leader of a Chicago gang in assessing the sources of revenue and expenditures for the organization.¹⁸ This information revealed a great deal about gang financing, drug trafficking, and inner-city violence. With the sophistication and high level of organization associated with some terrorist groups, it is likely that similarly detailed financial records for these factions do exist. Though it might be more difficult to obtain cooperation from an incarcerated terrorist leader than from a gang leader, it would nevertheless be enlightening to see accounting statements of the sources of funding for an organized terrorist group.

Finally, it should be debated what exactly is the appropriate

16 Salmon, Felix. "Thompson's Counterfeit Numbers." *The New York Sun*, 2 December 2004. <<http://www.felixsalmon.com/nysun.html>>.

17 Salmon, Felix. "All counterfeiting statistics are bullshit." 9 June 2005. <<http://www.felixsalmon.com/000363.html>>.

18 Levitt, Steven D. and Venkatesh, Sudhir Alladi. "An Economic Analysis of A Drug-Selling Gang's Finances." *Quarterly Journal of Economics*, August 2000, 115 (3), pp. 755-789.

methodology for evaluating the effect of the counterfeiting industry on terrorism. This study utilizes OLS regression in an attempt to link changes in counterfeit sales to yearly fluctuations in terrorist incidents. One factor not accounted for in any of the regressions is the potential importance of lags. The implicit assumption behind Tables 2 and 3 is that counterfeiting revenues are earmarked for the funding of terrorist attacks in the same calendar year. However, there may be a number of reasons why funds earned in one year finance incidents only after a certain amount of time. For example, it may take a year to launder illegal revenue to make it available for use in executing an attack, or several years just to plan such an attack. If this is the case, then the original regression:

$$T_t = \beta C_t + \delta X_t + \varepsilon_t$$

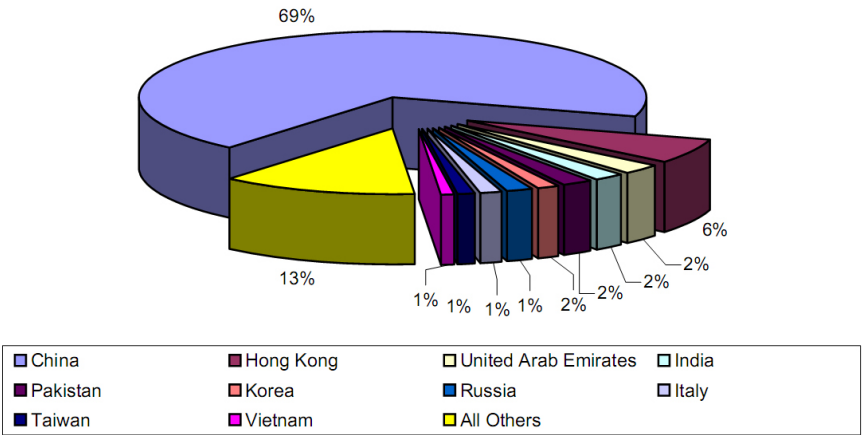
should be modified to read:

$$T_t = \beta C_{t-y} + \delta X_t + \varepsilon_t$$

so that terrorist incidents in year t are regressed as a function of counterfeiting profits after a lag of y years.

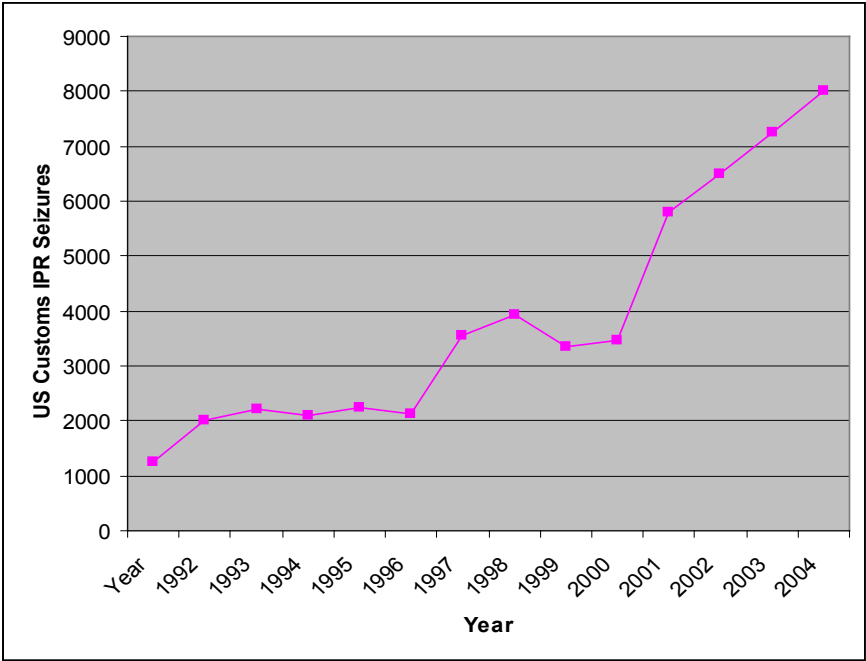
More generally, it should be questioned whether OLS is an appropriate method of study at all. The supply of international terrorism is fueled by funding from a wide array of sources. While revenue derived from the sales of counterfeit products may fund some terrorist incidents, it is inconclusive whether fluctuations in the overall levels of bootleg product sales will be a significant enough predictor to establish causation in the international terrorism market. Therefore, it may be in the best interest of law enforcement officials to focus on accounting figures and financial information of terrorist groups in reviewing incidents on a case-by-case basis rather than at an aggregate level. Policymakers in turn may be best advised to combat intellectual property theft as a crime in its own right and hope for a secondary benefit of reductions to terrorism potentially financed by the counterfeit trade.

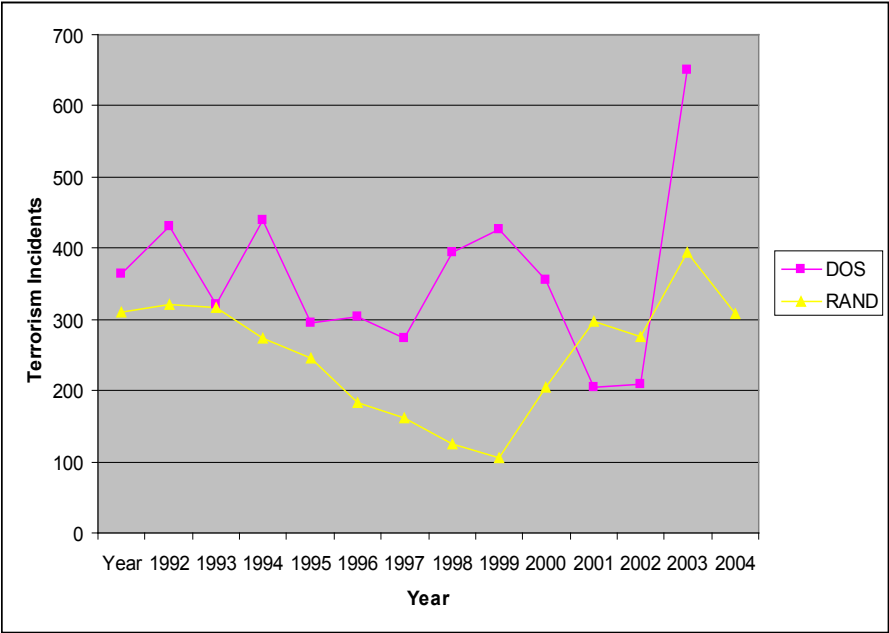
Appendix A
Figure 1 – Countries of Origin of Counterfeit Products (2005)



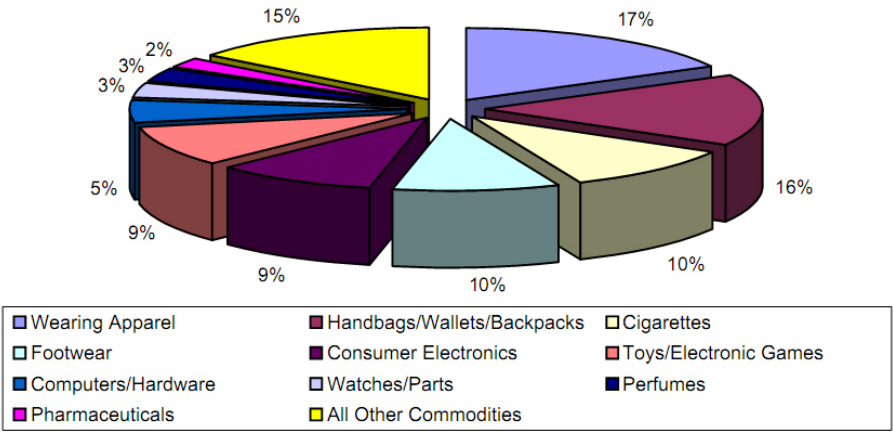
Source: US Customs and Border Protection, L.A. Strategic Trade Center, 11/3/05
<http://www.cbp.gov/linkhandler/cgov/import/commercial_enforcement/ipr/seizure/trading/fy05_midyear_stats.ctt/fy05_ipr_midyear.pdf>.

Appendix B
Figure 7 – Counterfeiting and Terrorism Incidents over Time





Appendix C
Figure 8 – Top Counterfeit Commodities Seized (2005)



Source: US Customs and Border Protection, L.A. Strategic Trade Center, 11/3/05
<http://www.cbp.gov/linkhandler/cgov/import/commercial_enforcement/ipr/seizure/trading/fy05_midyear_stats.ctt/fy05_ipr_midyear.pdf>.

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