The Cost of Terrorism to Financial Markets in Israel

Utility Maximization for Econo-Jihad

By

Gil Shefer

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Professor Marti G. Subrahmanyam	Professor Simon Bowmaker
Faculty Advisor	Thesis Advisor

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Abstract

Fear is the instrument that terrorism bluntly uses to achieve its aims. As the world recovers from an economic recession, fear of financial collapse gives way to Econo-Jihad, a portmanteau that captures terrorism's will to impact financial markets. This thesis explores the role terrorist attacks play in influencing the Tel Aviv 100, an index fund traded on the Tel Aviv Stock Exchange. Using data from University of Maryland's START database, Financial Content, Inc., and the World Bank provides almost ten years of contiguous data on the financial cost of terrorism. The quantitative model is joined with the concept of an economically rational terrorist, one who seeks to maximize his or her expected utility from each terrorist attack by creating the most negative returns to financial markets. Using parameters like # of attacks, location of attack, fatalities and injuries provide the hypothetical function for our utility equation. This study concludes, with 99% statistical significance, that an attack in Tel Aviv or Jerusalem causes the financial markets in Israel to drop 25.7 points (2% of its value on May 2, 2010) and *each* fatality will cause the market to drop 5.63 points (0.5% of its value on May 2, 2010 per each death). The thesis concludes by noting that an attack in and of itself has no statistically significant impact on Israeli markets, nor does the number of attacks or injuries resulting from such attacks. Policy makers should therefore focus on allocating resources to economically and politically valuable cities, like Tel Aviv and Jerusalem, while equally assuring the safety of potentially high fatality targets.

I would like to express my sincere appreciation to my thesis advisor, Professor Simon Bowmaker, for his guidance, insight, patience, and encouragement. His positive reinforcement and valuable input has helped shape this paper into what it is today. I would also like to thank Professor Marti Subrahmanyam, Jessie Rosenzweig, the seminar speakers, and my fellow classmates for making this program successful. I owe a special debt of gratitude to Karen Greenberg; Executive Director of the Center on Law and Security at NYU School of Law, who's Center has been the inspiration for this paper and a source of tremendous knowledge and support over the past three years.

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Introduction:

Few words in our lexicon share the protean character of the word terrorism. Conceived during the tumultuous French Revolution, it originally described methods used to impose a "radical new order on a reluctant citizenry."[1] As you might well imagine, despite the words etymological origins, terrorism, in its form and variety, existed long before the French were galvanizing their countrymen.

Even using the Académie Française's 1798 definition, "system or rule of terror," can lead one to suspect that terrorism may be as old as civilization itself. Indeed, the first Mesopotamian empire, that of Sargon of Akkad, was "founded on terror."[2] Adopting a Darwinian take on ideas leads one to the fundamental, yet sullen, conclusion that terrorism is *useful*. The ensuing paper will seek to partially test that conclusion, at least with regard to its economic affects on the contemporary state of Israel.

The motivation of this research is very much personal. Having been born in Israel and leaving at the young age of three, there has been and will continue to be interest in understanding the geo-political forces that surround my heritage. As an extension of precisely these agents, I have worked as a researcher at *New York University's Center on Law and Security* at NYU School of Law. In my capacity as intern, I have only become more interested in the nebula of issues that surround terrorism, be they legal, political, or economic.

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[1] Roberts, Adam Sir. BBC. Online. Internet.
<http://www.bbc.co.uk/history/recent/sept_11/changing_faces_01.shtml> 27 August 2002.
[2] Chaliand, Gérard. "The History of Terrorism: From Antiquity to Al Qaeda." University of California Press: Berkeley, 2007. Page vii.

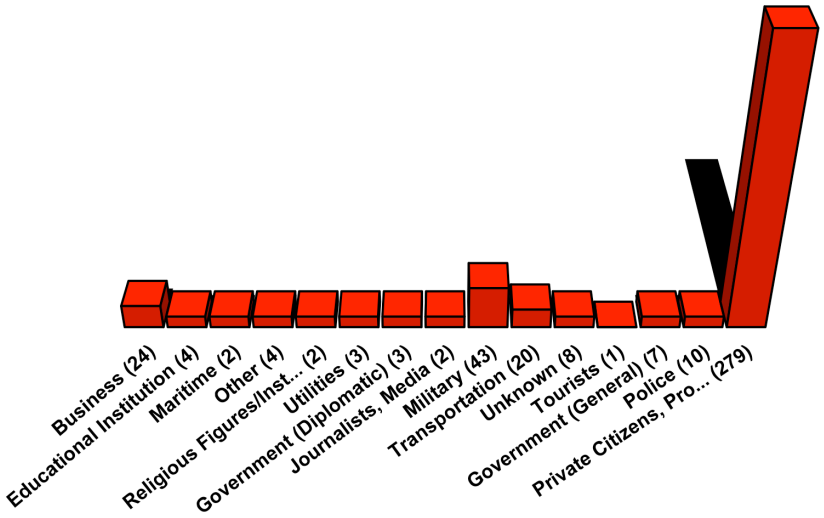
This paper does not claim to explain the full cost of terrorism to financial markets in Israel, but rather strives to pave the way for a more exhaustive search into what the impact of terrorism may have on that nation's markets. As will be discussed further in length, there is some consensus as to why it is important to study the economic effects of terrorism, but very little agreement on which practices are best for determining it. It is no coincidence, for example, that the World Trade Center in New York City was chosen as a target on 9/11. Economic targets have been conspicuous targets for terrorists, not only because they serve to symbolize what is often anathema to the perpetrators (i.e. capitalism) but also because these enemies look favorably upon the spillovers from economic distress, i.e. instability, policy change, and even regime change.

This body of work aims to add some substance to the important study that surrounds "costing" terrorism on financial markets in Israel.

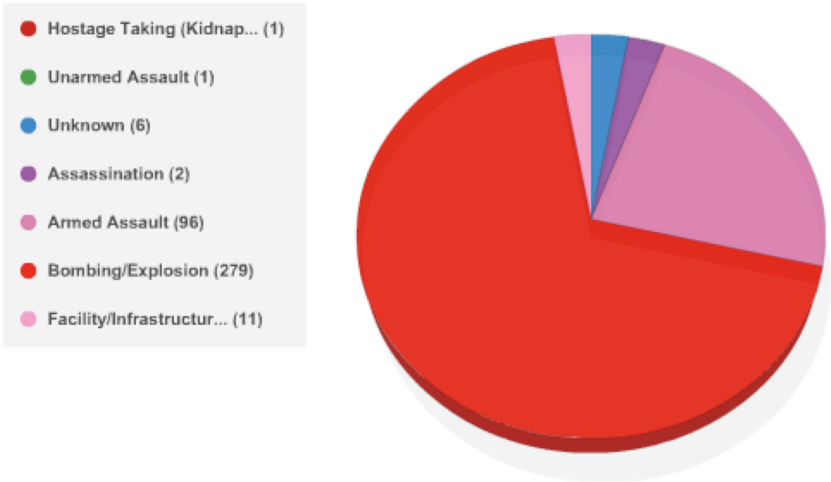
Background

With the benefit of the *University of Maryland's* very comprehensive START database, we can discover a great deal from the hundreds of terrorist attacks that have occurred in Israel from 1997 to

2007.[3] Though now overshadowed by the quotidian attacks that occur in Iraq and Afghanistan (see chart above, which was recently compiled by *IndiaToday*), Israel persists to deal with terrorism in many forms.



Beginning with the descriptions on target type, the data indicates that the perponderance of terrorism in Israel was focused on private citizens and property (279 attacks). Military targets came second with 43 attacks during the same ten year period.



Looking more specifically at the composition of these attacks, we find that most incidents pertain to bombings and explosions, with a sizable portion also attributed to armed assualt.

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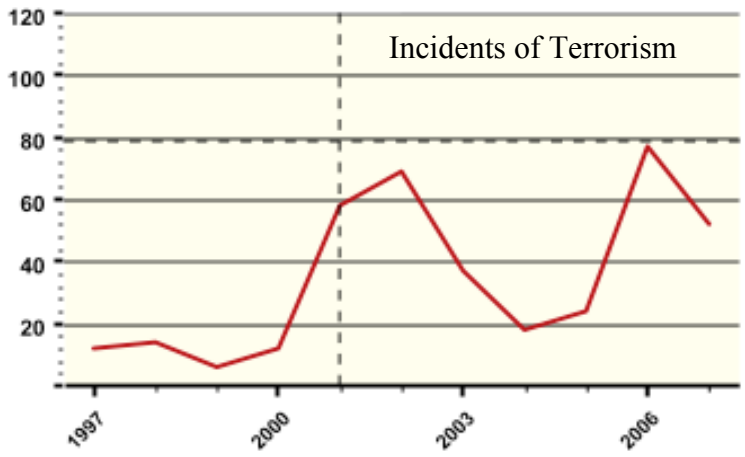
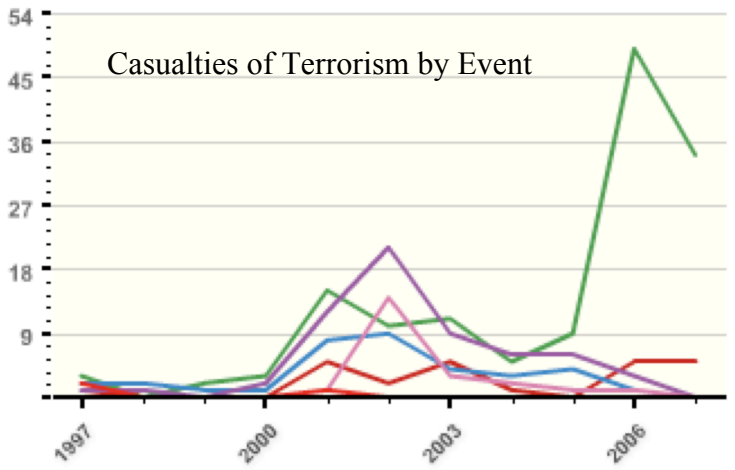
[3] For more information on this database, see http://www.start.umd.edu/gtd/
***Chart Above: Babu, Venkatesha. Indiatoday. Online. Internet.
<http://www.terrorismwatch.org/2008/11/major-terror-attacks-world-over.html> 30 April 2007.

The attacks themselves were largely in waves, beginning first with the intifada in 2000 and then with another strong resurgance of terror in 2005-6. Consquently, the number of casualities differ year by year, both because of the number of incidents and the extremity of the attacks attempted during these volatile political times.

Taking the two charts to the right, we can begin to understand the psyche of terrorism during this time interval. In the period between 2000 and 2003, there was a noticable spike in non-zero casualities (everything but the green line). Comparatively, the second surge of terrorism, between 2005 and 2006, was predominately filled with attacks that achived zero casualities. It is unclear whether the damage from these attacks made a lasting impact on property, but irregardless, it seems clear that terrorism is *not solely* an attempt to exact casualties. If that were the case, it could be argued that terrorists were ineffective during the 2nd wave of attacks to exact a high number of casualities per attack.





This brings us to the economic consequences of terrorism.

Professor Gabriel Weimann of the University of Haifa, Israel recently concluded, "For the Jihadists, the present economic crisis signifies an ideal opportunity and platform to leverage an economic terrorist campaign."[4] Weimann has called this new trend "Econo-Jihad," a portmanteau created to reflect his belief that there "is evidence that the economic turn actually influences the terrorists' targets, which have included oil-drilling infrastructures, tourism, international economic institutions and more."[5] Now that we have established some basis for hypothesizing that terrorist attacks in Israel are more complicated than a mere maximization of casualties, we can begin to assess the statements of Professor Weimann and other economists, whose literature on the economics of terrorism bear consideration.

A Foggy Mirror: What the Stock Market Can Tell Us

Several studies on the relationship between terrorism and the stock market have been conducted by researchers in both Israel and the United States, with conclusions that vary greatly. A paper from *Ohio State University* conducted an event study of attacks between 1995 and 2002, which "uncovers evidence of a statistically significant negative stock price reaction of -0.83%, which corresponds to an average loss per firm per attack of $401 million in firm market capitalization."[6] Since these authors took into consideration terrorist incidents from around the world, they focused their research on a list of attacks that knowingly went after the interests of specific companies, like Coca-Cola. Their results also yielded other information, "A cross sectional analysis of the abnormal returns

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[4] Feldman, Rachel. "Terrorism's new target: 'Econo-Jihad." Online. Internet. <http://www.eurekalert.org/pub_releases/2010-03/uoh-tnt030110.php> 1 March, 2010.
[5] Ibid.
[6] G. Andrew Karolyi and Rodolfo Martell. "Terrorism and the Stock Market." Online. Internet. <http://www.cob.ohio-state.edu/fin/dice/papers/2005/2005-19.pdf> 2005.

indicates that the impact of terrorist attacks differs according to the home country of the target firm and the country in which the incident occurred. Attacks in countries that are wealthier and more democratic are associated with larger negative share price reactions. Most interestingly, we find that human capital losses, such as kidnappings of company executives, are associated with larger negative stock price reactions than physical losses, such as bombings of facilities or buildings."[7] This papers touches not only upon the microeconomic effects of terrorism, but also on the differing reactions and sensitivities to terrorism within different political and social contexts.

In a similar study done across industries, Eldor and Melnik of the *Arison Business School* in Herzliya, Israel wanted to specifically determine whether terrorism affects defense and security-related industries differently than it does other economic sectors. They hypothesized that terror attacks would dampen the activity of most economic sectors but, at the same time, enhance expected business for companies in the defense and security industries.[8] The data, taken between 1990 and 2003, took a period of time in which 1,212 people in Israel were randomly killed and 5,726 people were randomly injured.[9] The authors concluded that location of a terror attack had no effect and that markets became desensitized to terror attacks. Ultimately, the authors conclude, "financial markets continued to efficiently perform their economic functions. Also, market-liberalization policies were not disrupted; the conclusions about market efficiency suggest that the

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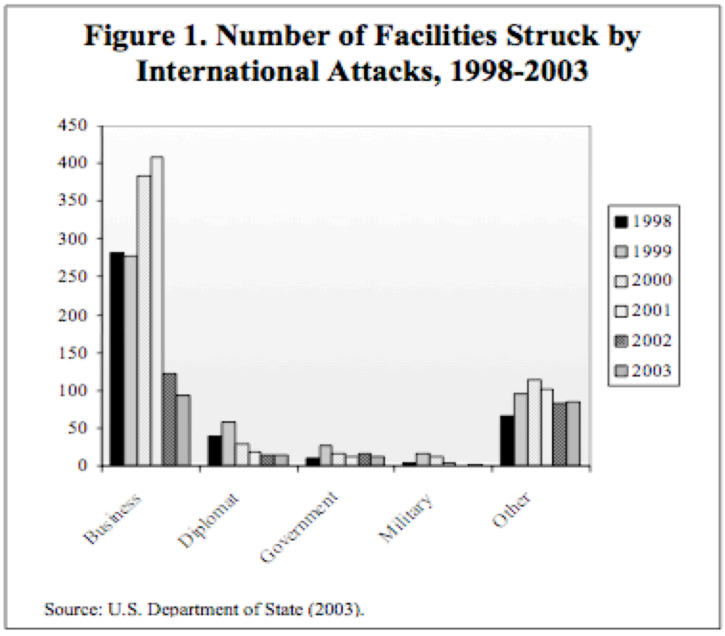
[7] Ibid.
[8] Eldor, Rafi and Rafi Melnik. "Financial Markets and Terrorism." Online. Internet. <http://pluto.huji.ac.il/~msfalkin/pdfs/paper%200503.pdf>. March 2003.
[9] Ibid.

market liberalization policies contributed to coping with terror."[10] The notion of *coping* with terrorism is often used in Israeli cultural mythology and seems to be supported by the work of Eldor and Melnik.

This is not the case in a study by Dotan Persitz of *Tel Aviv University*, whose study indicated that, "had there been no terror in Israel since 1994, the country's per-capita GDP in 2003:3 would have been 8.6% higher than it was."[11] Persitz adopts a different methodology that Eldor and Melnik, using a counterfactual rule for Israel that compares it with a subset of OECD countries before the Palestinian terror erupted. His analysis speaks to the macroeconomic effects from terrorism, rather than changes in financial markets, yet has relevance in our conceptualization of a nation that claims to cope with terrorism.

In a paper published by the *International Monetary Fund*, researchers Barry Johnson and Oana Nedelescu examined international terrorism on a broader scale. As seen by the chart to the right, these authors discovered that "business facilities have represented, by far, the preferred target of international terrorist attacks



[10] Ibid.
[11] Persitz, Dotan. The Economic Effects of Terrorism: Counterfactual Analysis of the Case of Israel. Online. Internet. <http://www.aeaweb.org/annual_mtg_papers/2007/0106_1015_1802.pdf>

since 1998."[12] To begin assessing the effects of terrorism on financial markets, the authors examined the direct effects after 9/11. Johnson and Nedelescu note that the effects were "visible worldwide on the major equity markets, which experienced sharp and rapid declines, demonstrating that market participants perceived the event as a global shock. The decline in the European stock markets, which started operating before the U.S. markets were opened, was even greater after September 17th, because of spillover effects. All in all, the Dow Jones Euro STOXX index was down 17.3 percent between September 11 and September 21."[13]

The study later compared the aftermath of 9/11 on financial markets with the Madrid 2004 bombings. Overall, these authors agree with the conclusions found by Eldor and Melnik, "financial markets were efficient in absorbing the shocks determined by terror attacks and continued to perform their functions in an effective way."[14] The stabilization was also attributed to the Federal Reserve's accommodative policy, "which was able to calm and stabilize the economy through the U.S. banking/financial sector" and "by a banking/financial sector that provides adequate liquidity to promote market stability and stifle panic."[15]

Like a ship at sea during a violent storm, an individual terrorist attack may shock financial markets with strong waves, but, as many studies seem to suggest, the waves are rarely large enough to capsize the vessel in the long term.

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[12] R. Barry Johnston and Oana M. Nedelescu. "The Impact of Terrorism on Financial Markets." Online. Internet. <http://www.imf.org/external/pubs/ft/wp/2005/wp0560.pdf> March 2005.
[13] Ibid.
[14] Ibid.
[15] Ibid.

Rational Behavior and Terrorism

Some of the first research on the economics of terrorism was done by Gary Becker and Yona Rubenstein, who used a rational choice model with the understanding that "terror affects not only the likelihood to be harmed but mainly, by generating *fear*, persons' utility and well-being."[16] Becker and Rubenstein use data from both Israel and the United States to study the behavior of people in terrorist-affected areas. They come to the conclusion that "while terror generates large average effects on consumers it has little effect on the compensation (wages) of those employed in the "infected" industries."[17] By compiling data on taxi and bus routes in Israel, the authors were able to find a strong negative effect on bus routes after a suicide attack carried out on buses.

Interestingly, controlling for income, age, and education they found no effect whatsoever of suicide bomber attacks on the number of bus rides taken by high frequency users. The authors claimed that the most committed users had effectively developed the "mental skills" that allowed them to absorb the effects of terrorism. The same conclusion was reached when they surveyed coffee shop users, which after terrorist attacks, would be mostly composed of customers that would typically spend a large part of their income on coffee shops to begin with. Despite these results, the paper comes to the conclusion that "terror generates large scale effect by damaging the quality of our life rather than the

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[16] Becker, Gary and Yona Rubenstein. "Fear and the Response to Terrorism: An Economic Analysis." Online. Internet. <http://www.econ.ku.dk/CAM/Files/Seminar/Thursday/BRabsract.pdf>
[17] Ibid.

"quantity" of life."[18] This study provides a behavior analysis of how we might expect terrorism to affect financial markets, which can largely be driven by consumer behavior.

The Rational Terrorist, Stock Market Mechanisms, and Hypotheses

University of Michigan political scientist Thomas Chadefaux provides a framework from which we can understand the opposite spectrum, that of a rational terrorist. Using his model, a rational terrorist is one who has a "a strategy to increase the cost of the other party in order to make it change its behavior."[19] When combining this basic understanding with a model focused on financial markets, we can derive a function for the expected utility of Econo-Jihad.

$E(U_T) = -\Delta$ in Financial Markets as a *function of* (# of attacks, Location of the Attack, # of Fatalities, and # of Injured)

The equation to the left will serve as the core hypothesis, which implies that the expected utility from a terrorist interested in Econo-Jihad will be derived from a negative change in financial markets. The change in financial markets will be a function of factors that can be directly influenced by the terrorist, such as the number of attacks, location of those attacks, the number of fatalities recorded per attack, and the number of injured per attack. A rational terrorist will attempt to maximize whichever of these characteristics can be determined to increase his or her expected utility from terrorism (U_T).

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[18] Ibid.
[19] Chadefaux, Thomas. Presentation on the Terrorism. Online. Internet. <www-personal.umich.edu/~chadefau/160_Slides/11-Terrorism.pdf>

The mechanisims that suggest that financial markets can be effected by terrorism arise from the costs associated with each attack.

- *Security Costs*: Each additional terrorist attack heightens public concern and vigilance. Businesses will be forced to hire private security detail, rearrange transportation and shipping, and spend considerably more time worrying about security.
- *Foregone Future Cash Flows*: Despite Becker and Rubenstein's work on the "mental skills" that acclimate some to terrorism, there exists a sizable population that will likely curb their spending and leisure time due to terrorist attacks. The challenge with consumer behavior can be very sticky, as consumers will not only curb their spending in the present, but may likely hold off spending for weeks or months if the threat level is perceived to be high.
- *Foregone Foreign Investment*: Risk averse investors are unlikely to be attracted to Israel with news of a terrorist attack. Similarly, deals already being negotiated may have to compensate for the increased risk that each attack presents to the country.
- *Market Signaling*: In a nation with a long history of wars in its sixty-two year existence, each terrorist attack may serve as a market signal for impending conflict. A string of attacks, or even one especially deadly attack could signal a time of economic uncertainty and great risk.

Bearing in mind the utility framework and mechanisms discussed above, I make the following hypotheses.

1. **Location and Fatalities will serve as a proxy for the magnitude of a terrorist attack**. Pinning location to either Tel Aviv or Jerusalem while at the same time maximizing deaths will have the largest effect on financial markets.

2. **Attacks in small towns or cities excluding Tel Aviv and Jerusalem will not significantly affect financial markets**. This hypothesis will be valuable in determining what the political costs of responding to katyusha rockets that frequently land in Sderot, Israel will be, given their affect on financial markets.

3. **The mere attempt to attack is not enough; attacks that neither kill nor injure will not maximize a terrorist's utility**. If the rational terrorist wants to extract the most damage from Econo-Jihad, attacking for the sake of attacking will be insufficient. Though there may be political considerations for maintaining operations, a utility maximizing terrorist will save resources for the most damaging type of attack.

Data

This thesis relied upon a dataset of 3,836 dates, spanning from July 1st, 1997 to December 31, 2007. The data came from three sources. As a proxy for financial markets, I used the Tel Aviv-100, an index fund published in

Descriptive Statistics

	Mean	Standard Deviation
TA-100(Close)	548.0334958	240.338026
# of Attacks	0.095933264	0.341290044
Fatalities	0.205943691	1.537646187
Injured	1.011209593	7.931133148
Foreign Direct Investment	1340857299	1513804278
Export of Goods and Services (% of GDP)	37.09707486	4.624355682
GDP (Constant 2000 USD)	1.28E+11	13435475887
Inflation	2.597975557	2.551468768

1992 containing 100 stocks with the highest market capitalization. I took the closing price from each day the Tel Aviv Stock Exchange was open and carried the closing price through weekends and holidays. All the financial data was provided by FinancialContent, Inc.

The data on terrorism was made possible through the *University of Maryland's* START program (Study of Terrorism and Responses to Terrorism). The database was established in 2001 and has since expanded with the help of the United States Department of Homeland Security. I made use of their Global Terrorism Database (GTD), an open-source database including information on terrorist events around the world from 1970 through 2007 that includes more than 80,000 cases. For each recorded incident, information is available on the date and location of the incident, the weapons used and nature of the target, the number of casualties, and—when identifiable—the group or individual responsible.[20]

For my control factors, I used the World Bank's databank on world development indicators and global development finance. The World Bank is a source of financial and technical assistance for countries around the world, offering high quality data that give researchers and policy makers alike the tools to understand global trends and the economic progress of individual countries.

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[20] Global Terrorism Database. Online. Internet. <http://www.start.umd.edu/gtd/about/History.aspx>

Methodology

The dataset was created by organizing the following parameters alongside each date: TA100(Close), dummy Attk, # of attacks, dummycity, fatalities, injuries, foreign direct investment, net (BoP, current US$), exports of goods and services (% of GDP), GDP (constant 2000 US$), and inflation (consumer prices, annual %).

The dummy attack variable was coded as 0 for no attack and 1 if any attack took place on that day. This was designed to determine the effect of terrorist attacks in general on the market. # of attacks measured the effects of multiple coordinated attacks on one day, which in some cases was three or more.

DummyCity was coded as 0 for cities beside Jerusalem and Tel Aviv and 1 for attacks that occurred in either Jerusalem or Tel Aviv. This parameter was designed to test the effects of attacking the most politically and economically symbolic centers in Israel.

Fatalities and Injuries simply measured the number killed or wounded from terrorist attacks. As a standard, I filled all unknown cases with zero, which treated cases where news was not clear and ineffectual in influencing financial markets.

My controls were chosen as foreign direct investment, export of goods and services, Gross Domestic Product and inflation because they might otherwise explain volatility in financial markets that terrorism would reflect. All of these parameters were recorded annually.

Once I had a complete dataset, I began running regressions on the effects of these parameters on the TA100(Close). I used five models to track the effects of terrorism on financial markets, all of which included the controlling factors:

Model (1): Excluding # of attacks from the terrorism factors. This model was used to test the effects of a mere occurrence of terrorism.

Model (2): Excluding DummyAttack from the terrorism factors. This model aimed to isolate the effects of multiple attacks.

Model (3): Excluding both DummyAttack and # of Attacks from terrorism factors. This model focused on how strong the location and causalities from terrorism were, independent of the number of attacks.

Model (4): Including only fatalities in terrorism factors. This model sought to test the strength of fatalities in explaining fluctuations in financial markets.

Model (5): Includes all terrorism factors. A test how each of these factors explain market fluctuations when combined into the regression.

Results

Table 1 - Regression Results

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Terrorism Factors					
Dummy Attack	-7.107 [5.359]				-19.11 [12.35]
# of Attacks		-3.146 [4.328]			10.755 [9.973]
Dummy City	-20.87 [10.40] **	-23.39 [10.25] **	-25.706 [9.743] ***		-20.63 [10.40] **
Fatalities	-5.324 [1.183] ***	-5.441 [1.190] ***	-5.633 [1.160] ***	-6.0738]0.7956] ***	-5.457 [1.190] ***
Injured	0.1540 [0.2367]	0.1499 [0.2369]	0.1402 [0.2365]		0.1440 [0.2369]
Control Factors					
Foreign Direct Investment	0.00000001 [0.0000] ***	0.00000001 [0.0000] ***	0.00000001 [0.0000] ***	0.00000001 [0.0000] ***	0.00000001 [0.0000] ***
Exports of Goods and Services	5.8016 [0.7904] ***	5.8247 [0.7909] ***	5.8619 [0.7892] ***	5.9769 [0.7885] ***	5.8268 [0.7908]***
GDP (Constant 2000 US$)	0.00000002 [0.0000] ***	0.00000002 [0.0000] ***	0.00000002 [0.0000] ***	0.00000002 [0.0000] ***	0.00000002 [0.0000] ***
Inflation, Consumer Prices	17.4055 [0.6968] ***	17.3992 [0.6970] ***	17.3864 [0.6967] ***	17.4049 [0.6968] ***	17.3941 [0.6969] ***
R Squared	90.10%	90.10%	90.10%	90.10%	90.10%

***p<0.01,
**p<0.05,
*p<0.10

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Analysis of Results and Discussion of Hypotheses

Among all the models, the only variables that were statistically significant were dummy city and fatalities. Lets return to each hypothesis to determine the implications:

1. **Location and Fatalities will serve as a proxy for the magnitude of a terrorist attack**. This is precisely what occurred. Location and fatalities were the best indicators of how impactful the terrorist attack was. Interestingly, injuries were not statistically significant, which indicates terrorists should be concerned with attacks that are more likely to kill than maim their victims.
2. **Attacks in small towns or cities excluding Tel Aviv and Jerusalem will not significantly affect financial markets**. The test on dummy city determined that attacks occurring outside Tel Aviv and Jerusalem *did not* have a statistically significant effect on the closing price of the TA-100.
3. **The mere attempt to attack is not enough; attacks that neither kill nor injure will not maximize a terrorist's utility**. This was tested with the dummy attack variable, which was not statistically significant, thus proving that every attack *does not* affect financial markets. Merely attacking a location is Israel is not likely to fulfill the objectives of Econo-Jihad.

Using the third model's regression equation, which was the most statistically significant (to the 99th percentile), we can create an equation for the successful Econo-jihadist:

TA100 (Close) = - 1948 - 25.7 DummyCity - 5.63 FATALITIES

From this equation we can surmise that an attack in Tel Aviv or Jerusalem causes the financial markets in Israel to drop 25.7 points (2% of its value on May 2, 2010) and *each* fatality will cause the market to drop 5.63 points (0.5% of its value on May 2, 2010 per each death).

Policy Implications

These results lead to a revised expected utility function for terrorists and a series of important policy implications for counter-terrorism analysts and practitioners.

$E(U_T) = -\Delta$ in Financial Markets as a *function of* Location of the Attack and # of Fatalities

For Terrorists: Instead of the expected utility function proposed earlier in this paper, the results of the statistical analysis suggest a revised function. An econo-jihadist interested in maximizing utility will therefore maximize the impact of an attack by choosing targets in Tel Aviv or Jerusalem, while at the same time choosing targets that maximize fatalities.

For Counter-Terrorism Analysts and Practitioners: Knowing the effect of these variables on financial markets allows one to re-strategize the allocation of scare resources and respond to terrorism in politically savvy ways. If negatively affecting financial markets is the primary goal of Econo-jihadists, law enforcement should assure the security of Tel Aviv and Jerusalem to a greater extent than smaller cities, like Sderot. Similarly, potentially high fatality targets should guarded more closely, assuring places like movie theaters, stadiums, dance clubs and other heavily concentrated locations are given the best protection. When responding to terrorism, these results also become useful. Attacks

on small towns, given their unproven effect on financial markets, should not be the sole impetus for military invasions. Military responses would likely exacerbate the effects of these small attacks, giving Econo-Jihadist more utility from their attack by creating instability that could affect markets.

Conclusion

As the world recovers from an economic recession, recounting the hardships the past two years have brought, so too have terrorists. Their understanding of our contemporary fears is an important ancillary to their operational objectives.

In many ways, terrorism is not a crime against an individual, but rather a strategy dedicated to the harm of a nation, it's ideals, and actions. This is especially evident in Iraq, where countless Iraqi citizens die from attacks while carrying out their daily lives. Terrorists aim to inflict hardship upon a people with the hope that economic and political considerations create favorable change for them. Thus, attacks are a means to an end, rather than an end in and of itself.

This distanced and calculated strategy is rational in the economic sense, but politically disastrous. A useful extension of this model would require a political corollary that accounts for the political implications of maximizing utility for econo-jihadists. Additionally, while it might be advantageous for terrorists to attack only Tel Aviv and Jerusalem, while at the same time maximizing fatalities; the costs, both financial and in human capital, are very high. Each attack increases the vigilance of authorities, making future attempts more costly and difficult to execute. These attacks also have negative

external effects on the terrorist groups themselves, distancing their more moderate supporters with each additional act of bloodshed.

Fear is the instrument that terrorism bluntly uses to achieve its aims. Our current fears have helped bring phrases like Econo-Jihad into our vernacular, but it is unclear for how long. In this paper I have introduced the concept of a rational terrorist, one who maximizes the factors that bring down financial markets in Israel with the greatest statistical probability. It is our responsibility to prevent this blunt object, however painful, from cutting into our psyche- from creating the fear that is decidedly still in our power to resist.

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Appendix A:

MODEL 1

Regression Analysis: TA100 (Close) versus DummyAttk, DummyCity, ...

```
The regression equation is
TA100 (Close) = - 1951 - 7.11 DummyAttk - 20.9 DummyCity - 5.32 FATALITIES
                + 0.154 INJURED + 0.000000 Foreign direct investment, net
                + 5.80 Exports of goods and services (
                + 0.000000 GDP (constant 2000 US$)
                + 17.4 Inflation, consumer prices (ann


Predictor                              Coef     SE Coef        T      P
Constant                          -1950.63       18.07  -107.95  0.000
DummyAttk                           -7.107       5.359    -1.33  0.185
DummyCity                           -20.87       10.40    -2.01  0.045
FATALITIES                          -5.324       1.183    -4.50  0.000
INJURED                             0.1540      0.2367     0.65  0.515
Foreign direct investment, net  0.00000001  0.00000000     9.11  0.000
Exports of goods and services (     5.8016      0.7904     7.34  0.000
GDP (constant 2000 US$)         0.00000002  0.00000000    70.95  0.000
Inflation, consumer prices (ann     17.4055      0.6968    24.98  0.000


S = 75.6223   R-Sq = 90.1%   R-Sq(adj) = 90.1%


Analysis of Variance

Source            DF         SS        MS        F      P
Regression         8  199633088  24954136  4363.58  0.000
Residual Error  3827   21885588      5719
Total           3835  221518676


Source                            DF     Seq SS
DummyAttk                          1    1039374
DummyCity                          1    3539268
FATALITIES                         1     879339
INJURED                            1      52543
Foreign direct investment, net     1    4249284
Exports of goods and services (    1  158017836
GDP (constant 2000 US$)            1   28287378
Inflation, consumer prices (ann    1    3568066


Unusual Observations

                TA100
 Obs  DummyAttk (Close)     Fit  SE Fit  Residual  St Resid
  22       1.00  293.43  197.81    9.74     95.62      1.28 X
  30       1.00  302.33  142.58   28.69    159.75      2.28RX
  66       1.00  287.09  188.57   37.98     98.52      1.51 X
  97       1.00  295.59  196.27   10.23     99.32      1.33 X
 143       1.00  279.75  191.10   10.08     88.65      1.18 X
 158       1.00  288.85  196.27   10.23     92.58      1.24 X
 226       1.00  263.12  210.30    9.92     52.82      0.70 X
 256       1.00  295.32  216.40    9.67     78.92      1.05 X
 378       1.00  312.18  215.78    9.91     96.40      1.29 X
```

384	1.00	310.41	215.78	9.91	94.63	1.26 X
421	1.00	309.44	172.61	14.34	136.83	1.84 X
423	1.00	293.08	218.86	9.64	74.22	0.99 X
451	1.00	285.27	215.78	9.91	69.49	0.93 X
470	1.00	259.48	210.46	9.83	49.02	0.65 X
476	1.00	267.51	246.51	16.22	21.00	0.28 X
494	1.00	282.24	208.21	8.84	74.03	0.99 X
860	1.00	424.33	345.16	9.65	79.17	1.06 X
931	1.00	519.13	469.07	7.37	50.06	0.67 X
1039	1.00	482.78	470.15	8.53	12.63	0.17 X
1213	1.00	457.50	444.97	10.03	12.53	0.17 X
1221	1.00	485.99	435.70	9.27	50.29	0.67 X
1229	1.00	487.93	445.12	9.96	42.81	0.57 X
1241	1.00	468.07	461.50	9.63	6.57	0.09 X
1266	1.00	495.39	444.97	10.03	50.42	0.67 X
1277	1.00	494.58	447.12	9.54	47.46	0.63 X
1291	1.00	463.11	427.46	10.09	35.65	0.48 X
1305	1.00	459.71	422.14	10.03	37.57	0.50 X
1319	1.00	451.08	427.62	10.02	23.46	0.31 X
1325	1.00	457.08	387.49	10.66	69.59	0.93 X
1343	1.00	443.27	419.93	6.93	23.34	0.31 X
1392	1.00	399.45	445.85	12.24	-46.40	-0.62 X
1425	1.00	426.57	457.57	15.20	-31.00	-0.42 X
1427	1.00	426.57	436.70	14.69	-10.13	-0.14 X
1432	1.00	414.21	325.73	18.64	88.48	1.21 X
1463	1.00	421.89	428.39	9.75	-6.50	-0.09 X
1493	1.00	435.84	427.46	10.09	8.38	0.11 X
1497	1.00	439.06	423.68	9.38	15.38	0.20 X
1501	0.00	434.59	338.16	20.08	96.43	1.32 X
1513	1.00	424.38	427.46	10.09	-3.08	-0.04 X
1527	1.00	402.79	427.46	10.09	-24.67	-0.33 X
1532	1.00	402.99	413.44	9.80	-10.45	-0.14 X
1543	1.00	362.98	427.46	10.09	-64.48	-0.86 X
1554	1.00	358.60	427.46	10.09	-68.86	-0.92 X
1570	1.00	376.74	417.12	9.91	-40.38	-0.54 X
1613	1.00	397.51	413.53	7.64	-16.02	-0.21 X
1615	1.00	397.51	427.46	10.09	-29.95	-0.40 X
1654	1.00	454.86	471.10	8.09	-16.24	-0.22 X
1662	1.00	445.49	474.95	6.57	-29.46	-0.39 X
1667	1.00	442.80	473.68	8.87	-30.88	-0.41 X
1670	1.00	438.00	480.70	9.25	-42.70	-0.57 X
1672	1.00	438.00	471.52	9.95	-33.52	-0.45 X
1694	1.00	409.59	471.68	9.84	-62.09	-0.83 X
1706	0.00	410.02	439.95	12.74	-29.93	-0.40 X
1709	1.00	402.00	457.62	9.32	-55.62	-0.74 X
1713	1.00	398.44	415.70	14.14	-17.26	-0.23 X
1716	1.00	397.74	456.05	10.14	-58.31	-0.78 X
1721	1.00	402.08	469.43	8.59	-67.35	-0.90 X
1724	1.00	412.48	464.91	7.71	-52.43	-0.70 X
1725	1.00	409.11	470.11	11.65	-61.00	-0.82 X
1730	1.00	400.47	471.52	9.95	-71.05	-0.95 X
1731	1.00	400.47	402.32	18.24	-1.85	-0.03 X
1733	1.00	400.47	469.28	8.61	-68.81	-0.92 X
1734	1.00	400.47	481.77	9.74	-81.30	-1.08 X
1735	1.00	400.47	428.57	13.53	-28.10	-0.38 X
1736	1.00	375.50	471.52	9.95	-96.02	-1.28 X
1746	1.00	379.11	449.80	12.05	-70.69	-0.95 X
1747	1.00	379.11	452.60	9.40	-73.49	-0.98 X
1751	1.00	375.76	482.17	9.92	-106.41	-1.42 X
1772	1.00	377.99	432.11	13.26	-54.12	-0.73 X
1775	1.00	369.76	505.66	6.61	-135.90	-1.80 X
1784	1.00	380.39	399.64	20.41	-19.25	-0.26 X

1785	1.00	375.90	386.04	20.93	-10.14	-0.14 X
1787	1.00	379.05	487.91	8.31	-108.86	-1.45 X
1788	1.00	378.31	482.17	9.92	-103.86	-1.39 X
1789	1.00	378.31	477.15	9.68	-98.84	-1.32 X
1792	1.00	377.12	494.77	10.69	-117.65	-1.57 X
1813	1.00	359.42	383.08	17.90	-23.66	-0.32 X
1814	0.00	358.78	510.15	2.15	-151.37	-2.00R
1815	0.00	353.84	510.15	2.15	-156.31	-2.07R
1816	0.00	347.32	510.15	2.15	-162.83	-2.15R
1817	0.00	347.32	510.15	2.15	-162.83	-2.15R
1818	0.00	347.32	510.15	2.15	-162.83	-2.15R
1819	0.00	347.32	510.15	2.15	-162.83	-2.15R
1820	0.00	340.30	510.15	2.15	-169.85	-2.25R
1821	0.00	351.53	510.15	2.15	-158.62	-2.10R
1822	0.00	343.97	510.15	2.15	-166.18	-2.20R
1823	0.00	353.92	510.15	2.15	-156.23	-2.07R
1824	0.00	353.92	510.15	2.15	-156.23	-2.07R
1825	0.00	353.92	510.15	2.15	-156.23	-2.07R
1826	1.00	353.92	482.63	9.71	-128.71	-1.72 X
1827	0.00	355.95	510.15	2.15	-154.20	-2.04R
1828	0.00	349.06	510.15	2.15	-161.09	-2.13R
1829	0.00	346.71	510.15	2.15	-163.44	-2.16R
1830	0.00	348.72	510.15	2.15	-161.43	-2.14R
1831	0.00	348.72	510.15	2.15	-161.43	-2.14R
1832	0.00	348.72	510.15	2.15	-161.43	-2.14R
1833	0.00	348.72	510.15	2.15	-161.43	-2.14R
1834	0.00	352.27	510.15	2.15	-157.88	-2.09R
1835	0.00	355.91	510.15	2.15	-154.24	-2.04R
1837	0.00	355.64	510.15	2.15	-154.51	-2.04R
1838	0.00	355.64	510.15	2.15	-154.51	-2.04R
1839	0.00	355.64	510.15	2.15	-154.51	-2.04R
1840	0.00	355.64	510.15	2.15	-154.51	-2.04R
1843	1.00	370.07	461.71	8.85	-91.64	-1.22 X
1850	0.00	350.17	510.15	2.15	-159.98	-2.12R
1851	0.00	351.94	510.15	2.15	-158.21	-2.09R
1852	0.00	351.94	510.15	2.15	-158.21	-2.09R
1853	0.00	351.94	510.15	2.15	-158.21	-2.09R
1854	0.00	351.94	510.15	2.15	-158.21	-2.09R
1856	1.00	361.57	482.94	9.60	-121.37	-1.62 X
1857	1.00	362.19	457.22	13.64	-95.03	-1.28 X
1858	1.00	359.51	451.90	13.26	-92.39	-1.24 X
1861	1.00	359.51	404.81	18.88	-45.30	-0.62 X
1863	0.00	352.69	510.15	2.15	-157.46	-2.08R
1864	0.00	355.85	510.15	2.15	-154.30	-2.04R
1865	0.00	352.82	510.15	2.15	-157.33	-2.08R
1866	0.00	352.82	510.15	2.15	-157.33	-2.08R
1867	0.00	352.82	510.15	2.15	-157.33	-2.08R
1868	0.00	352.82	510.15	2.15	-157.33	-2.08R
1869	0.00	351.14	510.15	2.15	-159.01	-2.10R
1870	0.00	350.66	510.15	2.15	-159.49	-2.11R
1871	0.00	350.15	510.15	2.15	-160.00	-2.12R
1872	0.00	352.13	510.15	2.15	-158.02	-2.09R
1873	0.00	352.13	510.15	2.15	-158.02	-2.09R
1874	0.00	352.13	510.15	2.15	-158.02	-2.09R
1875	0.00	352.13	510.15	2.15	-158.02	-2.09R
1890	0.00	358.86	510.15	2.15	-151.29	-2.00R
1891	0.00	357.46	510.15	2.15	-152.69	-2.02R
1892	0.00	357.33	510.15	2.15	-152.82	-2.02R
1893	0.00	355.95	510.15	2.15	-154.20	-2.04R
1894	0.00	355.95	510.15	2.15	-154.20	-2.04R
1895	0.00	355.95	510.15	2.15	-154.20	-2.04R
1896	0.00	355.95	510.15	2.15	-154.20	-2.04R

1897	0.00	357.34	510.15	2.15	-152.81	-2.02R
1907	1.00	351.43	457.92	9.52	-106.49	-1.42 X
1908	0.00	351.43	510.15	2.15	-158.72	-2.10R
1909	0.00	351.43	510.15	2.15	-158.72	-2.10R
1910	0.00	351.43	510.15	2.15	-158.72	-2.10R
1911	0.00	346.29	510.15	2.15	-163.86	-2.17R
1912	0.00	341.11	510.15	2.15	-169.04	-2.24R
1913	0.00	339.47	510.15	2.15	-170.68	-2.26R
1914	0.00	340.84	510.15	2.15	-169.31	-2.24R
1915	0.00	340.84	510.15	2.15	-169.31	-2.24R
1916	0.00	340.84	510.15	2.15	-169.31	-2.24R
1917	0.00	340.84	510.15	2.15	-169.31	-2.24R
1918	0.00	336.75	510.15	2.15	-173.40	-2.29R
1919	0.00	337.96	510.15	2.15	-172.19	-2.28R
1920	0.00	335.57	510.15	2.15	-174.58	-2.31R
1921	0.00	331.62	510.15	2.15	-178.53	-2.36R
1922	0.00	331.62	510.15	2.15	-178.53	-2.36R
1923	0.00	331.62	510.15	2.15	-178.53	-2.36R
1924	0.00	331.62	510.15	2.15	-178.53	-2.36R
1925	0.00	325.92	510.15	2.15	-184.23	-2.44R
1926	0.00	327.89	510.15	2.15	-182.26	-2.41R
1927	0.00	325.90	510.15	2.15	-184.25	-2.44R
1928	1.00	326.54	473.37	8.96	-146.83	-1.96 X
1929	1.00	326.54	482.17	9.92	-155.63	-2.08RX
1930	0.00	326.54	510.15	2.15	-183.61	-2.43R
1931	0.00	326.54	510.15	2.15	-183.61	-2.43R
1932	0.00	325.78	510.15	2.15	-184.37	-2.44R
1933	0.00	329.58	510.15	2.15	-180.57	-2.39R
1934	0.00	325.27	510.15	2.15	-184.88	-2.45R
1935	0.00	330.58	510.15	2.15	-179.57	-2.38R
1936	0.00	330.58	510.15	2.15	-179.57	-2.38R
1937	0.00	330.58	510.15	2.15	-179.57	-2.38R
1938	0.00	330.58	510.15	2.15	-179.57	-2.38R
1939	0.00	330.22	510.15	2.15	-179.93	-2.38R
1940	1.00	328.63	425.55	13.95	-96.92	-1.30 X
1941	0.00	328.59	510.15	2.15	-181.56	-2.40R
1942	0.00	331.07	510.15	2.15	-179.08	-2.37R
1943	0.00	331.07	510.15	2.15	-179.08	-2.37R
1944	0.00	331.07	510.15	2.15	-179.08	-2.37R
1945	0.00	331.07	510.15	2.15	-179.08	-2.37R
1946	0.00	324.66	510.15	2.15	-185.49	-2.45R
1947	0.00	322.48	510.15	2.15	-187.67	-2.48R
1948	0.00	328.00	510.15	2.15	-182.15	-2.41R
1949	0.00	322.11	510.15	2.15	-188.04	-2.49R
1950	0.00	322.11	510.15	2.15	-188.04	-2.49R
1951	0.00	322.11	510.15	2.15	-188.04	-2.49R
1952	0.00	322.11	510.15	2.15	-188.04	-2.49R
1953	1.00	321.96	493.23	8.72	-171.27	-2.28RX
1954	0.00	325.09	510.15	2.15	-185.06	-2.45R
1955	0.00	336.30	510.15	2.15	-173.85	-2.30R
1956	0.00	334.76	510.15	2.15	-175.39	-2.32R
1957	0.00	334.76	510.15	2.15	-175.39	-2.32R
1958	0.00	334.76	510.15	2.15	-175.39	-2.32R
1959	1.00	334.76	477.50	6.46	-142.74	-1.89 X
1960	0.00	335.63	510.15	2.15	-174.52	-2.31R
1961	0.00	331.73	510.15	2.15	-178.42	-2.36R
1962	0.00	329.73	510.15	2.15	-180.42	-2.39R
1963	0.00	333.78	510.15	2.15	-176.37	-2.33R
1964	0.00	333.78	510.15	2.15	-176.37	-2.33R
1965	0.00	333.78	510.15	2.15	-176.37	-2.33R
1966	0.00	333.78	510.15	2.15	-176.37	-2.33R
1967	0.00	337.27	510.15	2.15	-172.88	-2.29R

1968	0.00	335.03	510.15	2.15	-175.12	-2.32R
1969	0.00	336.13	510.15	2.15	-174.02	-2.30R
1970	1.00	338.72	425.52	10.97	-86.80	-1.16 X
1971	1.00	338.72	493.01	5.29	-154.29	-2.05R
1972	0.00	338.72	510.15	2.15	-171.43	-2.27R
1973	0.00	338.72	510.15	2.15	-171.43	-2.27R
1974	0.00	345.07	510.15	2.15	-165.08	-2.18R
1975	0.00	351.35	510.15	2.15	-158.80	-2.10R
1977	1.00	359.05	465.07	7.73	-106.02	-1.41 X
1988	0.00	356.14	510.15	2.15	-154.01	-2.04R
1997	0.00	355.86	510.15	2.15	-154.29	-2.04R
1998	0.00	348.75	510.15	2.15	-161.40	-2.14R
1999	0.00	348.75	510.15	2.15	-161.40	-2.14R
2000	0.00	348.75	510.15	2.15	-161.40	-2.14R
2001	0.00	348.75	510.15	2.15	-161.40	-2.14R
2002	0.00	337.90	510.15	2.15	-172.25	-2.28R
2003	0.00	337.55	510.15	2.15	-172.60	-2.28R
2004	0.00	337.55	510.15	2.15	-172.60	-2.28R
2005	0.00	341.20	510.15	2.15	-168.95	-2.24R
2006	0.00	341.20	510.15	2.15	-168.95	-2.24R
2007	0.00	341.20	510.15	2.15	-168.95	-2.24R
2008	0.00	341.20	510.15	2.15	-168.95	-2.24R
2009	0.00	332.83	510.15	2.15	-177.32	-2.35R
2010	0.00	332.45	510.15	2.15	-177.70	-2.35R
2015	1.00	329.58	329.14	26.83	0.44	0.01 X
2024	0.00	321.72	474.25	1.98	-152.53	-2.02R
2030	0.00	317.35	474.25	1.98	-156.90	-2.08R
2031	0.00	316.57	474.25	1.98	-157.68	-2.09R
2032	0.00	314.31	474.25	1.98	-159.94	-2.12R
2033	0.00	317.53	474.25	1.98	-156.72	-2.07R
2034	0.00	317.53	474.25	1.98	-156.72	-2.07R
2035	0.00	317.53	474.25	1.98	-156.72	-2.07R
2036	0.00	317.53	474.25	1.98	-156.72	-2.07R
2037	0.00	318.74	474.25	1.98	-155.51	-2.06R
2038	0.00	318.74	474.25	1.98	-155.51	-2.06R
2039	0.00	320.64	474.25	1.98	-153.61	-2.03R
2040	0.00	318.80	474.25	1.98	-155.45	-2.06R
2041	0.00	318.80	474.25	1.98	-155.45	-2.06R
2042	0.00	318.80	474.25	1.98	-155.45	-2.06R
2043	0.00	318.80	474.25	1.98	-155.45	-2.06R
2044	0.00	318.80	474.25	1.98	-155.45	-2.06R
2045	0.00	309.00	474.25	1.98	-165.25	-2.19R
2046	0.00	309.30	474.25	1.98	-164.95	-2.18R
2047	0.00	308.04	474.25	1.98	-166.21	-2.20R
2048	0.00	308.04	474.25	1.98	-166.21	-2.20R
2049	0.00	308.04	474.25	1.98	-166.21	-2.20R
2050	0.00	308.04	474.25	1.98	-166.21	-2.20R
2051	0.00	306.54	474.25	1.98	-167.71	-2.22R
2052	0.00	308.24	474.25	1.98	-166.01	-2.20R
2053	0.00	307.52	474.25	1.98	-166.73	-2.21R
2054	0.00	303.65	474.25	1.98	-170.60	-2.26R
2055	0.00	303.65	474.25	1.98	-170.60	-2.26R
2056	0.00	303.65	474.25	1.98	-170.60	-2.26R
2057	0.00	303.65	474.25	1.98	-170.60	-2.26R
2058	0.00	316.04	474.25	1.98	-158.21	-2.09R
2059	0.00	321.72	474.25	1.98	-152.53	-2.02R
2060	1.00	316.71	467.76	5.55	-151.05	-2.00R
2061	0.00	314.42	474.25	1.98	-159.83	-2.11R
2062	0.00	314.42	474.25	1.98	-159.83	-2.11R
2063	0.00	314.42	474.25	1.98	-159.83	-2.11R
2064	1.00	314.42	467.15	5.50	-152.73	-2.02R
2065	0.00	317.41	474.25	1.98	-156.84	-2.07R

2066	0.00	313.86	474.25	1.98	-160.39	-2.12R
2067	0.00	313.66	474.25	1.98	-160.59	-2.12R
2074	1.00	324.70	395.75	13.22	-71.05	-0.95 X
2099	1.00	347.65	465.83	7.43	-118.18	-1.57 X
2130	1.00	392.68	424.98	10.53	-32.30	-0.43 X
2148	1.00	416.77	401.43	10.83	15.34	0.20 X
2149	1.00	401.15	450.47	6.85	-49.32	-0.65 X
2169	1.00	426.78	430.49	8.46	-3.71	-0.05 X
2172	1.00	422.09	367.31	14.37	54.78	0.74 X
2225	1.00	424.77	446.89	9.68	-22.12	-0.29 X
2241	1.00	417.32	360.51	16.91	56.81	0.77 X
2262	1.00	422.40	380.05	12.23	42.35	0.57 X
2287	1.00	440.07	352.39	20.84	87.68	1.21 X
2336	1.00	500.58	435.62	9.96	64.96	0.87 X
2369	1.00	517.06	426.98	9.08	90.08	1.20 X
2389	1.00	565.84	524.63	7.10	41.21	0.55 X
2404	1.00	554.31	478.43	10.86	75.88	1.01 X
2428	1.00	576.42	495.95	10.88	80.47	1.08 X
2441	1.00	574.67	521.31	7.15	53.36	0.71 X
2449	1.00	565.32	489.36	11.97	75.96	1.02 X
2555	1.00	596.95	534.20	6.61	62.75	0.83 X
2568	1.00	596.28	528.60	10.14	67.68	0.90 X
2599	1.00	540.67	521.12	9.38	19.55	0.26 X
2681	1.00	555.59	507.61	9.12	47.98	0.64 X
2755	1.00	649.08	686.62	10.34	-37.54	-0.50 X
2797	1.00	657.38	694.43	10.45	-37.05	-0.49 X
2934	1.00	671.58	723.95	8.84	-52.37	-0.70 X
2977	1.00	710.82	707.72	10.01	3.10	0.04 X
2981	1.00	707.56	735.83	11.68	-28.27	-0.38 X
3040	1.00	760.21	705.67	6.70	54.54	0.72 X
3080	1.00	798.11	707.98	8.09	90.13	1.20 X
3125	1.00	858.06	839.93	9.27	18.13	0.24 X
3201	1.00	859.56	842.18	10.07	17.38	0.23 X
3213	1.00	869.93	793.77	11.37	76.16	1.02 X
3321	1.00	822.16	793.84	15.30	28.32	0.38 X
3324	1.00	822.16	800.70	12.76	21.46	0.29 X
3500	1.00	959.62	964.19	6.61	-4.57	-0.06 X
3664	0.00	1145.11	992.59	3.20	152.52	2.02R
3665	0.00	1145.11	992.59	3.20	152.52	2.02R
3666	0.00	1145.11	992.59	3.20	152.52	2.02R
3667	0.00	1145.11	992.59	3.20	152.52	2.02R
3668	1.00	1149.10	985.64	5.54	163.46	2.17R
3669	0.00	1147.62	992.59	3.20	155.03	2.05R
3671	0.00	1150.78	992.59	3.20	158.19	2.09R
3675	1.00	1149.57	985.95	5.57	163.62	2.17R
3676	0.00	1149.57	992.59	3.20	156.98	2.08R
3677	0.00	1145.90	992.59	3.20	153.31	2.03R
3679	0.00	1145.90	992.59	3.20	153.31	2.03R
3680	0.00	1145.90	992.59	3.20	153.31	2.03R
3681	0.00	1145.90	992.59	3.20	153.31	2.03R
3682	0.00	1145.90	992.59	3.20	153.31	2.03R
3752	0.00	1145.48	992.59	3.20	152.89	2.02R
3753	0.00	1155.53	992.59	3.20	162.94	2.16R
3754	0.00	1153.51	992.59	3.20	160.92	2.13R
3755	0.00	1163.32	992.59	3.20	170.73	2.26R
3756	0.00	1154.59	992.59	3.20	162.00	2.14R
3757	0.00	1154.59	992.59	3.20	162.00	2.14R
3758	0.00	1154.59	992.59	3.20	162.00	2.14R
3760	0.00	1149.37	992.59	3.20	156.78	2.08R
3761	0.00	1157.56	992.59	3.20	164.97	2.18R
3762	0.00	1151.33	992.59	3.20	158.74	2.10R
3763	0.00	1157.56	992.59	3.20	164.97	2.18R

3764	0.00	1157.56	992.59	3.20	164.97	2.18R
3765	0.00	1157.56	992.59	3.20	164.97	2.18R
3766	1.00	1142.59	985.49	5.55	157.10	2.08R
3767	1.00	1157.67	985.49	5.55	172.18	2.28R
3768	0.00	1143.83	992.59	3.20	151.24	2.00R
3769	0.00	1153.77	992.59	3.20	161.18	2.13R
3770	0.00	1153.77	992.59	3.20	161.18	2.13R
3771	0.00	1153.77	992.59	3.20	161.18	2.13R
3772	0.00	1153.77	992.59	3.20	161.18	2.13R
3773	0.00	1188.69	992.59	3.20	196.10	2.60R
3774	0.00	1183.37	992.59	3.20	190.78	2.53R
3775	1.00	1189.04	985.49	5.55	203.55	2.70R
3776	0.00	1176.10	992.59	3.20	183.51	2.43R
3777	0.00	1189.04	992.59	3.20	196.45	2.60R
3778	0.00	1189.04	992.59	3.20	196.45	2.60R
3779	1.00	1189.04	985.64	5.54	203.40	2.70R
3780	0.00	1173.45	992.59	3.20	180.86	2.39R
3781	0.00	1184.20	992.59	3.20	191.61	2.54R
3782	0.00	1176.94	992.59	3.20	184.35	2.44R
3783	1.00	1168.11	985.49	5.55	182.62	2.42R
3784	0.00	1176.94	992.59	3.20	184.35	2.44R
3785	0.00	1176.94	992.59	3.20	184.35	2.44R
3786	1.00	1176.94	985.49	5.55	191.45	2.54R
3788	0.00	1152.25	992.59	3.20	159.66	2.11R
3789	0.00	1153.78	992.59	3.20	161.19	2.13R
3790	0.00	1144.32	992.59	3.20	151.73	2.01R
3791	0.00	1154.26	992.59	3.20	161.67	2.14R
3792	1.00	1154.26	985.49	5.55	168.77	2.24R
3793	0.00	1154.26	992.59	3.20	161.67	2.14R
3794	1.00	1142.70	958.87	7.35	183.83	2.44RX
3795	1.00	1140.93	985.64	5.54	155.29	2.06R
3808	0.00	1145.88	992.59	3.20	153.29	2.03R
3810	0.00	1153.25	992.59	3.20	160.66	2.13R
3811	0.00	1163.81	992.59	3.20	171.22	2.27R
3812	0.00	1154.02	992.59	3.20	161.43	2.14R
3813	0.00	1154.02	992.59	3.20	161.43	2.14R
3814	0.00	1154.02	992.59	3.20	161.43	2.14R
3815	0.00	1176.69	992.59	3.20	184.10	2.44R
3816	0.00	1174.92	992.59	3.20	182.33	2.41R
3817	0.00	1182.73	992.59	3.20	190.14	2.52R
3818	0.00	1172.23	992.59	3.20	179.64	2.38R
3819	0.00	1172.23	992.59	3.20	179.64	2.38R
3820	1.00	1172.23	985.49	5.55	186.74	2.48R
3821	0.00	1172.23	992.59	3.20	179.64	2.38R
3829	0.00	1152.00	992.59	3.20	159.41	2.11R
3830	0.00	1162.48	992.59	3.20	169.89	2.25R
3831	0.00	1159.34	992.59	3.20	166.75	2.21R
3832	0.00	1158.49	992.59	3.20	165.90	2.20R
3833	0.00	1159.64	992.59	3.20	167.05	2.21R
3834	0.00	1159.64	992.59	3.20	167.05	2.21R
3835	0.00	1159.64	992.59	3.20	167.05	2.21R
3836	0.00	1150.38	992.59	3.20	157.79	2.09R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large leverage.

Appendix B:

MODEL 2

Regression Analysis: TA100 (Close) versus _ of Attacks, DummyCity, ...

```
The regression equation is
TA100 (Close) = - 1950 - 3.15 _ of Attacks - 23.4 DummyCity - 5.44 FATALITIES
                + 0.150 INJURED + 0.000000 Foreign direct investment, net
                + 5.82 Exports of goods and services (
                + 0.000000 GDP (constant 2000 US$)
                + 17.4 Inflation, consumer prices (ann


Predictor                              Coef     SE Coef        T      P
Constant                          -1949.65       18.09  -107.78  0.000
_ of Attacks                        -3.146       4.328    -0.73  0.467
DummyCity                           -23.39       10.25    -2.28  0.023
FATALITIES                          -5.441       1.190    -4.57  0.000
INJURED                             0.1499      0.2369     0.63  0.527
Foreign direct investment, net  0.00000001  0.00000000     9.12  0.000
Exports of goods and services (     5.8247      0.7909     7.36  0.000
GDP (constant 2000 US$)         0.00000002  0.00000000    70.78  0.000
Inflation, consumer prices (ann    17.3992      0.6970    24.96  0.000


S = 75.6345   R-Sq = 90.1%   R-Sq(adj) = 90.1%


Analysis of Variance

Source            DF         SS        MS        F      P
Regression         8  199626053  24953257  4362.02  0.000
Residual Error  3827   21892624      5721
Total           3835  221518676


Source                            DF     Seq SS
_ of Attacks                       1    1267477
DummyCity                          1    3536097
FATALITIES                         1    1092916
INJURED                            1      67534
Foreign direct investment, net     1    4269693
Exports of goods and services (    1  157681578
GDP (constant 2000 US$)            1   28146044
Inflation, consumer prices (ann    1    3564714


Unusual Observations

         _ of    TA100
 Obs  Attacks  (Close)     Fit  SE Fit  Residual  St Resid
  22     1.00   293.43  199.14    9.67     94.29      1.26 X
  30     1.00   302.33  141.50   28.92    160.83      2.30RX
  66     1.00   287.09  188.33   38.08     98.76      1.51 X
  97     1.00   295.59  197.64   10.16     97.95      1.31 X
 143     1.00   279.75  192.35   10.02     87.40      1.17 X
 158     1.00   288.85  197.64   10.16     91.21      1.22 X
 226     1.00   263.12  211.52    9.87     51.60      0.69 X
 256     1.00   295.32  217.71    9.60     77.61      1.03 X
 378     1.00   312.18  217.11    9.84     95.07      1.27 X
```

384	1.00	310.41	217.11	9.84	93.30	1.24 X
421	1.00	309.44	175.05	14.17	134.39	1.81 X
423	1.00	293.08	220.11	9.57	72.97	0.97 X
451	1.00	285.27	217.11	9.84	68.16	0.91 X
470	1.00	259.48	211.67	9.77	47.81	0.64 X
476	1.00	267.51	250.09	15.93	17.42	0.24 X
483	2.00	276.34	226.32	8.76	50.02	0.67 X
494	1.00	282.24	209.23	8.80	73.01	0.97 X
860	1.00	424.33	348.93	9.13	75.40	1.00 X
931	1.00	519.13	472.82	6.70	46.31	0.61 X
1039	1.00	482.78	473.87	7.96	8.91	0.12 X
1213	1.00	457.50	446.28	9.97	11.22	0.15 X
1221	1.00	485.99	436.75	9.23	49.24	0.66 X
1229	1.00	487.93	446.43	9.90	41.50	0.55 X
1241	1.00	468.07	464.93	9.17	3.14	0.04 X
1266	1.00	495.39	446.28	9.97	49.11	0.66 X
1277	1.00	494.58	448.38	9.47	46.20	0.62 X
1291	1.00	463.11	428.68	10.03	34.43	0.46 X
1305	1.00	459.71	423.24	9.99	36.47	0.49 X
1319	1.00	451.08	428.83	9.96	22.25	0.30 X
1325	1.00	457.08	387.70	10.75	69.38	0.93 X
1343	2.00	443.27	419.73	8.84	23.54	0.31 X
1392	2.00	399.45	445.99	13.57	-46.54	-0.63 X
1425	1.00	426.57	461.07	14.90	-34.50	-0.47 X
1427	2.00	426.57	434.53	15.30	-7.96	-0.11 X
1432	1.00	414.21	323.97	19.09	90.24	1.23 X
1463	1.00	421.89	429.58	9.69	-7.69	-0.10 X
1493	1.00	435.84	428.68	10.03	7.16	0.10 X
1497	1.00	439.06	424.74	9.34	14.32	0.19 X
1501	2.00	434.59	326.26	17.55	108.33	1.47 X
1513	1.00	424.38	428.68	10.03	-4.30	-0.06 X
1519	2.00	423.95	448.93	8.88	-24.98	-0.33 X
1527	1.00	402.79	428.68	10.03	-25.89	-0.35 X
1532	2.00	402.99	412.89	10.95	-9.90	-0.13 X
1543	1.00	362.98	428.68	10.03	-65.70	-0.88 X
1554	1.00	358.60	428.68	10.03	-70.08	-0.93 X
1570	2.00	376.74	414.96	10.89	-38.22	-0.51 X
1613	2.00	397.51	413.24	9.35	-15.73	-0.21 X
1615	2.00	397.51	425.54	11.24	-28.03	-0.37 X
1654	1.00	454.86	474.15	7.63	-19.29	-0.26 X
1667	2.00	442.80	471.48	9.90	-28.68	-0.38 X
1670	1.00	438.00	481.71	9.21	-43.71	-0.58 X
1672	1.00	438.00	472.53	9.91	-34.53	-0.46 X
1677	3.00	436.46	500.51	12.85	-64.05	-0.86 X
1694	1.00	409.59	472.68	9.80	-63.09	-0.84 X
1706	0.00	410.02	435.69	12.76	-25.67	-0.34 X
1709	3.00	402.00	451.66	11.81	-49.66	-0.66 X
1713	2.00	398.44	411.68	13.82	-13.24	-0.18 X
1716	1.00	397.74	458.73	9.85	-60.99	-0.81 X
1721	2.00	402.08	467.09	9.51	-65.01	-0.87 X
1724	1.00	412.48	467.61	7.32	-55.13	-0.73 X
1725	1.00	409.11	470.64	11.69	-61.53	-0.82 X
1730	1.00	400.47	472.53	9.91	-72.06	-0.96 X
1731	1.00	400.47	403.32	18.40	-2.85	-0.04 X
1733	1.00	400.47	470.08	8.60	-69.61	-0.93 X
1734	1.00	400.47	482.76	9.70	-82.29	-1.10 X
1735	1.00	400.47	430.42	13.49	-29.95	-0.40 X
1736	1.00	375.50	472.53	9.91	-97.03	-1.29 X
1746	1.00	379.11	452.38	11.83	-73.27	-0.98 X
1747	1.00	379.11	452.81	9.52	-73.70	-0.98 X
1751	1.00	375.76	483.41	9.86	-107.65	-1.44 X
1772	1.00	377.99	433.87	13.24	-55.88	-0.75 X

1784	1.00	380.39	400.97	20.47	-20.58	-0.28 X
1785	2.00	375.90	383.55	20.93	-7.65	-0.11 X
1787	1.00	379.05	491.03	7.83	-111.98	-1.49 X
1788	1.00	378.31	483.41	9.86	-105.10	-1.40 X
1789	1.00	378.31	478.27	9.63	-99.96	-1.33 X
1792	1.00	377.12	497.97	10.31	-120.85	-1.61 X
1813	2.00	359.42	378.63	17.52	-19.21	-0.26 X
1815	0.00	353.84	509.94	2.15	-156.10	-2.06R
1816	0.00	347.32	509.94	2.15	-162.62	-2.15R
1817	0.00	347.32	509.94	2.15	-162.62	-2.15R
1818	0.00	347.32	509.94	2.15	-162.62	-2.15R
1819	0.00	347.32	509.94	2.15	-162.62	-2.15R
1820	0.00	340.30	509.94	2.15	-169.64	-2.24R
1821	0.00	351.53	509.94	2.15	-158.41	-2.10R
1822	0.00	343.97	509.94	2.15	-165.97	-2.20R
1823	0.00	353.92	509.94	2.15	-156.02	-2.06R
1824	0.00	353.92	509.94	2.15	-156.02	-2.06R
1825	0.00	353.92	509.94	2.15	-156.02	-2.06R
1826	1.00	353.92	483.86	9.65	-129.94	-1.73 X
1827	0.00	355.95	509.94	2.15	-153.99	-2.04R
1828	0.00	349.06	509.94	2.15	-160.88	-2.13R
1829	0.00	346.71	509.94	2.15	-163.23	-2.16R
1830	0.00	348.72	509.94	2.15	-161.22	-2.13R
1831	0.00	348.72	509.94	2.15	-161.22	-2.13R
1832	0.00	348.72	509.94	2.15	-161.22	-2.13R
1833	0.00	348.72	509.94	2.15	-161.22	-2.13R
1834	0.00	352.27	509.94	2.15	-157.67	-2.09R
1835	0.00	355.91	509.94	2.15	-154.03	-2.04R
1837	0.00	355.64	509.94	2.15	-154.30	-2.04R
1838	0.00	355.64	509.94	2.15	-154.30	-2.04R
1839	0.00	355.64	509.94	2.15	-154.30	-2.04R
1840	0.00	355.64	509.94	2.15	-154.30	-2.04R
1843	1.00	370.07	462.20	8.91	-92.13	-1.23 X
1850	0.00	350.17	509.94	2.15	-159.77	-2.11R
1851	0.00	351.94	509.94	2.15	-158.00	-2.09R
1852	0.00	351.94	509.94	2.15	-158.00	-2.09R
1853	0.00	351.94	509.94	2.15	-158.00	-2.09R
1854	0.00	351.94	509.94	2.15	-158.00	-2.09R
1856	1.00	361.57	484.16	9.54	-122.59	-1.63 X
1857	1.00	362.19	457.31	13.76	-95.12	-1.28 X
1858	1.00	359.51	451.87	13.40	-92.36	-1.24 X
1861	2.00	359.51	400.31	18.49	-40.80	-0.56 X
1863	0.00	352.69	509.94	2.15	-157.25	-2.08R
1864	0.00	355.85	509.94	2.15	-154.09	-2.04R
1865	0.00	352.82	509.94	2.15	-157.12	-2.08R
1866	0.00	352.82	509.94	2.15	-157.12	-2.08R
1867	0.00	352.82	509.94	2.15	-157.12	-2.08R
1868	0.00	352.82	509.94	2.15	-157.12	-2.08R
1869	0.00	351.14	509.94	2.15	-158.80	-2.10R
1870	0.00	350.66	509.94	2.15	-159.28	-2.11R
1871	0.00	350.15	509.94	2.15	-159.79	-2.11R
1872	0.00	352.13	509.94	2.15	-157.81	-2.09R
1873	0.00	352.13	509.94	2.15	-157.81	-2.09R
1874	0.00	352.13	509.94	2.15	-157.81	-2.09R
1875	0.00	352.13	509.94	2.15	-157.81	-2.09R
1891	0.00	357.46	509.94	2.15	-152.48	-2.02R
1892	0.00	357.33	509.94	2.15	-152.61	-2.02R
1893	0.00	355.95	509.94	2.15	-153.99	-2.04R
1894	0.00	355.95	509.94	2.15	-153.99	-2.04R
1895	0.00	355.95	509.94	2.15	-153.99	-2.04R
1896	0.00	355.95	509.94	2.15	-153.99	-2.04R
1897	0.00	357.34	509.94	2.15	-152.60	-2.02R

1907	1.00	351.43	458.26	9.61	-106.83	-1.42 X
1908	0.00	351.43	509.94	2.15	-158.51	-2.10R
1909	0.00	351.43	509.94	2.15	-158.51	-2.10R
1910	0.00	351.43	509.94	2.15	-158.51	-2.10R
1911	0.00	346.29	509.94	2.15	-163.65	-2.16R
1912	0.00	341.11	509.94	2.15	-168.83	-2.23R
1913	0.00	339.47	509.94	2.15	-170.47	-2.25R
1914	0.00	340.84	509.94	2.15	-169.10	-2.24R
1915	0.00	340.84	509.94	2.15	-169.10	-2.24R
1916	0.00	340.84	509.94	2.15	-169.10	-2.24R
1917	0.00	340.84	509.94	2.15	-169.10	-2.24R
1918	0.00	336.75	509.94	2.15	-173.19	-2.29R
1919	0.00	337.96	509.94	2.15	-171.98	-2.27R
1920	0.00	335.57	509.94	2.15	-174.37	-2.31R
1921	0.00	331.62	509.94	2.15	-178.32	-2.36R
1922	0.00	331.62	509.94	2.15	-178.32	-2.36R
1923	0.00	331.62	509.94	2.15	-178.32	-2.36R
1924	0.00	331.62	509.94	2.15	-178.32	-2.36R
1925	0.00	325.92	509.94	2.15	-184.02	-2.43R
1926	0.00	327.89	509.94	2.15	-182.05	-2.41R
1927	0.00	325.90	509.94	2.15	-184.04	-2.43R
1928	1.00	326.54	474.32	8.93	-147.78	-1.97 X
1929	1.00	326.54	483.41	9.86	-156.87	-2.09RX
1930	0.00	326.54	509.94	2.15	-183.40	-2.43R
1931	0.00	326.54	509.94	2.15	-183.40	-2.43R
1932	0.00	325.78	509.94	2.15	-184.16	-2.44R
1933	0.00	329.58	509.94	2.15	-180.36	-2.39R
1934	0.00	325.27	509.94	2.15	-184.67	-2.44R
1935	0.00	330.58	509.94	2.15	-179.36	-2.37R
1936	0.00	330.58	509.94	2.15	-179.36	-2.37R
1937	0.00	330.58	509.94	2.15	-179.36	-2.37R
1938	0.00	330.58	509.94	2.15	-179.36	-2.37R
1939	0.00	330.22	509.94	2.15	-179.72	-2.38R
1940	1.00	328.63	427.23	13.95	-98.60	-1.33 X
1941	0.00	328.59	509.94	2.15	-181.35	-2.40R
1942	0.00	331.07	509.94	2.15	-178.87	-2.37R
1943	0.00	331.07	509.94	2.15	-178.87	-2.37R
1944	0.00	331.07	509.94	2.15	-178.87	-2.37R
1945	0.00	331.07	509.94	2.15	-178.87	-2.37R
1946	0.00	324.66	509.94	2.15	-185.28	-2.45R
1947	0.00	322.48	509.94	2.15	-187.46	-2.48R
1948	0.00	328.00	509.94	2.15	-181.94	-2.41R
1949	0.00	322.11	509.94	2.15	-187.83	-2.48R
1950	0.00	322.11	509.94	2.15	-187.83	-2.48R
1951	0.00	322.11	509.94	2.15	-187.83	-2.48R
1952	0.00	322.11	509.94	2.15	-187.83	-2.48R
1953	2.00	321.96	493.32	10.49	-171.36	-2.29RX
1954	0.00	325.09	509.94	2.15	-184.85	-2.45R
1955	0.00	336.30	509.94	2.15	-173.64	-2.30R
1956	0.00	334.76	509.94	2.15	-175.18	-2.32R
1957	0.00	334.76	509.94	2.15	-175.18	-2.32R
1958	0.00	334.76	509.94	2.15	-175.18	-2.32R
1960	0.00	335.63	509.94	2.15	-174.31	-2.31R
1961	0.00	331.73	509.94	2.15	-178.21	-2.36R
1962	0.00	329.73	509.94	2.15	-180.21	-2.38R
1963	0.00	333.78	509.94	2.15	-176.16	-2.33R
1964	0.00	333.78	509.94	2.15	-176.16	-2.33R
1965	0.00	333.78	509.94	2.15	-176.16	-2.33R
1966	0.00	333.78	509.94	2.15	-176.16	-2.33R
1967	0.00	337.27	509.94	2.15	-172.67	-2.28R
1968	0.00	335.03	509.94	2.15	-174.91	-2.31R
1969	0.00	336.13	509.94	2.15	-173.81	-2.30R

1970	1.00	338.72	425.16	11.20	-86.44	-1.16 X
1971	1.00	338.72	496.52	4.40	-157.80	-2.09R
1972	0.00	338.72	509.94	2.15	-171.22	-2.26R
1973	0.00	338.72	509.94	2.15	-171.22	-2.26R
1974	0.00	345.07	509.94	2.15	-164.87	-2.18R
1975	0.00	351.35	509.94	2.15	-158.59	-2.10R
1977	1.00	359.05	467.76	7.34	-108.71	-1.44 X
1988	0.00	356.14	509.94	2.15	-153.80	-2.03R
1997	0.00	355.86	509.94	2.15	-154.08	-2.04R
1998	0.00	348.75	509.94	2.15	-161.19	-2.13R
1999	0.00	348.75	509.94	2.15	-161.19	-2.13R
2000	0.00	348.75	509.94	2.15	-161.19	-2.13R
2001	0.00	348.75	509.94	2.15	-161.19	-2.13R
2002	0.00	337.90	509.94	2.15	-172.04	-2.28R
2003	0.00	337.55	509.94	2.15	-172.39	-2.28R
2004	0.00	337.55	509.94	2.15	-172.39	-2.28R
2005	0.00	341.20	509.94	2.15	-168.74	-2.23R
2006	0.00	341.20	509.94	2.15	-168.74	-2.23R
2007	0.00	341.20	509.94	2.15	-168.74	-2.23R
2008	0.00	341.20	509.94	2.15	-168.74	-2.23R
2009	0.00	332.83	509.94	2.15	-177.11	-2.34R
2010	0.00	332.45	509.94	2.15	-177.49	-2.35R
2015	1.00	329.58	327.85	27.02	1.73	0.02 X
2024	0.00	321.72	474.09	1.97	-152.37	-2.02R
2030	0.00	317.35	474.09	1.97	-156.74	-2.07R
2031	0.00	316.57	474.09	1.97	-157.52	-2.08R
2032	0.00	314.31	474.09	1.97	-159.78	-2.11R
2033	0.00	317.53	474.09	1.97	-156.56	-2.07R
2034	0.00	317.53	474.09	1.97	-156.56	-2.07R
2035	0.00	317.53	474.09	1.97	-156.56	-2.07R
2036	0.00	317.53	474.09	1.97	-156.56	-2.07R
2037	0.00	318.74	474.09	1.97	-155.35	-2.05R
2038	0.00	318.74	474.09	1.97	-155.35	-2.05R
2039	0.00	320.64	474.09	1.97	-153.45	-2.03R
2040	0.00	318.80	474.09	1.97	-155.29	-2.05R
2041	0.00	318.80	474.09	1.97	-155.29	-2.05R
2042	0.00	318.80	474.09	1.97	-155.29	-2.05R
2043	0.00	318.80	474.09	1.97	-155.29	-2.05R
2044	0.00	318.80	474.09	1.97	-155.29	-2.05R
2045	0.00	309.00	474.09	1.97	-165.09	-2.18R
2046	0.00	309.30	474.09	1.97	-164.79	-2.18R
2047	0.00	308.04	474.09	1.97	-166.05	-2.20R
2048	0.00	308.04	474.09	1.97	-166.05	-2.20R
2049	0.00	308.04	474.09	1.97	-166.05	-2.20R
2050	0.00	308.04	474.09	1.97	-166.05	-2.20R
2051	0.00	306.54	474.09	1.97	-167.55	-2.22R
2052	0.00	308.24	474.09	1.97	-165.85	-2.19R
2053	0.00	307.52	474.09	1.97	-166.57	-2.20R
2054	0.00	303.65	474.09	1.97	-170.44	-2.25R
2055	0.00	303.65	474.09	1.97	-170.44	-2.25R
2056	0.00	303.65	474.09	1.97	-170.44	-2.25R
2057	0.00	303.65	474.09	1.97	-170.44	-2.25R
2058	0.00	316.04	474.09	1.97	-158.05	-2.09R
2059	0.00	321.72	474.09	1.97	-152.37	-2.02R
2060	1.00	316.71	471.55	4.64	-154.84	-2.05R
2061	0.00	314.42	474.09	1.97	-159.67	-2.11R
2062	0.00	314.42	474.09	1.97	-159.67	-2.11R
2063	0.00	314.42	474.09	1.97	-159.67	-2.11R
2064	1.00	314.42	470.95	4.59	-156.53	-2.07R
2065	0.00	317.41	474.09	1.97	-156.68	-2.07R
2066	0.00	313.86	474.09	1.97	-160.23	-2.12R
2067	0.00	313.66	474.09	1.97	-160.43	-2.12R

2074	2.00	324.70	394.43	13.72	-69.73	-0.94 X
2099	1.00	347.65	469.40	6.80	-121.75	-1.62 X
2130	1.00	392.68	425.79	10.51	-33.11	-0.44 X
2148	2.00	416.77	398.44	11.13	18.33	0.25 X
2169	1.00	426.78	433.46	8.03	-6.68	-0.09 X
2172	1.00	422.09	366.30	14.72	55.79	0.75 X
2225	1.00	424.77	448.16	9.61	-23.39	-0.31 X
2241	1.00	417.32	359.16	17.30	58.16	0.79 X
2262	2.00	422.40	376.33	12.04	46.07	0.62 X
2287	1.00	440.07	353.29	20.99	86.78	1.19 X
2336	1.00	500.58	436.68	9.92	63.90	0.85 X
2369	1.00	517.06	427.74	9.08	89.32	1.19 X
2389	1.00	565.84	527.81	6.53	38.03	0.50 X
2404	1.00	554.31	478.22	11.05	76.09	1.02 X
2428	1.00	576.42	496.04	11.00	80.38	1.07 X
2441	1.00	574.67	524.32	6.63	50.35	0.67 X
2449	1.00	565.32	491.67	11.81	73.65	0.99 X
2568	1.00	596.28	529.63	10.10	66.65	0.89 X
2599	1.00	540.67	522.09	9.35	18.58	0.25 X
2681	1.00	555.59	508.17	9.15	47.42	0.63 X
2755	1.00	649.08	689.27	10.06	-40.19	-0.54 X
2797	1.00	657.38	694.84	10.51	-37.46	-0.50 X
2838	2.00	672.76	734.34	8.69	-61.58	-0.82 X
2934	1.00	671.58	727.16	8.38	-55.58	-0.74 X
2977	1.00	710.82	708.81	9.96	2.01	0.03 X
2981	1.00	707.56	739.25	11.30	-31.69	-0.42 X
3080	1.00	798.11	710.84	7.67	87.27	1.16 X
3125	1.00	858.06	840.82	9.25	17.24	0.23 X
3139	2.00	849.11	863.51	8.47	-14.40	-0.19 X
3140	2.00	848.37	864.11	8.47	-15.74	-0.21 X
3151	2.00	822.76	863.51	8.47	-40.75	-0.54 X
3161	3.00	810.91	860.36	12.67	-49.45	-0.66 X
3197	2.00	860.65	863.51	8.47	-2.86	-0.04 X
3201	1.00	859.56	843.26	10.02	16.30	0.22 X
3203	3.00	860.65	860.36	12.67	0.29	0.00 X
3213	1.00	869.93	793.30	11.62	76.63	1.03 X
3244	3.00	906.67	860.66	12.65	46.01	0.62 X
3292	2.00	823.06	863.51	8.47	-40.45	-0.54 X
3320	2.00	822.16	863.66	8.46	-41.50	-0.55 X
3321	2.00	822.16	792.77	15.90	29.39	0.40 X
3324	1.00	822.16	802.86	12.63	19.30	0.26 X
3369	2.00	835.37	863.66	8.46	-28.29	-0.38 X
3370	2.00	831.78	863.51	8.47	-31.73	-0.42 X
3376	2.00	837.23	863.51	8.47	-26.28	-0.35 X
3623	2.00	1117.02	985.84	8.48	131.18	1.75 X
3624	2.00	1117.02	985.84	8.48	131.18	1.75 X
3636	2.00	1098.83	985.84	8.48	112.99	1.50 X
3664	0.00	1145.11	992.14	3.20	152.97	2.02R
3665	0.00	1145.11	992.14	3.20	152.97	2.02R
3666	0.00	1145.11	992.14	3.20	152.97	2.02R
3667	0.00	1145.11	992.14	3.20	152.97	2.02R
3668	1.00	1149.10	989.14	4.72	159.96	2.12R
3669	0.00	1147.62	992.14	3.20	155.48	2.06R
3670	0.00	1143.30	992.14	3.20	151.16	2.00R
3671	0.00	1150.78	992.14	3.20	158.64	2.10R
3672	0.00	1143.30	992.14	3.20	151.16	2.00R
3673	0.00	1143.30	992.14	3.20	151.16	2.00R
3674	0.00	1143.30	992.14	3.20	151.16	2.00R
3675	1.00	1149.57	989.44	4.75	160.13	2.12R
3676	0.00	1149.57	992.14	3.20	157.43	2.08R
3677	0.00	1145.90	992.14	3.20	153.76	2.03R
3679	0.00	1145.90	992.14	3.20	153.76	2.03R

3680	0.00	1145.90	992.14	3.20	153.76	2.03R
3681	0.00	1145.90	992.14	3.20	153.76	2.03R
3682	0.00	1145.90	992.14	3.20	153.76	2.03R
3752	0.00	1145.48	992.14	3.20	153.34	2.03R
3753	0.00	1155.53	992.14	3.20	163.39	2.16R
3754	0.00	1153.51	992.14	3.20	161.37	2.14R
3755	0.00	1163.32	992.14	3.20	171.18	2.27R
3756	0.00	1154.59	992.14	3.20	162.45	2.15R
3757	0.00	1154.59	992.14	3.20	162.45	2.15R
3758	0.00	1154.59	992.14	3.20	162.45	2.15R
3760	0.00	1149.37	992.14	3.20	157.23	2.08R
3761	0.00	1157.56	992.14	3.20	165.42	2.19R
3762	0.00	1151.33	992.14	3.20	159.19	2.11R
3763	0.00	1157.56	992.14	3.20	165.42	2.19R
3764	0.00	1157.56	992.14	3.20	165.42	2.19R
3765	0.00	1157.56	992.14	3.20	165.42	2.19R
3766	1.00	1142.59	988.99	4.73	153.60	2.03R
3767	1.00	1157.67	988.99	4.73	168.68	2.23R
3768	0.00	1143.83	992.14	3.20	151.69	2.01R
3769	0.00	1153.77	992.14	3.20	161.63	2.14R
3770	0.00	1153.77	992.14	3.20	161.63	2.14R
3771	0.00	1153.77	992.14	3.20	161.63	2.14R
3772	0.00	1153.77	992.14	3.20	161.63	2.14R
3773	0.00	1188.69	992.14	3.20	196.55	2.60R
3774	0.00	1183.37	992.14	3.20	191.23	2.53R
3775	1.00	1189.04	988.99	4.73	200.05	2.65R
3776	0.00	1176.10	992.14	3.20	183.96	2.43R
3777	0.00	1189.04	992.14	3.20	196.90	2.61R
3778	0.00	1189.04	992.14	3.20	196.90	2.61R
3779	3.00	1189.04	982.85	12.60	206.19	2.76RX
3780	0.00	1173.45	992.14	3.20	181.31	2.40R
3781	0.00	1184.20	992.14	3.20	192.06	2.54R
3782	0.00	1176.94	992.14	3.20	184.80	2.45R
3783	1.00	1168.11	988.99	4.73	179.12	2.37R
3784	0.00	1176.94	992.14	3.20	184.80	2.45R
3785	0.00	1176.94	992.14	3.20	184.80	2.45R
3786	1.00	1176.94	988.99	4.73	187.95	2.49R
3788	0.00	1152.25	992.14	3.20	160.11	2.12R
3789	0.00	1153.78	992.14	3.20	161.64	2.14R
3790	0.00	1144.32	992.14	3.20	152.18	2.01R
3791	0.00	1154.26	992.14	3.20	162.12	2.15R
3792	2.00	1154.26	985.84	8.48	168.42	2.24RX
3793	0.00	1154.26	992.14	3.20	162.12	2.15R
3794	3.00	1142.70	955.49	12.69	187.21	2.51RX
3795	1.00	1140.93	989.14	4.72	151.79	2.01R
3796	2.00	1111.85	985.84	8.48	126.01	1.68 X
3808	0.00	1145.88	992.14	3.20	153.74	2.03R
3810	0.00	1153.25	992.14	3.20	161.11	2.13R
3811	0.00	1163.81	992.14	3.20	171.67	2.27R
3812	0.00	1154.02	992.14	3.20	161.88	2.14R
3813	0.00	1154.02	992.14	3.20	161.88	2.14R
3814	0.00	1154.02	992.14	3.20	161.88	2.14R
3815	0.00	1176.69	992.14	3.20	184.55	2.44R
3816	0.00	1174.92	992.14	3.20	182.78	2.42R
3817	0.00	1182.73	992.14	3.20	190.59	2.52R
3818	0.00	1172.23	992.14	3.20	180.09	2.38R
3819	0.00	1172.23	992.14	3.20	180.09	2.38R
3820	1.00	1172.23	988.99	4.73	183.24	2.43R
3821	0.00	1172.23	992.14	3.20	180.09	2.38R
3829	0.00	1152.00	992.14	3.20	159.86	2.12R
3830	0.00	1162.48	992.14	3.20	170.34	2.25R
3831	0.00	1159.34	992.14	3.20	167.20	2.21R

```
3832     0.00  1158.49  992.14    3.20    166.35      2.20R
3833     0.00  1159.64  992.14    3.20    167.50      2.22R
3834     0.00  1159.64  992.14    3.20    167.50      2.22R
3835     0.00  1159.64  992.14    3.20    167.50      2.22R
3836     0.00  1150.38  992.14    3.20    158.24      2.09R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large leverage.
```

Appendix C:

MODEL 3

Regression Analysis: TA100 (Close) versus DummyCity, FATALITIES, ...

```
The regression equation is
TA100 (Close) = - 1948 - 25.7 DummyCity - 5.63 FATALITIES + 0.140 INJURED
                + 0.000000 Foreign direct investment, net
                + 5.86 Exports of goods and services (
                + 0.000000 GDP (constant 2000 US$)
                + 17.4 Inflation, consumer prices (ann


Predictor                              Coef     SE Coef        T      P
Constant                            -1948.21       17.98  -108.35  0.000
DummyCity                             -25.706       9.743    -2.64  0.008
FATALITIES                             -5.633       1.160    -4.85  0.000
INJURED                                 0.1402      0.2365     0.59  0.553
Foreign direct investment, net   0.00000001  0.00000000     9.13  0.000
Exports of goods and services (      5.8619      0.7892     7.43  0.000
GDP (constant 2000 US$)          0.00000002  0.00000000    71.31  0.000
Inflation, consumer prices (ann     17.3864      0.6967    24.95  0.000


S = 75.6298   R-Sq = 90.1%   R-Sq(adj) = 90.1%


Analysis of Variance

Source            DF         SS        MS        F      P
Regression         7  199623029  28517576  4985.71  0.000
Residual Error  3828   21895647      5720
Total           3835  221518676


Source                           DF     Seq SS
DummyCity                         1    1351194
FATALITIES                        1     140207
INJURED                           1      21382
Foreign direct investment, net    1    4323396
Exports of goods and services (   1  161602713
GDP (constant 2000 US$)           1   28622396
Inflation, consumer prices (ann   1    3561742


Unusual Observations
```

Obs	DummyCity	TA100 (Close)	Fit	SE Fit	Residual	St Resid	
22	1.00	293.43	199.81	9.62	93.62	1.25	X
30	1.00	302.33	137.75	28.46	164.58	2.35	RX
66	1.00	287.09	185.90	37.93	101.19	1.55	X
97	1.00	295.59	198.41	10.10	97.18	1.30	X
143	1.00	279.75	192.92	9.99	86.83	1.16	X
158	1.00	288.85	198.41	10.10	90.44	1.21	X
226	1.00	263.12	212.06	9.84	51.06	0.68	X
256	1.00	295.32	218.39	9.56	76.93	1.03	X
378	1.00	312.18	217.83	9.79	94.35	1.26	X
384	1.00	310.41	217.83	9.79	92.58	1.23	X
421	0.00	309.44	175.81	14.13	133.63	1.80	X
423	1.00	293.08	220.64	9.54	72.44	0.97	X
451	1.00	285.27	217.83	9.79	67.44	0.90	X
470	1.00	259.48	212.20	9.75	47.28	0.63	X
476	0.00	267.51	252.51	15.58	15.00	0.20	X
494	1.00	282.24	209.37	8.80	72.87	0.97	X
860	0.00	424.33	351.75	8.27	72.58	0.97	X
1039	0.00	482.78	476.65	6.98	6.13	0.08	X
1213	1.00	457.50	447.02	9.92	10.48	0.14	X
1221	1.00	485.99	437.01	9.22	48.98	0.65	X
1229	1.00	487.93	447.16	9.85	40.77	0.54	X
1241	0.00	468.07	467.21	8.62	0.86	0.01	X
1266	1.00	495.39	447.02	9.92	48.37	0.65	X
1277	1.00	494.58	448.98	9.44	45.60	0.61	X
1291	1.00	463.11	429.27	10.00	33.84	0.45	X
1305	1.00	459.71	423.64	9.97	36.07	0.48	X
1319	1.00	451.08	429.41	9.93	21.67	0.29	X
1325	1.00	457.08	386.60	10.64	70.48	0.94	X
1343	0.00	443.27	424.41	6.05	18.86	0.25	X
1392	0.00	399.45	451.14	11.57	-51.69	-0.69	X
1425	0.00	426.57	463.39	14.55	-36.82	-0.50	X
1427	1.00	426.57	437.68	14.67	-11.11	-0.15	X
1432	1.00	414.21	319.38	18.02	94.83	1.29	X
1463	1.00	421.89	430.12	9.66	-8.23	-0.11	X
1493	1.00	435.84	429.27	10.00	6.57	0.09	X
1497	1.00	439.06	425.04	9.33	14.02	0.19	X
1501	1.00	434.59	325.01	17.47	109.58	1.49	X
1513	1.00	424.38	429.27	10.00	-4.89	-0.07	X
1527	1.00	402.79	429.27	10.00	-26.48	-0.35	X
1532	0.00	402.99	416.93	9.44	-13.94	-0.19	X
1543	1.00	362.98	429.27	10.00	-66.29	-0.88	X
1554	1.00	358.60	429.27	10.00	-70.67	-0.94	X
1570	1.00	376.74	418.29	9.87	-41.55	-0.55	X
1613	0.00	397.51	417.80	6.93	-20.29	-0.27	X
1615	1.00	397.51	429.27	10.00	-31.76	-0.42	X
1654	0.00	454.86	475.93	7.23	-21.07	-0.28	X
1667	1.00	442.80	474.71	8.84	-31.91	-0.42	X
1670	1.00	438.00	481.89	9.21	-43.89	-0.58	X
1672	1.00	438.00	472.75	9.91	-34.75	-0.46	X
1694	1.00	409.59	472.89	9.80	-63.30	-0.84	X
1706	1.00	410.02	430.47	10.54	-20.45	-0.27	X
1709	1.00	402.00	456.95	9.31	-54.95	-0.73	X
1713	1.00	398.44	411.72	13.81	-13.28	-0.18	X
1716	0.00	397.74	459.87	9.73	-62.13	-0.83	X
1721	1.00	402.08	470.06	8.58	-67.98	-0.90	X
1724	0.00	412.48	468.73	7.16	-56.25	-0.75	X
1725	1.00	409.11	469.90	11.65	-60.79	-0.81	X
1730	1.00	400.47	472.75	9.91	-72.28	-0.96	X
1731	0.00	400.47	401.53	18.23	-1.06	-0.01	X
1733	1.00	400.47	469.92	8.60	-69.45	-0.92	X

1734	1.00	400.47	482.87	9.70	-82.40	-1.10 X
1735	0.00	400.47	430.14	13.48	-29.67	-0.40 X
1736	1.00	375.50	472.75	9.91	-97.25	-1.30 X
1746	0.00	379.11	453.40	11.74	-74.29	-0.99 X
1747	1.00	379.11	451.60	9.37	-72.49	-0.97 X
1751	1.00	375.76	484.02	9.82	-108.26	-1.44 X
1772	0.00	377.99	433.36	13.22	-55.37	-0.74 X
1784	0.00	380.39	399.87	20.41	-19.48	-0.27 X
1785	0.00	375.90	384.35	20.90	-8.45	-0.12 X
1787	0.00	379.05	492.80	7.45	-113.75	-1.51 X
1788	1.00	378.31	484.02	9.82	-105.71	-1.41 X
1789	1.00	378.31	478.66	9.62	-100.35	-1.34 X
1792	0.00	377.12	499.83	9.99	-122.71	-1.64 X
1813	1.00	359.42	378.09	17.50	-18.67	-0.25 X
1815	0.00	353.84	509.72	2.13	-155.88	-2.06R
1816	0.00	347.32	509.72	2.13	-162.40	-2.15R
1817	0.00	347.32	509.72	2.13	-162.40	-2.15R
1818	0.00	347.32	509.72	2.13	-162.40	-2.15R
1819	0.00	347.32	509.72	2.13	-162.40	-2.15R
1820	0.00	340.30	509.72	2.13	-169.42	-2.24R
1821	0.00	351.53	509.72	2.13	-158.19	-2.09R
1822	0.00	343.97	509.72	2.13	-165.75	-2.19R
1823	0.00	353.92	509.72	2.13	-155.80	-2.06R
1824	0.00	353.92	509.72	2.13	-155.80	-2.06R
1825	0.00	353.92	509.72	2.13	-155.80	-2.06R
1826	1.00	353.92	484.44	9.62	-130.52	-1.74 X
1827	0.00	355.95	509.72	2.13	-153.77	-2.03R
1828	0.00	349.06	509.72	2.13	-160.66	-2.13R
1829	0.00	346.71	509.72	2.13	-163.01	-2.16R
1830	0.00	348.72	509.72	2.13	-161.00	-2.13R
1831	0.00	348.72	509.72	2.13	-161.00	-2.13R
1832	0.00	348.72	509.72	2.13	-161.00	-2.13R
1833	0.00	348.72	509.72	2.13	-161.00	-2.13R
1834	0.00	352.27	509.72	2.13	-157.45	-2.08R
1835	0.00	355.91	509.72	2.13	-153.81	-2.03R
1837	0.00	355.64	509.72	2.13	-154.08	-2.04R
1838	0.00	355.64	509.72	2.13	-154.08	-2.04R
1839	0.00	355.64	509.72	2.13	-154.08	-2.04R
1840	0.00	355.64	509.72	2.13	-154.08	-2.04R
1843	1.00	370.07	461.46	8.85	-91.39	-1.22 X
1850	0.00	350.17	509.72	2.13	-159.55	-2.11R
1851	0.00	351.94	509.72	2.13	-157.78	-2.09R
1852	0.00	351.94	509.72	2.13	-157.78	-2.09R
1853	0.00	351.94	509.72	2.13	-157.78	-2.09R
1854	0.00	351.94	509.72	2.13	-157.78	-2.09R
1856	1.00	361.57	484.72	9.51	-123.15	-1.64 X
1857	1.00	362.19	455.80	13.60	-93.61	-1.26 X
1858	1.00	359.51	450.17	13.20	-90.66	-1.22 X
1861	1.00	359.51	399.45	18.45	-39.94	-0.54 X
1862	0.00	350.97	504.23	2.33	-153.26	-2.03R
1863	0.00	352.69	509.72	2.13	-157.03	-2.08R
1864	0.00	355.85	509.72	2.13	-153.87	-2.04R
1865	0.00	352.82	509.72	2.13	-156.90	-2.08R
1866	0.00	352.82	509.72	2.13	-156.90	-2.08R
1867	0.00	352.82	509.72	2.13	-156.90	-2.08R
1868	0.00	352.82	509.72	2.13	-156.90	-2.08R
1869	0.00	351.14	509.72	2.13	-158.58	-2.10R
1870	0.00	350.66	509.72	2.13	-159.06	-2.10R
1871	0.00	350.15	509.72	2.13	-159.57	-2.11R
1872	0.00	352.13	509.72	2.13	-157.59	-2.08R
1873	0.00	352.13	509.72	2.13	-157.59	-2.08R
1874	0.00	352.13	509.72	2.13	-157.59	-2.08R

1875	0.00	352.13	509.72	2.13	-157.59	-2.08R
1891	0.00	357.46	509.72	2.13	-152.26	-2.01R
1892	0.00	357.33	509.72	2.13	-152.39	-2.02R
1893	0.00	355.95	509.72	2.13	-153.77	-2.03R
1894	0.00	355.95	509.72	2.13	-153.77	-2.03R
1895	0.00	355.95	509.72	2.13	-153.77	-2.03R
1896	0.00	355.95	509.72	2.13	-153.77	-2.03R
1897	0.00	357.34	509.72	2.13	-152.38	-2.02R
1907	1.00	351.43	457.23	9.50	-105.80	-1.41 X
1908	0.00	351.43	509.72	2.13	-158.29	-2.09R
1909	0.00	351.43	509.72	2.13	-158.29	-2.09R
1910	0.00	351.43	509.72	2.13	-158.29	-2.09R
1911	0.00	346.29	509.72	2.13	-163.43	-2.16R
1912	0.00	341.11	509.72	2.13	-168.61	-2.23R
1913	0.00	339.47	509.72	2.13	-170.25	-2.25R
1914	0.00	340.84	509.72	2.13	-168.88	-2.23R
1915	0.00	340.84	509.72	2.13	-168.88	-2.23R
1916	0.00	340.84	509.72	2.13	-168.88	-2.23R
1917	0.00	340.84	509.72	2.13	-168.88	-2.23R
1918	0.00	336.75	509.72	2.13	-172.97	-2.29R
1919	0.00	337.96	509.72	2.13	-171.76	-2.27R
1920	0.00	335.57	509.72	2.13	-174.15	-2.30R
1921	0.00	331.62	509.72	2.13	-178.10	-2.36R
1922	0.00	331.62	509.72	2.13	-178.10	-2.36R
1923	0.00	331.62	509.72	2.13	-178.10	-2.36R
1924	0.00	331.62	509.72	2.13	-178.10	-2.36R
1925	0.00	325.92	509.72	2.13	-183.80	-2.43R
1926	0.00	327.89	509.72	2.13	-181.83	-2.41R
1927	0.00	325.90	509.72	2.13	-183.82	-2.43R
1928	1.00	326.54	474.43	8.93	-147.89	-1.97 X
1929	1.00	326.54	484.02	9.82	-157.48	-2.10RX
1930	0.00	326.54	509.72	2.13	-183.18	-2.42R
1931	0.00	326.54	509.72	2.13	-183.18	-2.42R
1932	0.00	325.78	509.72	2.13	-183.94	-2.43R
1933	0.00	329.58	509.72	2.13	-180.14	-2.38R
1934	0.00	325.27	509.72	2.13	-184.45	-2.44R
1935	0.00	330.58	509.72	2.13	-179.14	-2.37R
1936	0.00	330.58	509.72	2.13	-179.14	-2.37R
1937	0.00	330.58	509.72	2.13	-179.14	-2.37R
1938	0.00	330.58	509.72	2.13	-179.14	-2.37R
1939	0.00	330.22	509.72	2.13	-179.50	-2.37R
1940	0.00	328.63	426.61	13.93	-97.98	-1.32 X
1941	0.00	328.59	509.72	2.13	-181.13	-2.40R
1942	0.00	331.07	509.72	2.13	-178.65	-2.36R
1943	0.00	331.07	509.72	2.13	-178.65	-2.36R
1944	0.00	331.07	509.72	2.13	-178.65	-2.36R
1945	0.00	331.07	509.72	2.13	-178.65	-2.36R
1946	0.00	324.66	509.72	2.13	-185.06	-2.45R
1947	0.00	322.48	509.72	2.13	-187.24	-2.48R
1948	0.00	328.00	509.72	2.13	-181.72	-2.40R
1949	0.00	322.11	509.72	2.13	-187.61	-2.48R
1950	0.00	322.11	509.72	2.13	-187.61	-2.48R
1951	0.00	322.11	509.72	2.13	-187.61	-2.48R
1952	0.00	322.11	509.72	2.13	-187.61	-2.48R
1953	0.00	321.96	498.43	7.79	-176.47	-2.35RX
1954	0.00	325.09	509.72	2.13	-184.63	-2.44R
1955	0.00	336.30	509.72	2.13	-173.42	-2.29R
1956	0.00	334.76	509.72	2.13	-174.96	-2.31R
1957	0.00	334.76	509.72	2.13	-174.96	-2.31R
1958	0.00	334.76	509.72	2.13	-174.96	-2.31R
1960	0.00	335.63	509.72	2.13	-174.09	-2.30R
1961	0.00	331.73	509.72	2.13	-177.99	-2.35R

1962	0.00	329.73	509.72	2.13	-179.99	-2.38R
1963	0.00	333.78	509.72	2.13	-175.94	-2.33R
1964	0.00	333.78	509.72	2.13	-175.94	-2.33R
1965	0.00	333.78	509.72	2.13	-175.94	-2.33R
1966	0.00	333.78	509.72	2.13	-175.94	-2.33R
1967	0.00	337.27	509.72	2.13	-172.45	-2.28R
1968	0.00	335.03	509.72	2.13	-174.69	-2.31R
1969	0.00	336.13	509.72	2.13	-173.59	-2.30R
1970	1.00	338.72	423.01	10.80	-84.29	-1.13 X
1971	0.00	338.72	499.02	2.74	-160.30	-2.12R
1972	0.00	338.72	509.72	2.13	-171.00	-2.26R
1973	0.00	338.72	509.72	2.13	-171.00	-2.26R
1974	0.00	345.07	509.72	2.13	-164.65	-2.18R
1975	0.00	351.35	509.72	2.13	-158.37	-2.09R
1977	0.00	359.05	468.87	7.18	-109.82	-1.46 X
1988	0.00	356.14	509.72	2.13	-153.58	-2.03R
1997	0.00	355.86	509.72	2.13	-153.86	-2.04R
1998	0.00	348.75	509.72	2.13	-160.97	-2.13R
1999	0.00	348.75	509.72	2.13	-160.97	-2.13R
2000	0.00	348.75	509.72	2.13	-160.97	-2.13R
2001	0.00	348.75	509.72	2.13	-160.97	-2.13R
2002	0.00	337.90	509.72	2.13	-171.82	-2.27R
2003	0.00	337.55	509.72	2.13	-172.17	-2.28R
2004	0.00	337.55	509.72	2.13	-172.17	-2.28R
2005	0.00	341.20	509.72	2.13	-168.52	-2.23R
2006	0.00	341.20	509.72	2.13	-168.52	-2.23R
2007	0.00	341.20	509.72	2.13	-168.52	-2.23R
2008	0.00	341.20	509.72	2.13	-168.52	-2.23R
2009	0.00	332.83	509.72	2.13	-176.89	-2.34R
2010	0.00	332.45	509.72	2.13	-177.27	-2.34R
2015	1.00	329.58	324.34	26.59	5.24	0.07 X
2024	0.00	321.72	473.96	1.96	-152.24	-2.01R
2030	0.00	317.35	473.96	1.96	-156.61	-2.07R
2031	0.00	316.57	473.96	1.96	-157.39	-2.08R
2032	0.00	314.31	473.96	1.96	-159.65	-2.11R
2033	0.00	317.53	473.96	1.96	-156.43	-2.07R
2034	0.00	317.53	473.96	1.96	-156.43	-2.07R
2035	0.00	317.53	473.96	1.96	-156.43	-2.07R
2036	0.00	317.53	473.96	1.96	-156.43	-2.07R
2037	0.00	318.74	473.96	1.96	-155.22	-2.05R
2038	0.00	318.74	473.96	1.96	-155.22	-2.05R
2039	0.00	320.64	473.96	1.96	-153.32	-2.03R
2040	0.00	318.80	473.96	1.96	-155.16	-2.05R
2041	0.00	318.80	473.96	1.96	-155.16	-2.05R
2042	0.00	318.80	473.96	1.96	-155.16	-2.05R
2043	0.00	318.80	473.96	1.96	-155.16	-2.05R
2044	0.00	318.80	473.96	1.96	-155.16	-2.05R
2045	0.00	309.00	473.96	1.96	-164.96	-2.18R
2046	0.00	309.30	473.96	1.96	-164.66	-2.18R
2047	0.00	308.04	473.96	1.96	-165.92	-2.19R
2048	0.00	308.04	473.96	1.96	-165.92	-2.19R
2049	0.00	308.04	473.96	1.96	-165.92	-2.19R
2050	0.00	308.04	473.96	1.96	-165.92	-2.19R
2051	0.00	306.54	473.96	1.96	-167.42	-2.21R
2052	0.00	308.24	473.96	1.96	-165.72	-2.19R
2053	0.00	307.52	473.96	1.96	-166.44	-2.20R
2054	0.00	303.65	473.96	1.96	-170.31	-2.25R
2055	0.00	303.65	473.96	1.96	-170.31	-2.25R
2056	0.00	303.65	473.96	1.96	-170.31	-2.25R
2057	0.00	303.65	473.96	1.96	-170.31	-2.25R
2058	0.00	316.04	473.96	1.96	-157.92	-2.09R
2059	0.00	321.72	473.96	1.96	-152.24	-2.01R

2060	0.00	316.71	474.52	2.19	-157.81	-2.09R
2061	0.00	314.42	473.96	1.96	-159.54	-2.11R
2062	0.00	314.42	473.96	1.96	-159.54	-2.11R
2063	0.00	314.42	473.96	1.96	-159.54	-2.11R
2064	0.00	314.42	473.96	1.96	-159.54	-2.11R
2065	0.00	317.41	473.96	1.96	-156.55	-2.07R
2066	0.00	313.86	473.96	1.96	-160.10	-2.12R
2067	0.00	313.66	473.96	1.96	-160.30	-2.12R
2074	0.00	324.70	397.18	13.18	-72.48	-0.97 X
2130	1.00	392.68	425.72	10.51	-33.04	-0.44 X
2148	1.00	416.77	400.37	10.81	16.40	0.22 X
2169	0.00	426.78	435.09	7.71	-8.31	-0.11 X
2172	1.00	422.09	363.01	14.01	59.08	0.79 X
2225	1.00	424.77	448.82	9.57	-24.05	-0.32 X
2241	1.00	417.32	355.25	16.45	62.07	0.84 X
2262	1.00	422.40	376.97	12.01	45.43	0.61 X
2287	0.00	440.07	351.42	20.83	88.65	1.22 X
2336	1.00	500.58	436.99	9.91	63.59	0.85 X
2369	1.00	517.06	427.55	9.08	89.51	1.19 X
2404	1.00	554.31	476.34	10.75	77.97	1.04 X
2428	1.00	576.42	494.64	10.83	81.78	1.09 X
2441	0.00	574.67	526.00	6.21	48.67	0.65 X
2449	0.00	565.32	492.21	11.78	73.11	0.98 X
2568	1.00	596.28	529.86	10.10	66.42	0.89 X
2599	1.00	540.67	522.27	9.35	18.40	0.25 X
2681	1.00	555.59	507.61	9.12	47.98	0.64 X
2755	0.00	649.08	690.42	9.93	-41.34	-0.55 X
2797	1.00	657.38	693.97	10.44	-36.59	-0.49 X
2934	0.00	671.58	729.12	7.94	-57.54	-0.77 X
2977	1.00	710.82	709.21	9.95	1.61	0.02 X
2981	0.00	707.56	741.51	10.87	-33.95	-0.45 X
3080	0.00	798.11	712.22	7.43	85.89	1.14 X
3125	1.00	858.06	840.85	9.25	17.21	0.23 X
3201	1.00	859.56	843.68	10.01	15.88	0.21 X
3213	1.00	869.93	790.98	11.17	78.95	1.06 X
3321	0.00	822.16	796.17	15.20	25.99	0.35 X
3324	0.00	822.16	803.20	12.62	18.96	0.25 X
3664	0.00	1145.11	991.58	3.11	153.53	2.03R
3665	0.00	1145.11	991.58	3.11	153.53	2.03R
3666	0.00	1145.11	991.58	3.11	153.53	2.03R
3667	0.00	1145.11	991.58	3.11	153.53	2.03R
3668	0.00	1149.10	991.72	3.12	157.38	2.08R
3669	0.00	1147.62	991.58	3.11	156.04	2.06R
3670	0.00	1143.30	991.58	3.11	151.72	2.01R
3671	0.00	1150.78	991.58	3.11	159.20	2.11R
3672	0.00	1143.30	991.58	3.11	151.72	2.01R
3673	0.00	1143.30	991.58	3.11	151.72	2.01R
3674	0.00	1143.30	991.58	3.11	151.72	2.01R
3675	0.00	1149.57	992.00	3.19	157.57	2.09R
3676	0.00	1149.57	991.58	3.11	157.99	2.09R
3677	0.00	1145.90	991.58	3.11	154.32	2.04R
3679	0.00	1145.90	991.58	3.11	154.32	2.04R
3680	0.00	1145.90	991.58	3.11	154.32	2.04R
3681	0.00	1145.90	991.58	3.11	154.32	2.04R
3682	0.00	1145.90	991.58	3.11	154.32	2.04R
3752	0.00	1145.48	991.58	3.11	153.90	2.04R
3753	0.00	1155.53	991.58	3.11	163.95	2.17R
3754	0.00	1153.51	991.58	3.11	161.93	2.14R
3755	0.00	1163.32	991.58	3.11	171.74	2.27R
3756	0.00	1154.59	991.58	3.11	163.01	2.16R
3757	0.00	1154.59	991.58	3.11	163.01	2.16R
3758	0.00	1154.59	991.58	3.11	163.01	2.16R

3760	0.00	1149.37	991.58	3.11	157.79	2.09R
3761	0.00	1157.56	991.58	3.11	165.98	2.20R
3762	0.00	1151.33	991.58	3.11	159.75	2.11R
3763	0.00	1157.56	991.58	3.11	165.98	2.20R
3764	0.00	1157.56	991.58	3.11	165.98	2.20R
3765	0.00	1157.56	991.58	3.11	165.98	2.20R
3767	0.00	1157.67	991.58	3.11	166.09	2.20R
3768	0.00	1143.83	991.58	3.11	152.25	2.01R
3769	0.00	1153.77	991.58	3.11	162.19	2.15R
3770	0.00	1153.77	991.58	3.11	162.19	2.15R
3771	0.00	1153.77	991.58	3.11	162.19	2.15R
3772	0.00	1153.77	991.58	3.11	162.19	2.15R
3773	0.00	1188.69	991.58	3.11	197.11	2.61R
3774	0.00	1183.37	991.58	3.11	191.79	2.54R
3775	0.00	1189.04	991.58	3.11	197.46	2.61R
3776	0.00	1176.10	991.58	3.11	184.52	2.44R
3777	0.00	1189.04	991.58	3.11	197.46	2.61R
3778	0.00	1189.04	991.58	3.11	197.46	2.61R
3779	0.00	1189.04	991.72	3.12	197.32	2.61R
3780	0.00	1173.45	991.58	3.11	181.87	2.41R
3781	0.00	1184.20	991.58	3.11	192.62	2.55R
3782	0.00	1176.94	991.58	3.11	185.36	2.45R
3783	0.00	1168.11	991.58	3.11	176.53	2.34R
3784	0.00	1176.94	991.58	3.11	185.36	2.45R
3785	0.00	1176.94	991.58	3.11	185.36	2.45R
3786	0.00	1176.94	991.58	3.11	185.36	2.45R
3788	0.00	1152.25	991.58	3.11	160.67	2.13R
3789	0.00	1153.78	991.58	3.11	162.20	2.15R
3790	0.00	1144.32	991.58	3.11	152.74	2.02R
3791	0.00	1154.26	991.58	3.11	162.68	2.15R
3792	0.00	1154.26	991.58	3.11	162.68	2.15R
3793	0.00	1154.26	991.58	3.11	162.68	2.15R
3794	0.00	1142.70	963.42	6.50	179.28	2.38RX
3808	0.00	1145.88	991.58	3.11	154.30	2.04R
3810	0.00	1153.25	991.58	3.11	161.67	2.14R
3811	0.00	1163.81	991.58	3.11	172.23	2.28R
3812	0.00	1154.02	991.58	3.11	162.44	2.15R
3813	0.00	1154.02	991.58	3.11	162.44	2.15R
3814	0.00	1154.02	991.58	3.11	162.44	2.15R
3815	0.00	1176.69	991.58	3.11	185.11	2.45R
3816	0.00	1174.92	991.58	3.11	183.34	2.43R
3817	0.00	1182.73	991.58	3.11	191.15	2.53R
3818	0.00	1172.23	991.58	3.11	180.65	2.39R
3819	0.00	1172.23	991.58	3.11	180.65	2.39R
3820	0.00	1172.23	991.58	3.11	180.65	2.39R
3821	0.00	1172.23	991.58	3.11	180.65	2.39R
3829	0.00	1152.00	991.58	3.11	160.42	2.12R
3830	0.00	1162.48	991.58	3.11	170.90	2.26R
3831	0.00	1159.34	991.58	3.11	167.76	2.22R
3832	0.00	1158.49	991.58	3.11	166.91	2.21R
3833	0.00	1159.64	991.58	3.11	168.06	2.22R
3834	0.00	1159.64	991.58	3.11	168.06	2.22R
3835	0.00	1159.64	991.58	3.11	168.06	2.22R
3836	0.00	1150.38	991.58	3.11	158.80	2.10R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large leverage.

Appendix D:

MODEL 4

```
The regression equation is
TA100 (Close) = - 1950 - 6.07 FATALITIES
                + 0.000000 Foreign direct investment, net
                + 5.98 Exports of goods and services (
                + 0.000000 GDP (constant 2000 US$)
                + 17.4 Inflation, consumer prices (ann


Predictor                             Coef     SE Coef        T      P
Constant                           -1950.16       17.98  -108.48  0.000
FATALITIES                          -6.0738      0.7956    -7.63  0.000
Foreign direct investment, net   0.00000001  0.00000000     9.19  0.000
Exports of goods and services (      5.9769      0.7885     7.58  0.000
GDP (constant 2000 US$)          0.00000002  0.00000000    71.21  0.000
Inflation, consumer prices (ann     17.4049      0.6968    24.98  0.000


S = 75.6794   R-Sq = 90.1%   R-Sq(adj) = 90.1%


Analysis of Variance

Source            DF         SS        MS        F      P
Regression         5  199582853  39916571  6969.44  0.000
Residual Error  3830   21935823      5727
Total           3835  221518676


Source                           DF     Seq SS
FATALITIES                        1     656715
Foreign direct investment, net    1    4361311
Exports of goods and services (   1  162413874
GDP (constant 2000 US$)           1   28578027
Inflation, consumer prices (ann   1    3572927


Unusual Observations

                  TA100
 Obs  FATALITIES  (Close)     Fit  SE Fit  Residual  St Resid
  30        15.0   302.33  132.36   12.13    169.97      2.28RX
  66         7.0   287.09  180.95    6.27    106.14      1.41 X
 421        12.0   309.44  169.76    9.68    139.68      1.86 X
1325         8.0   457.08  405.78    6.91     51.30      0.68 X
1343         6.0   443.27  417.92    5.53     25.35      0.34 X
1432        22.0   414.21  320.74   17.60     93.47      1.27 X
1501        21.0   434.59  326.82   16.82    107.77      1.46 X
1532         8.0   402.99  405.78    6.91     -2.79     -0.04 X
1613         7.0   397.51  411.85    6.21    -14.34     -0.19 X
1706        11.0   410.02  442.47    8.78    -32.45     -0.43 X
1713        15.0   398.44  418.17   11.90    -19.73     -0.26 X
1716         9.0   397.74  454.62    7.25    -56.88     -0.76 X
1724         8.0   412.48  460.69    6.49    -48.21     -0.64 X
1731        21.0   400.47  381.73   16.62     18.74      0.25 X
1735        15.0   400.47  418.17   11.90    -17.70     -0.24 X
1746        10.0   379.11  448.54    8.01    -69.43     -0.92 X
1747         7.0   379.11  466.76    5.74    -87.65     -1.16 X
```

1772	15.0	377.99	418.17	11.90	-40.18	-0.54 X
1784	20.0	380.39	387.80	15.83	-7.41	-0.10 X
1785	24.0	375.90	363.51	18.99	12.39	0.17 X
1813	20.0	359.42	387.80	15.83	-28.38	-0.38 X
1815	0.0	353.84	509.28	2.12	-155.44	-2.05R
1816	0.0	347.32	509.28	2.12	-161.96	-2.14R
1817	0.0	347.32	509.28	2.12	-161.96	-2.14R
1818	0.0	347.32	509.28	2.12	-161.96	-2.14R
1819	0.0	347.32	509.28	2.12	-161.96	-2.14R
1820	0.0	340.30	509.28	2.12	-168.98	-2.23R
1821	0.0	351.53	509.28	2.12	-157.75	-2.09R
1822	0.0	343.97	509.28	2.12	-165.31	-2.19R
1823	0.0	353.92	509.28	2.12	-155.36	-2.05R
1824	0.0	353.92	509.28	2.12	-155.36	-2.05R
1825	0.0	353.92	509.28	2.12	-155.36	-2.05R
1826	0.0	353.92	509.28	2.12	-155.36	-2.05R
1827	0.0	355.95	509.28	2.12	-153.33	-2.03R
1828	0.0	349.06	509.28	2.12	-160.22	-2.12R
1829	0.0	346.71	509.28	2.12	-162.57	-2.15R
1830	0.0	348.72	509.28	2.12	-160.56	-2.12R
1831	0.0	348.72	509.28	2.12	-160.56	-2.12R
1832	0.0	348.72	509.28	2.12	-160.56	-2.12R
1833	0.0	348.72	509.28	2.12	-160.56	-2.12R
1834	0.0	352.27	509.28	2.12	-157.01	-2.08R
1835	0.0	355.91	509.28	2.12	-153.37	-2.03R
1837	0.0	355.64	509.28	2.12	-153.64	-2.03R
1838	0.0	355.64	509.28	2.12	-153.64	-2.03R
1839	0.0	355.64	509.28	2.12	-153.64	-2.03R
1840	0.0	355.64	509.28	2.12	-153.64	-2.03R
1850	0.0	350.17	509.28	2.12	-159.11	-2.10R
1851	0.0	351.94	509.28	2.12	-157.34	-2.08R
1852	0.0	351.94	509.28	2.12	-157.34	-2.08R
1853	0.0	351.94	509.28	2.12	-157.34	-2.08R
1854	0.0	351.94	509.28	2.12	-157.34	-2.08R
1857	7.0	362.19	466.76	5.74	-104.57	-1.39 X
1858	8.0	359.51	460.69	6.49	-101.18	-1.34 X
1861	18.0	359.51	399.95	14.25	-40.44	-0.54 X
1862	1.0	350.97	503.21	2.18	-152.24	-2.01R
1863	0.0	352.69	509.28	2.12	-156.59	-2.07R
1864	0.0	355.85	509.28	2.12	-153.43	-2.03R
1865	0.0	352.82	509.28	2.12	-156.46	-2.07R
1866	0.0	352.82	509.28	2.12	-156.46	-2.07R
1867	0.0	352.82	509.28	2.12	-156.46	-2.07R
1868	0.0	352.82	509.28	2.12	-156.46	-2.07R
1869	0.0	351.14	509.28	2.12	-158.14	-2.09R
1870	0.0	350.66	509.28	2.12	-158.62	-2.10R
1871	0.0	350.15	509.28	2.12	-159.13	-2.10R
1872	0.0	352.13	509.28	2.12	-157.15	-2.08R
1873	0.0	352.13	509.28	2.12	-157.15	-2.08R
1874	0.0	352.13	509.28	2.12	-157.15	-2.08R
1875	0.0	352.13	509.28	2.12	-157.15	-2.08R
1891	0.0	357.46	509.28	2.12	-151.82	-2.01R
1892	0.0	357.33	509.28	2.12	-151.95	-2.01R
1893	0.0	355.95	509.28	2.12	-153.33	-2.03R
1894	0.0	355.95	509.28	2.12	-153.33	-2.03R
1895	0.0	355.95	509.28	2.12	-153.33	-2.03R
1896	0.0	355.95	509.28	2.12	-153.33	-2.03R
1897	0.0	357.34	509.28	2.12	-151.94	-2.01R
1908	0.0	351.43	509.28	2.12	-157.85	-2.09R
1909	0.0	351.43	509.28	2.12	-157.85	-2.09R
1910	0.0	351.43	509.28	2.12	-157.85	-2.09R
1911	0.0	346.29	509.28	2.12	-162.99	-2.15R

1912	0.0	341.11	509.28	2.12	-168.17	-2.22R
1913	0.0	339.47	509.28	2.12	-169.81	-2.24R
1914	0.0	340.84	509.28	2.12	-168.44	-2.23R
1915	0.0	340.84	509.28	2.12	-168.44	-2.23R
1916	0.0	340.84	509.28	2.12	-168.44	-2.23R
1917	0.0	340.84	509.28	2.12	-168.44	-2.23R
1918	0.0	336.75	509.28	2.12	-172.53	-2.28R
1919	0.0	337.96	509.28	2.12	-171.32	-2.26R
1920	0.0	335.57	509.28	2.12	-173.71	-2.30R
1921	0.0	331.62	509.28	2.12	-177.66	-2.35R
1922	0.0	331.62	509.28	2.12	-177.66	-2.35R
1923	0.0	331.62	509.28	2.12	-177.66	-2.35R
1924	0.0	331.62	509.28	2.12	-177.66	-2.35R
1925	0.0	325.92	509.28	2.12	-183.36	-2.42R
1926	0.0	327.89	509.28	2.12	-181.39	-2.40R
1927	0.0	325.90	509.28	2.12	-183.38	-2.42R
1928	2.0	326.54	497.13	2.51	-170.59	-2.26R
1929	0.0	326.54	509.28	2.12	-182.74	-2.42R
1930	0.0	326.54	509.28	2.12	-182.74	-2.42R
1931	0.0	326.54	509.28	2.12	-182.74	-2.42R
1932	0.0	325.78	509.28	2.12	-183.50	-2.43R
1933	0.0	329.58	509.28	2.12	-179.70	-2.38R
1934	0.0	325.27	509.28	2.12	-184.01	-2.43R
1935	0.0	330.58	509.28	2.12	-178.70	-2.36R
1936	0.0	330.58	509.28	2.12	-178.70	-2.36R
1937	0.0	330.58	509.28	2.12	-178.70	-2.36R
1938	0.0	330.58	509.28	2.12	-178.70	-2.36R
1939	0.0	330.22	509.28	2.12	-179.06	-2.37R
1940	16.0	328.63	412.10	12.68	-83.47	-1.12 X
1941	0.0	328.59	509.28	2.12	-180.69	-2.39R
1942	0.0	331.07	509.28	2.12	-178.21	-2.36R
1943	0.0	331.07	509.28	2.12	-178.21	-2.36R
1944	0.0	331.07	509.28	2.12	-178.21	-2.36R
1945	0.0	331.07	509.28	2.12	-178.21	-2.36R
1946	0.0	324.66	509.28	2.12	-184.62	-2.44R
1947	0.0	322.48	509.28	2.12	-186.80	-2.47R
1948	0.0	328.00	509.28	2.12	-181.28	-2.40R
1949	0.0	322.11	509.28	2.12	-187.17	-2.47R
1950	0.0	322.11	509.28	2.12	-187.17	-2.47R
1951	0.0	322.11	509.28	2.12	-187.17	-2.47R
1952	0.0	322.11	509.28	2.12	-187.17	-2.47R
1953	3.0	321.96	491.06	3.02	-169.10	-2.24R
1954	0.0	325.09	509.28	2.12	-184.19	-2.43R
1955	0.0	336.30	509.28	2.12	-172.98	-2.29R
1956	0.0	334.76	509.28	2.12	-174.52	-2.31R
1957	0.0	334.76	509.28	2.12	-174.52	-2.31R
1958	0.0	334.76	509.28	2.12	-174.52	-2.31R
1960	0.0	335.63	509.28	2.12	-173.65	-2.30R
1961	0.0	331.73	509.28	2.12	-177.55	-2.35R
1962	0.0	329.73	509.28	2.12	-179.55	-2.37R
1963	0.0	333.78	509.28	2.12	-175.50	-2.32R
1964	0.0	333.78	509.28	2.12	-175.50	-2.32R
1965	0.0	333.78	509.28	2.12	-175.50	-2.32R
1966	0.0	333.78	509.28	2.12	-175.50	-2.32R
1967	0.0	337.27	509.28	2.12	-172.01	-2.27R
1968	0.0	335.03	509.28	2.12	-174.25	-2.30R
1969	0.0	336.13	509.28	2.12	-173.15	-2.29R
1970	12.0	338.72	436.39	9.56	-97.67	-1.30 X
1971	2.0	338.72	497.13	2.51	-158.41	-2.09R
1972	0.0	338.72	509.28	2.12	-170.56	-2.25R
1973	0.0	338.72	509.28	2.12	-170.56	-2.25R
1974	0.0	345.07	509.28	2.12	-164.21	-2.17R

1975	0.0	351.35	509.28	2.12	-157.93	-2.09R
1977	8.0	359.05	460.69	6.49	-101.64	-1.35 X
1988	0.0	356.14	509.28	2.12	-153.14	-2.02R
1997	0.0	355.86	509.28	2.12	-153.42	-2.03R
1998	0.0	348.75	509.28	2.12	-160.53	-2.12R
1999	0.0	348.75	509.28	2.12	-160.53	-2.12R
2000	0.0	348.75	509.28	2.12	-160.53	-2.12R
2001	0.0	348.75	509.28	2.12	-160.53	-2.12R
2002	0.0	337.90	509.28	2.12	-171.38	-2.27R
2003	0.0	337.55	509.28	2.12	-171.73	-2.27R
2004	0.0	337.55	509.28	2.12	-171.73	-2.27R
2005	0.0	341.20	509.28	2.12	-168.08	-2.22R
2006	0.0	341.20	509.28	2.12	-168.08	-2.22R
2007	0.0	341.20	509.28	2.12	-168.08	-2.22R
2008	0.0	341.20	509.28	2.12	-168.08	-2.22R
2009	0.0	332.83	509.28	2.12	-176.45	-2.33R
2010	0.0	332.45	509.28	2.12	-176.83	-2.34R
2015	22.0	329.58	340.02	17.49	-10.44	-0.14 X
2024	0.0	321.72	473.65	1.96	-151.93	-2.01R
2030	0.0	317.35	473.65	1.96	-156.30	-2.07R
2031	0.0	316.57	473.65	1.96	-157.08	-2.08R
2032	0.0	314.31	473.65	1.96	-159.34	-2.11R
2033	0.0	317.53	473.65	1.96	-156.12	-2.06R
2034	0.0	317.53	473.65	1.96	-156.12	-2.06R
2035	0.0	317.53	473.65	1.96	-156.12	-2.06R
2036	0.0	317.53	473.65	1.96	-156.12	-2.06R
2037	0.0	318.74	473.65	1.96	-154.91	-2.05R
2038	0.0	318.74	473.65	1.96	-154.91	-2.05R
2039	0.0	320.64	473.65	1.96	-153.01	-2.02R
2040	0.0	318.80	473.65	1.96	-154.85	-2.05R
2041	0.0	318.80	473.65	1.96	-154.85	-2.05R
2042	0.0	318.80	473.65	1.96	-154.85	-2.05R
2043	0.0	318.80	473.65	1.96	-154.85	-2.05R
2044	0.0	318.80	473.65	1.96	-154.85	-2.05R
2045	0.0	309.00	473.65	1.96	-164.65	-2.18R
2046	0.0	309.30	473.65	1.96	-164.35	-2.17R
2047	0.0	308.04	473.65	1.96	-165.61	-2.19R
2048	0.0	308.04	473.65	1.96	-165.61	-2.19R
2049	0.0	308.04	473.65	1.96	-165.61	-2.19R
2050	0.0	308.04	473.65	1.96	-165.61	-2.19R
2051	0.0	306.54	473.65	1.96	-167.11	-2.21R
2052	0.0	308.24	473.65	1.96	-165.41	-2.19R
2053	0.0	307.52	473.65	1.96	-166.13	-2.20R
2054	0.0	303.65	473.65	1.96	-170.00	-2.25R
2055	0.0	303.65	473.65	1.96	-170.00	-2.25R
2056	0.0	303.65	473.65	1.96	-170.00	-2.25R
2057	0.0	303.65	473.65	1.96	-170.00	-2.25R
2058	0.0	316.04	473.65	1.96	-157.61	-2.08R
2059	0.0	321.72	473.65	1.96	-151.93	-2.01R
2060	0.0	316.71	473.65	1.96	-156.94	-2.07R
2061	0.0	314.42	473.65	1.96	-159.23	-2.10R
2062	0.0	314.42	473.65	1.96	-159.23	-2.10R
2063	0.0	314.42	473.65	1.96	-159.23	-2.10R
2064	0.0	314.42	473.65	1.96	-159.23	-2.10R
2065	0.0	317.41	473.65	1.96	-156.24	-2.07R
2066	0.0	313.86	473.65	1.96	-159.79	-2.11R
2067	0.0	313.66	473.65	1.96	-159.99	-2.11R
2074	15.0	324.70	382.54	11.97	-57.84	-0.77 X
2148	9.0	416.77	418.98	7.30	-2.21	-0.03 X
2169	7.0	426.78	431.13	5.79	-4.35	-0.06 X
2172	17.0	422.09	370.39	13.54	51.70	0.69 X
2241	19.0	417.32	358.24	15.12	59.08	0.80 X

2262	14.0	422.40	388.61	11.19	33.79	0.45 X
2287	23.0	440.07	333.95	18.28	106.12	1.45 X
2389	5.0	565.84	526.45	5.22	39.39	0.52 X
2404	11.0	554.31	490.00	9.31	64.31	0.86 X
2428	8.0	576.42	508.22	7.16	68.20	0.91 X
2441	6.0	574.67	520.37	5.83	54.30	0.72 X
2449	12.0	565.32	483.93	10.05	81.39	1.09 X
2681	5.0	555.59	526.45	5.22	29.14	0.39 X
2755	9.0	649.08	685.81	7.47	-36.73	-0.49 X
3040	6.0	760.21	704.03	5.27	56.18	0.74 X
3080	6.0	798.11	704.03	5.27	94.08	1.25 X
3213	11.0	869.93	802.43	8.93	67.50	0.90 X
3321	13.0	822.16	790.28	10.47	31.88	0.43 X
3324	12.0	822.16	796.36	9.70	25.80	0.34 X
3664	0.0	1145.11	991.36	3.11	153.75	2.03R
3665	0.0	1145.11	991.36	3.11	153.75	2.03R
3666	0.0	1145.11	991.36	3.11	153.75	2.03R
3667	0.0	1145.11	991.36	3.11	153.75	2.03R
3668	0.0	1149.10	991.36	3.11	157.74	2.09R
3669	0.0	1147.62	991.36	3.11	156.26	2.07R
3670	0.0	1143.30	991.36	3.11	151.94	2.01R
3671	0.0	1150.78	991.36	3.11	159.42	2.11R
3672	0.0	1143.30	991.36	3.11	151.94	2.01R
3673	0.0	1143.30	991.36	3.11	151.94	2.01R
3674	0.0	1143.30	991.36	3.11	151.94	2.01R
3675	0.0	1149.57	991.36	3.11	158.21	2.09R
3676	0.0	1149.57	991.36	3.11	158.21	2.09R
3677	0.0	1145.90	991.36	3.11	154.54	2.04R
3679	0.0	1145.90	991.36	3.11	154.54	2.04R
3680	0.0	1145.90	991.36	3.11	154.54	2.04R
3681	0.0	1145.90	991.36	3.11	154.54	2.04R
3682	0.0	1145.90	991.36	3.11	154.54	2.04R
3752	0.0	1145.48	991.36	3.11	154.12	2.04R
3753	0.0	1155.53	991.36	3.11	164.17	2.17R
3754	0.0	1153.51	991.36	3.11	162.15	2.14R
3755	0.0	1163.32	991.36	3.11	171.96	2.27R
3756	0.0	1154.59	991.36	3.11	163.23	2.16R
3757	0.0	1154.59	991.36	3.11	163.23	2.16R
3758	0.0	1154.59	991.36	3.11	163.23	2.16R
3760	0.0	1149.37	991.36	3.11	158.01	2.09R
3761	0.0	1157.56	991.36	3.11	166.20	2.20R
3762	0.0	1151.33	991.36	3.11	159.97	2.12R
3763	0.0	1157.56	991.36	3.11	166.20	2.20R
3764	0.0	1157.56	991.36	3.11	166.20	2.20R
3765	0.0	1157.56	991.36	3.11	166.20	2.20R
3767	0.0	1157.67	991.36	3.11	166.31	2.20R
3768	0.0	1143.83	991.36	3.11	152.47	2.02R
3769	0.0	1153.77	991.36	3.11	162.41	2.15R
3770	0.0	1153.77	991.36	3.11	162.41	2.15R
3771	0.0	1153.77	991.36	3.11	162.41	2.15R
3772	0.0	1153.77	991.36	3.11	162.41	2.15R
3773	0.0	1188.69	991.36	3.11	197.33	2.61R
3774	0.0	1183.37	991.36	3.11	192.01	2.54R
3775	0.0	1189.04	991.36	3.11	197.68	2.61R
3776	0.0	1176.10	991.36	3.11	184.74	2.44R
3777	0.0	1189.04	991.36	3.11	197.68	2.61R
3778	0.0	1189.04	991.36	3.11	197.68	2.61R
3779	0.0	1189.04	991.36	3.11	197.68	2.61R
3780	0.0	1173.45	991.36	3.11	182.09	2.41R
3781	0.0	1184.20	991.36	3.11	192.84	2.55R
3782	0.0	1176.94	991.36	3.11	185.58	2.45R
3783	0.0	1168.11	991.36	3.11	176.75	2.34R

3784	0.0	1176.94	991.36	3.11	185.58	2.45R
3785	0.0	1176.94	991.36	3.11	185.58	2.45R
3786	0.0	1176.94	991.36	3.11	185.58	2.45R
3788	0.0	1152.25	991.36	3.11	160.89	2.13R
3789	0.0	1153.78	991.36	3.11	162.42	2.15R
3790	0.0	1144.32	991.36	3.11	152.96	2.02R
3791	0.0	1154.26	991.36	3.11	162.90	2.15R
3792	0.0	1154.26	991.36	3.11	162.90	2.15R
3793	0.0	1154.26	991.36	3.11	162.90	2.15R
3794	5.0	1142.70	960.99	4.92	181.71	2.41R
3808	0.0	1145.88	991.36	3.11	154.52	2.04R
3810	0.0	1153.25	991.36	3.11	161.89	2.14R
3811	0.0	1163.81	991.36	3.11	172.45	2.28R
3812	0.0	1154.02	991.36	3.11	162.66	2.15R
3813	0.0	1154.02	991.36	3.11	162.66	2.15R
3814	0.0	1154.02	991.36	3.11	162.66	2.15R
3815	0.0	1176.69	991.36	3.11	185.33	2.45R
3816	0.0	1174.92	991.36	3.11	183.56	2.43R
3817	0.0	1182.73	991.36	3.11	191.37	2.53R
3818	0.0	1172.23	991.36	3.11	180.87	2.39R
3819	0.0	1172.23	991.36	3.11	180.87	2.39R
3820	0.0	1172.23	991.36	3.11	180.87	2.39R
3821	0.0	1172.23	991.36	3.11	180.87	2.39R
3829	0.0	1152.00	991.36	3.11	160.64	2.12R
3830	0.0	1162.48	991.36	3.11	171.12	2.26R
3831	0.0	1159.34	991.36	3.11	167.98	2.22R
3832	0.0	1158.49	991.36	3.11	167.13	2.21R
3833	0.0	1159.64	991.36	3.11	168.28	2.23R
3834	0.0	1159.64	991.36	3.11	168.28	2.23R
3835	0.0	1159.64	991.36	3.11	168.28	2.23R
3836	0.0	1150.38	991.36	3.11	159.02	2.10R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large leverage.

Appendix E:

MODEL 5

Regression Analysis: TA100 (Close) versus DummyAttk, _ of Attacks, ...

The regression equation is

TA100 (Close) = - 1950 - 19.1 DummyAttk + 10.8 _ of Attacks - 20.6 DummyCity
- 5.46 FATALITIES + 0.144 INJURED
+ 0.000000 Foreign direct investment, net
+ 5.83 Exports of goods and services (
+ 0.000000 GDP (constant 2000 US$)
+ 17.4 Inflation, consumer prices (ann

Predictor	Coef	SE Coef	T	P
Constant	-1949.79	18.09	-107.80	0.000
DummyAttk	-19.11	12.35	-1.55	0.122
_ of Attacks	10.755	9.973	1.08	0.281
DummyCity	-20.63	10.40	-1.98	0.047
FATALITIES	-5.457	1.190	-4.59	0.000
INJURED	0.1440	0.2369	0.61	0.543
Foreign direct investment, net	0.00000001	0.00000000	9.11	0.000
Exports of goods and services (	5.8268	0.7908	7.37	0.000
GDP (constant 2000 US$)	0.00000002	0.00000000	70.80	0.000

```
Inflation, consumer prices (ann     17.3941      0.6969    24.96  0.000


S = 75.6207   R-Sq = 90.1%   R-Sq(adj) = 90.1%


Analysis of Variance

Source            DF         SS        MS        F      P
Regression         9  199639739  22182193  3879.03  0.000
Residual Error  3826   21878938      5718
Total           3835  221518676


Source                           DF     Seq SS
DummyAttk                         1    1039374
_ of Attacks                      1     234324
DummyCity                         1    3591119
FATALITIES                        1    1080522
INJURED                           1      65628
Foreign direct investment, net    1    4262800
Exports of goods and services (   1  157650557
GDP (constant 2000 US$)           1   28152880
Inflation, consumer prices (ann   1    3562534


Unusual Observations

                 TA100
 Obs  DummyAttk  (Close)      Fit  SE Fit  Residual  St Resid
  22       1.00   293.43   196.74    9.79     96.69      1.29 X
  30       1.00   302.33   137.92   29.01    164.41      2.35RX
  66       1.00   287.09   184.75   38.14    102.34      1.57 X
  97       1.00   295.59   195.30   10.27    100.29      1.34 X
 143       1.00   279.75   189.98   10.13     89.77      1.20 X
 158       1.00   288.85   195.30   10.27     93.55      1.25 X
 226       1.00   263.12   209.19    9.98     53.93      0.72 X
 256       1.00   295.32   215.37    9.72     79.95      1.07 X
 378       1.00   312.18   214.79    9.95     97.39      1.30 X
 384       1.00   310.41   214.79    9.95     95.62      1.28 X
 421       1.00   309.44   169.79   14.57    139.65      1.88 X
 423       1.00   293.08   217.67    9.70     75.41      1.01 X
 451       1.00   285.27   214.79    9.95     70.48      0.94 X
 470       1.00   259.48   209.33    9.89     50.15      0.67 X
 476       1.00   267.51   244.64   16.31     22.87      0.31 X
 483       1.00   276.34   235.12   10.44     41.22      0.55 X
 494       1.00   282.24   206.76    8.95     75.48      1.01 X
 860       1.00   424.33   343.67    9.74     80.66      1.08 X
 931       1.00   519.13   467.68    7.48     51.45      0.68 X
1039       1.00   482.78   468.69    8.64     14.09      0.19 X
1213       1.00   457.50   444.03   10.07     13.47      0.18 X
1221       1.00   485.99   434.41    9.35     51.58      0.69 X
1229       1.00   487.93   444.17   10.00     43.76      0.58 X
1241       1.00   468.07   459.64    9.78      8.43      0.11 X
1266       1.00   495.39   444.03   10.07     51.36      0.69 X
1277       1.00   494.58   446.04    9.59     48.54      0.65 X
1291       1.00   463.11   426.42   10.13     36.69      0.49 X
1305       1.00   459.71   420.96   10.09     38.75      0.52 X
1319       1.00   451.08   426.56   10.07     24.52      0.33 X
1325       1.00   457.08   385.21   10.87     71.87      0.96 X
1343       1.00   443.27   428.37   10.45     14.90      0.20 X
1392       1.00   399.45   454.52   14.64    -55.07     -0.74 X
```

1425	1.00	426.57	455.69	15.30	-29.12	-0.39 X
1427	1.00	426.57	445.81	16.95	-19.24	-0.26 X
1432	1.00	414.21	320.76	19.20	93.45	1.28 X
1463	1.00	421.89	427.28	9.80	-5.39	-0.07 X
1493	1.00	435.84	426.42	10.13	9.42	0.13 X
1497	1.00	439.06	422.40	9.46	16.66	0.22 X
1501	0.00	434.59	356.08	26.07	78.51	1.11 X
1513	1.00	424.38	426.42	10.13	-2.04	-0.03 X
1519	1.00	423.95	457.80	10.57	-33.85	-0.45 X
1527	1.00	402.79	426.42	10.13	-23.63	-0.32 X
1532	1.00	402.99	421.34	12.24	-18.35	-0.25 X
1543	1.00	362.98	426.42	10.13	-63.44	-0.85 X
1554	1.00	358.60	426.42	10.13	-67.82	-0.90 X
1570	1.00	376.74	426.55	13.21	-49.81	-0.67 X
1613	1.00	397.51	421.90	10.89	-24.39	-0.33 X
1615	1.00	397.51	437.17	13.52	-39.66	-0.53 X
1654	1.00	454.86	469.02	8.32	-14.16	-0.19 X
1662	1.00	445.49	472.62	6.92	-27.13	-0.36 X
1667	1.00	442.80	482.99	12.38	-40.19	-0.54 X
1670	1.00	438.00	479.27	9.34	-41.27	-0.55 X
1672	1.00	438.00	470.22	10.02	-32.22	-0.43 X
1677	1.00	436.46	523.27	19.54	-86.81	-1.19 X
1694	1.00	409.59	470.36	9.91	-60.77	-0.81 X
1706	0.00	410.02	438.10	12.85	-28.08	-0.38 X
1709	1.00	402.00	476.81	20.09	-74.81	-1.03 X
1713	1.00	398.44	422.56	15.50	-24.12	-0.33 X
1716	1.00	397.74	453.51	10.41	-55.77	-0.74 X
1721	1.00	402.08	478.54	12.05	-76.46	-1.02 X
1724	1.00	412.48	462.28	8.09	-49.80	-0.66 X
1725	1.00	409.11	467.94	11.82	-58.83	-0.79 X
1730	1.00	400.47	470.22	10.02	-69.75	-0.93 X
1731	1.00	400.47	397.53	18.77	2.94	0.04 X
1733	1.00	400.47	467.64	8.74	-67.17	-0.89 X
1734	1.00	400.47	480.28	9.83	-79.81	-1.06 X
1735	1.00	400.47	424.94	13.94	-24.47	-0.33 X
1736	1.00	375.50	470.22	10.02	-94.72	-1.26 X
1746	1.00	379.11	447.19	12.29	-68.08	-0.91 X
1747	1.00	379.11	450.13	9.67	-71.02	-0.95 X
1751	1.00	375.76	481.13	9.96	-105.37	-1.41 X
1772	1.00	377.99	428.25	13.73	-50.26	-0.68 X
1775	1.00	369.76	504.21	6.75	-134.45	-1.79 X
1784	1.00	380.39	395.50	20.77	-15.11	-0.21 X
1785	1.00	375.90	391.62	21.56	-15.72	-0.22 X
1787	1.00	379.05	485.69	8.56	-106.64	-1.42 X
1788	1.00	378.31	481.13	9.96	-102.82	-1.37 X
1789	1.00	378.31	475.96	9.74	-97.65	-1.30 X
1792	1.00	377.12	492.59	10.88	-115.47	-1.54 X
1813	1.00	359.42	389.65	18.91	-30.23	-0.41 X
1814	0.00	358.78	510.11	2.15	-151.33	-2.00R
1815	0.00	353.84	510.11	2.15	-156.27	-2.07R
1816	0.00	347.32	510.11	2.15	-162.79	-2.15R
1817	0.00	347.32	510.11	2.15	-162.79	-2.15R
1818	0.00	347.32	510.11	2.15	-162.79	-2.15R
1819	0.00	347.32	510.11	2.15	-162.79	-2.15R
1820	0.00	340.30	510.11	2.15	-169.81	-2.25R
1821	0.00	351.53	510.11	2.15	-158.58	-2.10R
1822	0.00	343.97	510.11	2.15	-166.14	-2.20R
1823	0.00	353.92	510.11	2.15	-156.19	-2.07R
1824	0.00	353.92	510.11	2.15	-156.19	-2.07R
1825	0.00	353.92	510.11	2.15	-156.19	-2.07R
1826	1.00	353.92	481.56	9.76	-127.64	-1.70 X
1827	0.00	355.95	510.11	2.15	-154.16	-2.04R

1828	0.00	349.06	510.11	2.15	-161.05	-2.13R
1829	0.00	346.71	510.11	2.15	-163.40	-2.16R
1830	0.00	348.72	510.11	2.15	-161.39	-2.14R
1831	0.00	348.72	510.11	2.15	-161.39	-2.14R
1832	0.00	348.72	510.11	2.15	-161.39	-2.14R
1833	0.00	348.72	510.11	2.15	-161.39	-2.14R
1834	0.00	352.27	510.11	2.15	-157.84	-2.09R
1835	0.00	355.91	510.11	2.15	-154.20	-2.04R
1837	0.00	355.64	510.11	2.15	-154.47	-2.04R
1838	0.00	355.64	510.11	2.15	-154.47	-2.04R
1839	0.00	355.64	510.11	2.15	-154.47	-2.04R
1840	0.00	355.64	510.11	2.15	-154.47	-2.04R
1843	1.00	370.07	459.61	9.06	-89.54	-1.19 X
1850	0.00	350.17	510.11	2.15	-159.94	-2.12R
1851	0.00	351.94	510.11	2.15	-158.17	-2.09R
1852	0.00	351.94	510.11	2.15	-158.17	-2.09R
1853	0.00	351.94	510.11	2.15	-158.17	-2.09R
1854	0.00	351.94	510.11	2.15	-158.17	-2.09R
1856	1.00	361.57	481.85	9.65	-120.28	-1.60 X
1857	1.00	362.19	454.45	13.88	-92.26	-1.24 X
1858	1.00	359.51	448.99	13.53	-89.48	-1.20 X
1861	1.00	359.51	410.94	19.72	-51.43	-0.70 X
1863	0.00	352.69	510.11	2.15	-157.42	-2.08R
1864	0.00	355.85	510.11	2.15	-154.26	-2.04R
1865	0.00	352.82	510.11	2.15	-157.29	-2.08R
1866	0.00	352.82	510.11	2.15	-157.29	-2.08R
1867	0.00	352.82	510.11	2.15	-157.29	-2.08R
1868	0.00	352.82	510.11	2.15	-157.29	-2.08R
1869	0.00	351.14	510.11	2.15	-158.97	-2.10R
1870	0.00	350.66	510.11	2.15	-159.45	-2.11R
1871	0.00	350.15	510.11	2.15	-159.96	-2.12R
1872	0.00	352.13	510.11	2.15	-157.98	-2.09R
1873	0.00	352.13	510.11	2.15	-157.98	-2.09R
1874	0.00	352.13	510.11	2.15	-157.98	-2.09R
1875	0.00	352.13	510.11	2.15	-157.98	-2.09R
1890	0.00	358.86	510.11	2.15	-151.25	-2.00R
1891	0.00	357.46	510.11	2.15	-152.65	-2.02R
1892	0.00	357.33	510.11	2.15	-152.78	-2.02R
1893	0.00	355.95	510.11	2.15	-154.16	-2.04R
1894	0.00	355.95	510.11	2.15	-154.16	-2.04R
1895	0.00	355.95	510.11	2.15	-154.16	-2.04R
1896	0.00	355.95	510.11	2.15	-154.16	-2.04R
1897	0.00	357.34	510.11	2.15	-152.77	-2.02R
1907	1.00	351.43	455.59	9.76	-104.16	-1.39 X
1908	0.00	351.43	510.11	2.15	-158.68	-2.10R
1909	0.00	351.43	510.11	2.15	-158.68	-2.10R
1910	0.00	351.43	510.11	2.15	-158.68	-2.10R
1911	0.00	346.29	510.11	2.15	-163.82	-2.17R
1912	0.00	341.11	510.11	2.15	-169.00	-2.24R
1913	0.00	339.47	510.11	2.15	-170.64	-2.26R
1914	0.00	340.84	510.11	2.15	-169.27	-2.24R
1915	0.00	340.84	510.11	2.15	-169.27	-2.24R
1916	0.00	340.84	510.11	2.15	-169.27	-2.24R
1917	0.00	340.84	510.11	2.15	-169.27	-2.24R
1918	0.00	336.75	510.11	2.15	-173.36	-2.29R
1919	0.00	337.96	510.11	2.15	-172.15	-2.28R
1920	0.00	335.57	510.11	2.15	-174.54	-2.31R
1921	0.00	331.62	510.11	2.15	-178.49	-2.36R
1922	0.00	331.62	510.11	2.15	-178.49	-2.36R
1923	0.00	331.62	510.11	2.15	-178.49	-2.36R
1924	0.00	331.62	510.11	2.15	-178.49	-2.36R
1925	0.00	325.92	510.11	2.15	-184.19	-2.44R

1926	0.00	327.89	510.11	2.15	-182.22	-2.41R
1927	0.00	325.90	510.11	2.15	-184.21	-2.44R
1928	1.00	326.54	471.94	9.06	-145.40	-1.94 X
1929	1.00	326.54	481.13	9.96	-154.59	-2.06RX
1930	0.00	326.54	510.11	2.15	-183.57	-2.43R
1931	0.00	326.54	510.11	2.15	-183.57	-2.43R
1932	0.00	325.78	510.11	2.15	-184.33	-2.44R
1933	0.00	329.58	510.11	2.15	-180.53	-2.39R
1934	0.00	325.27	510.11	2.15	-184.84	-2.45R
1935	0.00	330.58	510.11	2.15	-179.53	-2.38R
1936	0.00	330.58	510.11	2.15	-179.53	-2.38R
1937	0.00	330.58	510.11	2.15	-179.53	-2.38R
1938	0.00	330.58	510.11	2.15	-179.53	-2.38R
1939	0.00	330.22	510.11	2.15	-179.89	-2.38R
1940	1.00	328.63	421.65	14.41	-93.02	-1.25 X
1941	0.00	328.59	510.11	2.15	-181.52	-2.40R
1942	0.00	331.07	510.11	2.15	-179.04	-2.37R
1943	0.00	331.07	510.11	2.15	-179.04	-2.37R
1944	0.00	331.07	510.11	2.15	-179.04	-2.37R
1945	0.00	331.07	510.11	2.15	-179.04	-2.37R
1946	0.00	324.66	510.11	2.15	-185.45	-2.45R
1947	0.00	322.48	510.11	2.15	-187.63	-2.48R
1948	0.00	328.00	510.11	2.15	-182.11	-2.41R
1949	0.00	322.11	510.11	2.15	-188.00	-2.49R
1950	0.00	322.11	510.11	2.15	-188.00	-2.49R
1951	0.00	322.11	510.11	2.15	-188.00	-2.49R
1952	0.00	322.11	510.11	2.15	-188.00	-2.49R
1953	1.00	321.96	501.90	11.86	-179.94	-2.41RX
1954	0.00	325.09	510.11	2.15	-185.02	-2.45R
1955	0.00	336.30	510.11	2.15	-173.81	-2.30R
1956	0.00	334.76	510.11	2.15	-175.35	-2.32R
1957	0.00	334.76	510.11	2.15	-175.35	-2.32R
1958	0.00	334.76	510.11	2.15	-175.35	-2.32R
1959	1.00	334.76	475.48	6.73	-140.72	-1.87 X
1960	0.00	335.63	510.11	2.15	-174.48	-2.31R
1961	0.00	331.73	510.11	2.15	-178.38	-2.36R
1962	0.00	329.73	510.11	2.15	-180.38	-2.39R
1963	0.00	333.78	510.11	2.15	-176.33	-2.33R
1964	0.00	333.78	510.11	2.15	-176.33	-2.33R
1965	0.00	333.78	510.11	2.15	-176.33	-2.33R
1966	0.00	333.78	510.11	2.15	-176.33	-2.33R
1967	0.00	337.27	510.11	2.15	-172.84	-2.29R
1968	0.00	335.03	510.11	2.15	-175.08	-2.32R
1969	0.00	336.13	510.11	2.15	-173.98	-2.30R
1970	1.00	338.72	422.41	11.34	-83.69	-1.12 X
1971	1.00	338.72	491.42	5.50	-152.70	-2.02R
1972	0.00	338.72	510.11	2.15	-171.39	-2.27R
1973	0.00	338.72	510.11	2.15	-171.39	-2.27R
1974	0.00	345.07	510.11	2.15	-165.04	-2.18R
1975	0.00	351.35	510.11	2.15	-158.76	-2.10R
1977	1.00	359.05	462.42	8.11	-103.37	-1.37 X
1988	0.00	356.14	510.11	2.15	-153.97	-2.04R
1997	0.00	355.86	510.11	2.15	-154.25	-2.04R
1998	0.00	348.75	510.11	2.15	-161.36	-2.13R
1999	0.00	348.75	510.11	2.15	-161.36	-2.13R
2000	0.00	348.75	510.11	2.15	-161.36	-2.13R
2001	0.00	348.75	510.11	2.15	-161.36	-2.13R
2002	0.00	337.90	510.11	2.15	-172.21	-2.28R
2003	0.00	337.55	510.11	2.15	-172.56	-2.28R
2004	0.00	337.55	510.11	2.15	-172.56	-2.28R
2005	0.00	341.20	510.11	2.15	-168.91	-2.23R
2006	0.00	341.20	510.11	2.15	-168.91	-2.23R

2007	0.00	341.20	510.11	2.15	-168.91	-2.23R
2008	0.00	341.20	510.11	2.15	-168.91	-2.23R
2009	0.00	332.83	510.11	2.15	-177.28	-2.35R
2010	0.00	332.45	510.11	2.15	-177.66	-2.35R
2015	1.00	329.58	325.25	27.07	4.33	0.06 X
2024	0.00	321.72	474.29	1.98	-152.57	-2.02R
2030	0.00	317.35	474.29	1.98	-156.94	-2.08R
2031	0.00	316.57	474.29	1.98	-157.72	-2.09R
2032	0.00	314.31	474.29	1.98	-159.98	-2.12R
2033	0.00	317.53	474.29	1.98	-156.76	-2.07R
2034	0.00	317.53	474.29	1.98	-156.76	-2.07R
2035	0.00	317.53	474.29	1.98	-156.76	-2.07R
2036	0.00	317.53	474.29	1.98	-156.76	-2.07R
2037	0.00	318.74	474.29	1.98	-155.55	-2.06R
2038	0.00	318.74	474.29	1.98	-155.55	-2.06R
2039	0.00	320.64	474.29	1.98	-153.65	-2.03R
2040	0.00	318.80	474.29	1.98	-155.49	-2.06R
2041	0.00	318.80	474.29	1.98	-155.49	-2.06R
2042	0.00	318.80	474.29	1.98	-155.49	-2.06R
2043	0.00	318.80	474.29	1.98	-155.49	-2.06R
2044	0.00	318.80	474.29	1.98	-155.49	-2.06R
2045	0.00	309.00	474.29	1.98	-165.29	-2.19R
2046	0.00	309.30	474.29	1.98	-164.99	-2.18R
2047	0.00	308.04	474.29	1.98	-166.25	-2.20R
2048	0.00	308.04	474.29	1.98	-166.25	-2.20R
2049	0.00	308.04	474.29	1.98	-166.25	-2.20R
2050	0.00	308.04	474.29	1.98	-166.25	-2.20R
2051	0.00	306.54	474.29	1.98	-167.75	-2.22R
2052	0.00	308.24	474.29	1.98	-166.05	-2.20R
2053	0.00	307.52	474.29	1.98	-166.77	-2.21R
2054	0.00	303.65	474.29	1.98	-170.64	-2.26R
2055	0.00	303.65	474.29	1.98	-170.64	-2.26R
2056	0.00	303.65	474.29	1.98	-170.64	-2.26R
2057	0.00	303.65	474.29	1.98	-170.64	-2.26R
2058	0.00	316.04	474.29	1.98	-158.25	-2.09R
2059	0.00	321.72	474.29	1.98	-152.57	-2.02R
2061	0.00	314.42	474.29	1.98	-159.87	-2.11R
2062	0.00	314.42	474.29	1.98	-159.87	-2.11R
2063	0.00	314.42	474.29	1.98	-159.87	-2.11R
2064	1.00	314.42	465.94	5.61	-151.52	-2.01R
2065	0.00	317.41	474.29	1.98	-156.88	-2.08R
2066	0.00	313.86	474.29	1.98	-160.43	-2.12R
2067	0.00	313.66	474.29	1.98	-160.63	-2.12R
2074	1.00	324.70	402.76	14.73	-78.06	-1.05 X
2099	1.00	347.65	464.23	7.57	-116.58	-1.55 X
2130	1.00	392.68	423.48	10.62	-30.80	-0.41 X
2148	1.00	416.77	409.83	13.34	6.94	0.09 X
2149	1.00	401.15	448.43	7.11	-47.28	-0.63 X
2169	1.00	426.78	428.31	8.69	-1.53	-0.02 X
2172	1.00	422.09	363.34	14.84	58.75	0.79 X
2225	1.00	424.77	445.89	9.72	-21.12	-0.28 X
2241	1.00	417.32	356.02	17.42	61.30	0.83 X
2262	1.00	422.40	387.44	14.02	34.96	0.47 X
2287	1.00	440.07	347.62	21.30	92.45	1.27 X
2336	1.00	500.58	434.40	10.02	66.18	0.88 X
2369	1.00	517.06	425.35	9.21	91.71	1.22 X
2389	1.00	565.84	522.73	7.31	43.11	0.57 X
2404	1.00	554.31	475.55	11.19	78.76	1.05 X
2428	1.00	576.42	493.36	11.14	83.06	1.11 X
2441	1.00	574.67	519.14	7.43	55.53	0.74 X
2449	1.00	565.32	486.40	12.29	78.92	1.06 X
2555	1.00	596.95	532.63	6.77	64.32	0.85 X

2568	1.00	596.28	527.24	10.22	69.04	0.92 X
2599	1.00	540.67	519.77	9.47	20.90	0.28 X
2681	1.00	555.59	505.70	9.29	49.89	0.66 X
2755	1.00	649.08	684.13	10.59	-35.05	-0.47 X
2797	1.00	657.38	692.24	10.64	-34.86	-0.47 X
2838	1.00	672.76	743.28	10.43	-70.52	-0.94 X
2934	1.00	671.58	721.91	9.04	-50.33	-0.67 X
2977	1.00	710.82	706.58	10.07	4.24	0.06 X
2981	1.00	707.56	733.98	11.80	-26.42	-0.35 X
3040	1.00	760.21	703.38	7.03	56.83	0.75 X
3080	1.00	798.11	705.54	8.40	92.57	1.23 X
3125	1.00	858.06	838.50	9.37	19.56	0.26 X
3139	1.00	849.11	872.46	10.25	-23.35	-0.31 X
3140	1.00	848.37	873.03	10.24	-24.66	-0.33 X
3151	1.00	822.76	872.46	10.25	-49.70	-0.66 X
3161	1.00	810.91	883.21	19.46	-72.30	-0.99 X
3197	1.00	860.65	872.46	10.25	-11.81	-0.16 X
3201	1.00	859.56	841.07	10.12	18.49	0.25 X
3203	1.00	860.65	883.21	19.46	-22.56	-0.31 X
3213	1.00	869.93	790.55	11.76	79.38	1.06 X
3244	1.00	906.67	883.50	19.44	23.17	0.32 X
3292	1.00	823.06	872.46	10.25	-49.40	-0.66 X
3320	1.00	822.16	872.60	10.24	-50.44	-0.67 X
3321	1.00	822.16	801.51	16.87	20.65	0.28 X
3324	1.00	822.16	797.66	13.07	24.50	0.33 X
3369	1.00	835.37	872.60	10.24	-37.23	-0.50 X
3370	1.00	831.78	872.46	10.25	-40.68	-0.54 X
3376	1.00	837.23	872.46	10.25	-35.23	-0.47 X
3500	1.00	959.62	962.22	6.86	-2.60	-0.03 X
3623	1.00	1117.02	994.81	10.27	122.21	1.63 X
3624	1.00	1117.02	994.81	10.27	122.21	1.63 X
3636	1.00	1098.83	994.81	10.27	104.02	1.39 X
3664	0.00	1145.11	992.40	3.20	152.71	2.02R
3665	0.00	1145.11	992.40	3.20	152.71	2.02R
3666	0.00	1145.11	992.40	3.20	152.71	2.02R
3667	0.00	1145.11	992.40	3.20	152.71	2.02R
3668	1.00	1149.10	984.20	5.70	164.90	2.19R
3669	0.00	1147.62	992.40	3.20	155.22	2.05R
3671	0.00	1150.78	992.40	3.20	158.38	2.10R
3675	1.00	1149.57	984.48	5.73	165.09	2.19R
3676	0.00	1149.57	992.40	3.20	157.17	2.08R
3677	0.00	1145.90	992.40	3.20	153.50	2.03R
3679	0.00	1145.90	992.40	3.20	153.50	2.03R
3680	0.00	1145.90	992.40	3.20	153.50	2.03R
3681	0.00	1145.90	992.40	3.20	153.50	2.03R
3682	0.00	1145.90	992.40	3.20	153.50	2.03R
3752	0.00	1145.48	992.40	3.20	153.08	2.03R
3753	0.00	1155.53	992.40	3.20	163.13	2.16R
3754	0.00	1153.51	992.40	3.20	161.11	2.13R
3755	0.00	1163.32	992.40	3.20	170.92	2.26R
3756	0.00	1154.59	992.40	3.20	162.19	2.15R
3757	0.00	1154.59	992.40	3.20	162.19	2.15R
3758	0.00	1154.59	992.40	3.20	162.19	2.15R
3760	0.00	1149.37	992.40	3.20	156.97	2.08R
3761	0.00	1157.56	992.40	3.20	165.16	2.19R
3762	0.00	1151.33	992.40	3.20	158.93	2.10R
3763	0.00	1157.56	992.40	3.20	165.16	2.19R
3764	0.00	1157.56	992.40	3.20	165.16	2.19R
3765	0.00	1157.56	992.40	3.20	165.16	2.19R
3766	1.00	1142.59	984.05	5.70	158.54	2.10R
3767	1.00	1157.67	984.05	5.70	173.62	2.30R
3768	0.00	1143.83	992.40	3.20	151.43	2.00R

3769	0.00	1153.77	992.40	3.20	161.37	2.14R
3770	0.00	1153.77	992.40	3.20	161.37	2.14R
3771	0.00	1153.77	992.40	3.20	161.37	2.14R
3772	0.00	1153.77	992.40	3.20	161.37	2.14R
3773	0.00	1188.69	992.40	3.20	196.29	2.60R
3774	0.00	1183.37	992.40	3.20	190.97	2.53R
3775	1.00	1189.04	984.05	5.70	204.99	2.72R
3776	0.00	1176.10	992.40	3.20	183.70	2.43R
3777	0.00	1189.04	992.40	3.20	196.64	2.60R
3778	0.00	1189.04	992.40	3.20	196.64	2.60R
3779	1.00	1189.04	1005.71	19.42	183.33	2.51RX
3780	0.00	1173.45	992.40	3.20	181.05	2.40R
3781	0.00	1184.20	992.40	3.20	191.80	2.54R
3782	0.00	1176.94	992.40	3.20	184.54	2.44R
3783	1.00	1168.11	984.05	5.70	184.06	2.44R
3784	0.00	1176.94	992.40	3.20	184.54	2.44R
3785	0.00	1176.94	992.40	3.20	184.54	2.44R
3786	1.00	1176.94	984.05	5.70	192.89	2.56R
3788	0.00	1152.25	992.40	3.20	159.85	2.12R
3789	0.00	1153.78	992.40	3.20	161.38	2.14R
3790	0.00	1144.32	992.40	3.20	151.92	2.01R
3791	0.00	1154.26	992.40	3.20	161.86	2.14R
3792	1.00	1154.26	994.81	10.27	159.45	2.13RX
3793	0.00	1154.26	992.40	3.20	161.86	2.14R
3794	1.00	1142.70	978.28	19.44	164.42	2.25RX
3795	1.00	1140.93	984.20	5.70	156.73	2.08R
3796	1.00	1111.85	994.81	10.27	117.04	1.56 X
3808	0.00	1145.88	992.40	3.20	153.48	2.03R
3810	0.00	1153.25	992.40	3.20	160.85	2.13R
3811	0.00	1163.81	992.40	3.20	171.41	2.27R
3812	0.00	1154.02	992.40	3.20	161.62	2.14R
3813	0.00	1154.02	992.40	3.20	161.62	2.14R
3814	0.00	1154.02	992.40	3.20	161.62	2.14R
3815	0.00	1176.69	992.40	3.20	184.29	2.44R
3816	0.00	1174.92	992.40	3.20	182.52	2.42R
3817	0.00	1182.73	992.40	3.20	190.33	2.52R
3818	0.00	1172.23	992.40	3.20	179.83	2.38R
3819	0.00	1172.23	992.40	3.20	179.83	2.38R
3820	1.00	1172.23	984.05	5.70	188.18	2.50R
3821	0.00	1172.23	992.40	3.20	179.83	2.38R
3829	0.00	1152.00	992.40	3.20	159.60	2.11R
3830	0.00	1162.48	992.40	3.20	170.08	2.25R
3831	0.00	1159.34	992.40	3.20	166.94	2.21R
3832	0.00	1158.49	992.40	3.20	166.09	2.20R
3833	0.00	1159.64	992.40	3.20	167.24	2.21R
3834	0.00	1159.64	992.40	3.20	167.24	2.21R
3835	0.00	1159.64	992.40	3.20	167.24	2.21R
3836	0.00	1150.38	992.40	3.20	157.98	2.09R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large leverage.