The US versus the UK in crime fighting efficiency

A. Statement of Task

I plan to conduct a survey on the capabilities of the police department of the United States in fighting crime. To do this, I will look at numbers, published by the FBI, on incarceration, arrests and crimes committed over a period of sixteen years. To find the efficiency of the police force, I will then calculate the number of crimes that went unsolved, and then the number of cases without an arrested suspect. I will do this by subtracting the number of offenders convicted, and then the number of suspects arrested for the police-recorded offenses of that year. The survey will be conducted in two parts. Part one will focus on the United States, while part two will contrast the US data with data found from a census surveys in the United Kingdom, also published on the FBI website. This comparison is mainly used to contrast US developments in crime with that of the rest of the world. However, collected US data was greater than collected UK data, so the comparison will only existed between the number of crimes remaining unsolved. The crime categories that both countries were calculated for will be: murder, rape, robbery, assault, burglary and motor vehicle theft.

To judge whether, over the period of sixteen years, efficiency has improved, the results will be graphed using excel, and the linear regression, or "r value" will be found, so determining the correlation between the increase or decrease in crime fighting efficiency in the US and the UK, and also, determine the degree of efficiency change over a period of sixteen years in the US.

B. Data Collection

The data I have collected is freely available on the FBI website, as part of a study conducted on crime between the US and the UK. Unfortunately, the Home Office website for the United Kingdom was unable to produce data from sixteen years ago online; as such data had been archived. Living in the United States, there was no way I could see such materials. However, from the data the FBI had made available to the public, I could make a limited comparison between the US and UK.

Part One Data

Table #1 Murder in the US from 1981-1994

murder, US

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	22520	19319	20610	20680	23440	23760	23330
offenders convicted	8797	8150	10699	10164	12270	13522	13068
persons arrested	21590	20310	19190	21890	22990	22510	22100

Table # 2 Rape in the US from 1981-1994

rape, US

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	82500	78920	91460	92490	102560	109060	102220
offenders convicted	9559	9804	17754	17558	20277	24711	23047
persons arrested	31710	34080	37140	38610	39160	39100	36610

Table # 3 Robbery in the US from 1981-1994

robbery, US

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	773248	609060	585313	597360	574855	737661	714313
offenders convicted	2051	48334	56563	48996	63232	70560	65848
persons arrested	153890	146170	145800	149100	167990	173310	172290

Table # 4 Assault in the US from 1981-1994

assault, US

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	1040193	944668	1012034	1045446	1049948	1274180	1288638
offenders convicted	31907	37514	54374	53332	77617	90318	97046
persons arrested	283270	298830	351770	416300	574618	507210	547760

Table # 5 Burglary in the US from 1981-1994

burglary, US

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	3779700	3129900	3241400	3218100	3073900	2979900	2712800
offenders convicted	190846	199679	169976	15857	174890	181997	161975
persons arrested	518900	475800	450600	463400	432600	42400	396100

Table # 6 Motor Vehicle Theft in the US from 1981-1994

motor vehicle theft, US

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	1087800	1007900	1224100	1432900	1635900	1610800	1539300
offenders convicted	14489	21465	35947	41623	53575	53245	47377
persons arrested	129200	119400	153600	208400	211300	197600	200200

From these table we can already gather that burglary is the most frequent crime in the US, with Murder being the least frequent. Crime has increased from 1981-1994 in all areas except burglary, where the number of recorded crimes has decreased.

Part Two Data

Table # 7 Murder in the UK from 1981-1995

murder, UK

	1981	1983	1987	1991	1993	1995
recorded crimes	559	550	688	725	670	745
offenders convicted	338	389	432	448	466	455
cases unsloved	171	161	256	277	204	290

Table # 8 Rape in the UK from 1981-1995

rape, UK

	1981	1983	1987	1991	1993	1995
recorded crimes	1068	1334	2471	4045	4589	4986
offenders convicted	320	312	425	537	464	547
cases unsloved	748	1022	2046	3508	4125	4439

Table # 9 Robbery in the UK from 1981-1995

robbery, UK

	1981	1983	1987	1991	1993	1995
recorded crimes	20282	22119	32633	45323	57845	68074
offenders convicted	4132	4124	4439	4841	5094	5167
cases unsloved	16150	18094	28194	35641	52751	62907

Table # 10 Assault in the UK from 1981-1995

assault, UK

	1981	1983	1987	1991	1993	1995
recorded crimes	98021	108980	137135	183653	197466	203461
offenders convicted	48650	49459	45640	45513	37412	27466
cases unsloved	49371	59521	91495	138140	160054	175995

Table # 11 Burglary in the UK from 1981-1995

burglary, UK

	1981	1983	1987	1991	1993	1995
recorded crimes	718381	808341	900104	1219464	1369584	1239484
offenders convicted	73469	69672	54170	46089	40272	35346
cases unsloved	644912	738669	845934	1173375	1329312	1204138

Table # 12 Motor Vehicle Theft in the UK from 1981-1995

motor vehilce theft, UK

	1981	1983	1987	1991	1993	1995
recorded crimes	332590	325699	389576	581901	597519	508450
offenders convicted	35988	29478	25946	22837	16802	15454
cases unsloved	296602	296221	363630	559064	580717	492996

In this study of part two, we can see that both the US and the UK share the most frequent crime of burglary, and the least frequent one of murder. Bear in mind when

looking at the data that Britian is much smaller than the US, and could fit into the state of Texas approximately three times.

C. Analysis

Working primarily on US data, first I found the number of unsolved crimes per year, and the number of cases without an arrested suspect. This was achieved by subtracting the number of offenders convicted for the particular crime from the number of police recorded crimes, and then the number of suspects arrested for the particular crimes from the number of police recorded crimes. After making a data table from this, I also found the percentages of crimes unsolved by the police, and crimes without an arrested suspect.

Part One Full Analysis Tables

Table # 13 Murder in the US from 1981-1994 including percentages

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	22520	19319	20610	20680	23440	23760	23330
offenders convicted	8797	8150	10699	10164	12270	13522	13068
persons arrested	21590	20310	19190	21890	22990	22510	22100
cases unsolved	13723	11160	9911	10516	11170	10238	10262
" " w/o arrested suspect	930	0	1420	0	450	1250	1230
% of cases unsolved	60.9	57.8	48.1	50.9	47.7	43.1	44

Table # 14 Rape in the US from 1981-1994 including percentages

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	82500	78920	91460	92490	102560	109060	102220
offenders convicted	9559	9804	17754	17558	20277	24711	23047
persons arrested	31710	34080	37140	38610	39160	39100	36610
cases unsolved	72041	69116	73706	74932	82283	84349	79173
" " w/o arrested suspect	50790	44840	54320	53880	63400	69960	65610
% of cases unsolved	87.3	87.5	80.6	81	80.2	77.3	77.5

Table # 15 Assault in the US from 1981-1994 including percentages

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	1040193	944668	1012034	1045446	1049948	1274180	1288638
offenders convicted	31907	37514	54374	53332	77617	90318	97046
persons arrested	283270	298830	351770	416300	574618	507210	547760
cases unsolved	1008286	907154	957660	992114	972331	1183862	1191592
" " w/o arrested suspect	756923	645838	660264	629146	574618	766970	740878
% of cases unsolved	96.9	96	94.6	94.8	92.6	92.9	92.4

Table # 16 Robbery in the US from 1981-1994 including percentages

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	773248	609060	585313	597360	574855	737661	714313
offenders convicted	2051	48334	56563	48996	63232	70560	65848
persons arrested	153890	146170	145800	149100	167990	173310	172290
cases unsolved	717731	560726	528750	548364	511623	667101	648484
" " w/o arrested suspect	619358	462890	439513	448260	406865	564351	542023
% of cases unsolved	92.8	92.1	90.3	91.8	89	90.4	90.7

Table # 17 Burglary in the US from 1981-1994 including percentages

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	3779700	3129900	3241400	3218100	3073900	2979900	2712800
offenders convicted	190846	199679	169976	15857	174890	181997	161975
persons arrested	518900	475800	450600	463400	432600	42400	396100
cases unsolved	3588854	2930221	3071424	309530	2899010	2797903	2550825
" " w/o arrested suspect	3260800	2654100	2790800	2754700	2641300	2937500	2316700
% of cases unsolved	94.9	93.6	94.7	95	94.3	93.8	94

Table # 18 Motor Vehicle Theft in the US from 1981-1994 including percentages

	1981	1983	1986	1988	1990	1992	1994
recorded crimes	1087800	1007900	1224100	1432900	1635900	1610800	1539300
offenders convicted	14489	21465	35947	41623	53575	53245	47377
persons arrested	129200	119400	153600	208400	211300	197600	200200
cases unsolved	1073311	986435	1188153	1391277	1582325	1557555	1491923
" " w/o arrested suspect	958600	888500	1070500	1224500	1424600	1413200	1339100
% of cases unsolved	98.6	97.8	97	97	96.7	96.6	96.9

Then, a graph was made using Microsoft Excel, and I used the Peirson Correlation Co-Efficient to find the R value from the graphs
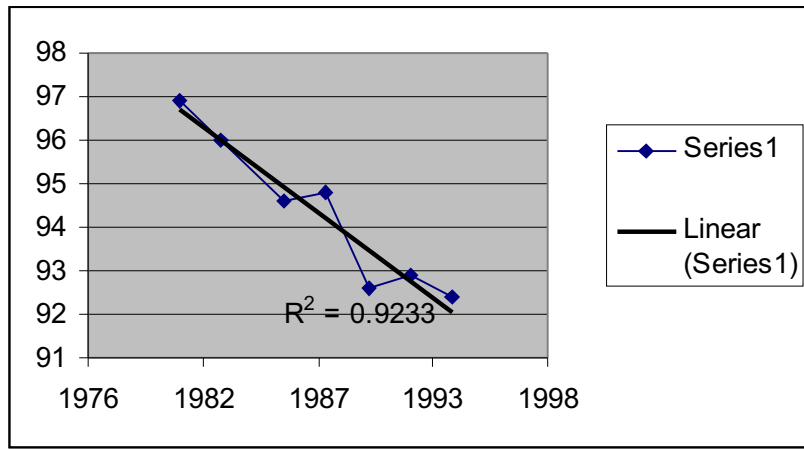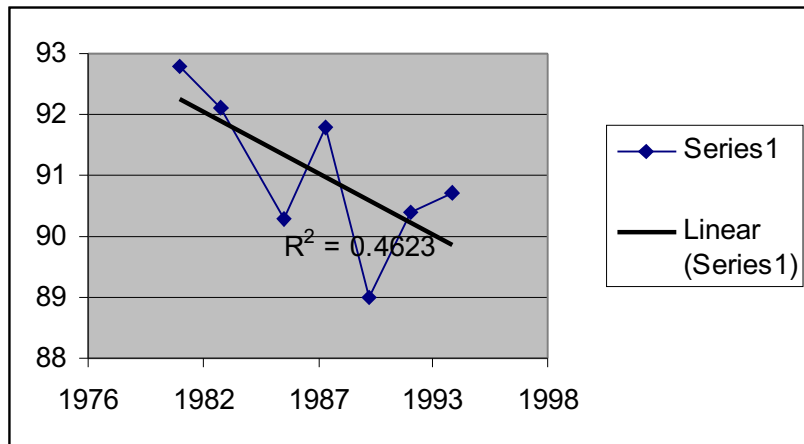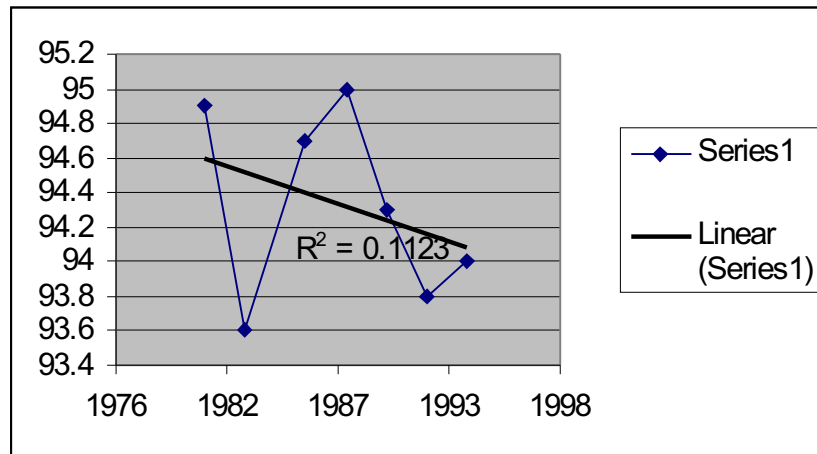
Graph # 1 Murder, US
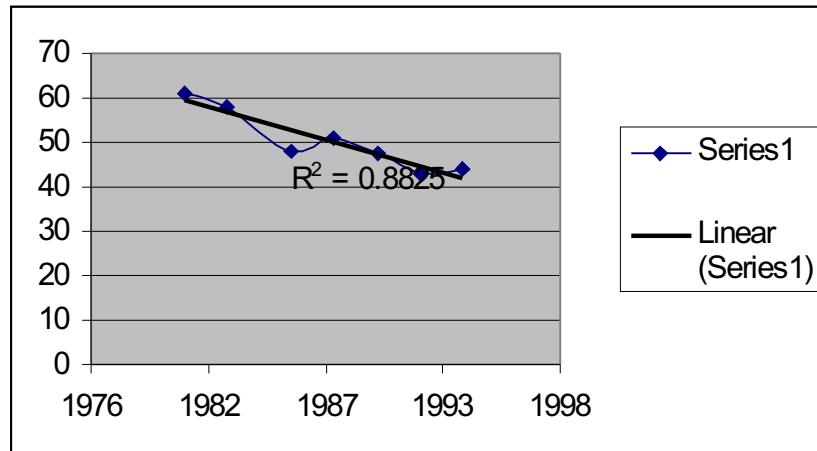
Graph # 2 Rape, US

Graph # 3, Assault, US
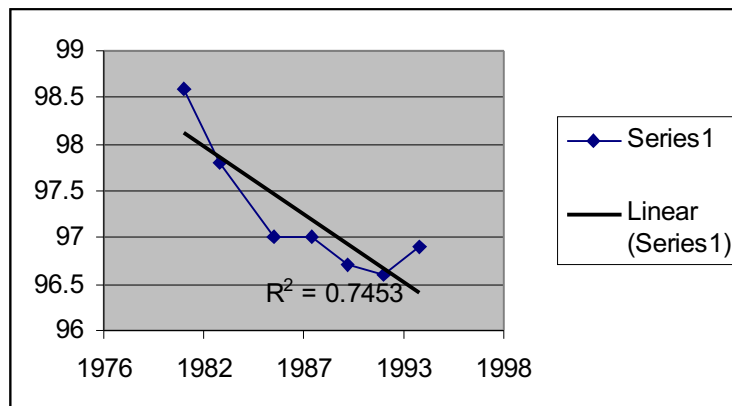

R^2 = 0.9233

Graph # 4 Robbery, US

R^2 = 0.4623
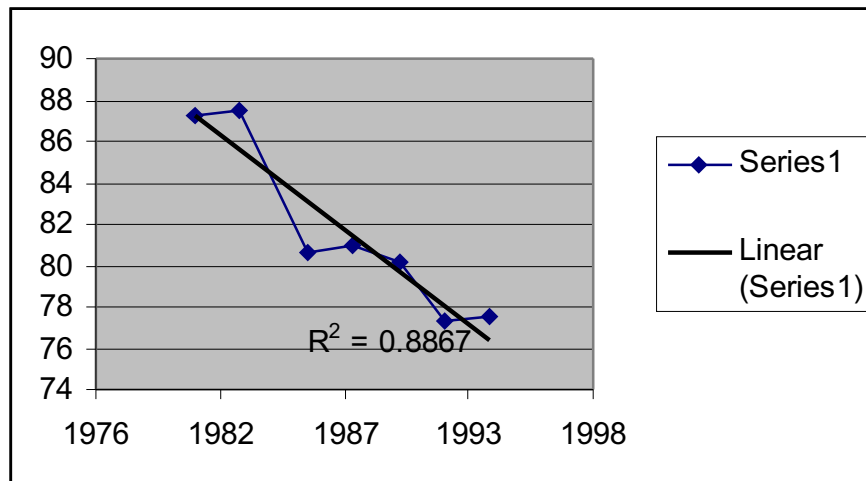
Graph # 5 Burglary, US

Graph #6 Motor Vehicle Theft, US

Secondly working on the UK data, I found only the cases unsolved per year, for that is what the data available allowed. I was also able to form graphs of the number of cases unsolved per year, and compare these to those of the US. Despite not being able to compare the number of cases without an arrested suspect per year between the two countries, the category I was able to compare provided a good contrast.

Part Two Full Data Tables

Table # 19 Murder in the UK from 1981-1995 including percentages

	1981	1983	1987	1991	1993	1995
recorded crimes	559	550	688	725	670	745
offenders convicted	338	389	432	448	466	455
cases unsolved	171	161	256	277	204	290
% of cases unsolved	30.6	29.3	37.2	38.2	30.4	38.9

Table # 20 Rape in the UK from 1981-1995 including percentages

	1981	1983	1987	1991	1993	1995
recorded crimes	1068	1334	2471	4045	4589	4986
offenders convicted	320	312	425	537	464	547
cases unsolved	748	1022	2046	3508	4125	4439
% of cases unsolved	70	76.6	82.8	86.7	89.9	89

Table # 21 Assault in the UK from 1981-1995 including percentages

	1981	1983	1987	1991	1993	1995
recorded crimes	98021	108980	137135	183653	197466	203461
offenders convicted	48650	49459	45640	45513	37412	27466
cases unsloved	49371	59521	91495	138140	160054	175995
% of cases unsolved	50.4	54.6	66.7	75.2	81.1	86.5

Table # 22 Robbery in the UK from 1981-1995 including percentages

	1981	1983	1987	1991	1993	1995
recorded crimes	20282	22119	32633	45323	57845	68074
offenders convicted	4132	4124	4439	4841	5094	5167
cases unsloved	16150	18094	28194	35641	52751	62907
% of cases unsolved	79.6	81.8	86.3	78.6	91.1	92.4

Table # 23 Burglary in the UK from 1981-1995 including percentages

	1981	1983	1987	1991	1993	1995
recorded crimes	718381	808341	900104	1219464	1369584	1239484
offenders convicted	73469	69672	54170	46089	40272	35346
cases unsloved	644912	738669	845934	1173375	1329312	1204138
% of cases unsolved	89.8	91.4	93.9	96.2	97.1	97.2

	1981	1983	1987	1991	1993	1995
recorded crimes	332590	325699	389576	581901	597519	508450
offenders convicted	35988	29478	25946	22837	16802	15454
cases unsloved	296602	296221	363630	559064	580717	492996
% of cases unsolved	89.2	90.9	93.3	96.1	97.2	97

From looking at both countries' graphs, it is obvious which country had the most efficient crime fighting team; the US. However, I also compared r values of the two graphs, just in case, and the r values backed up my visual conclusions.
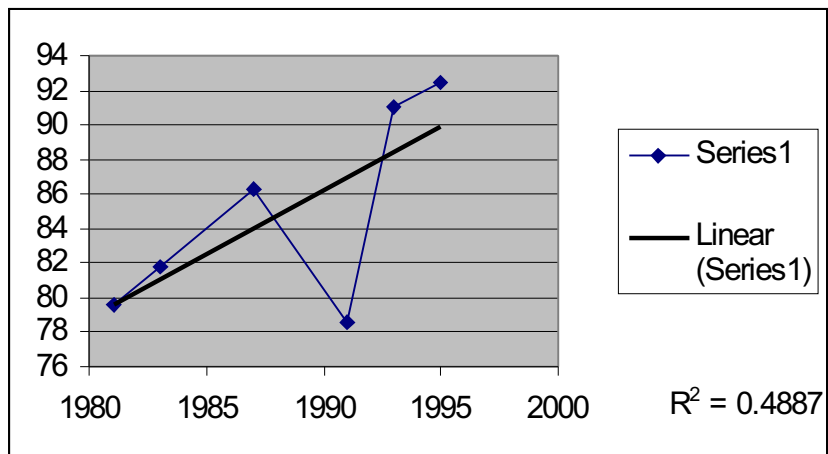
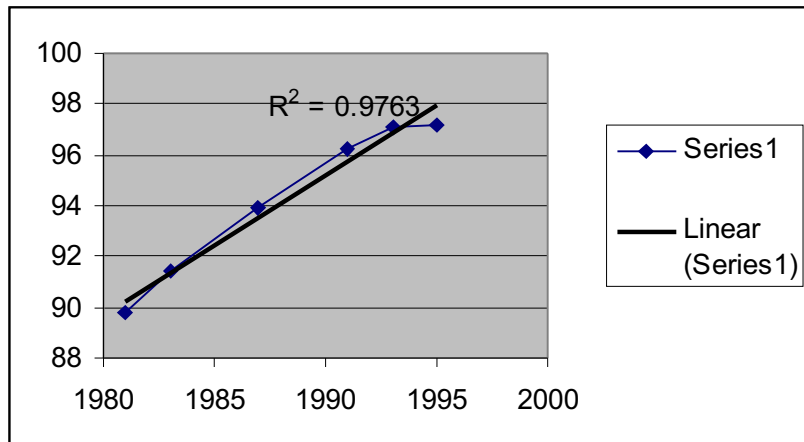## Graph # 7 Murder UK
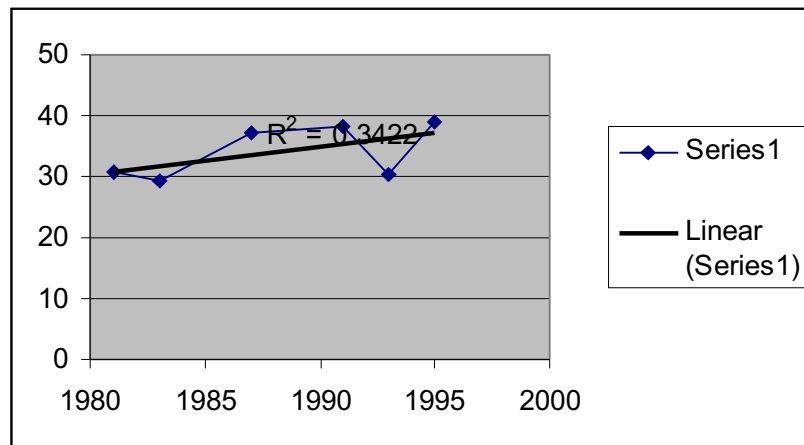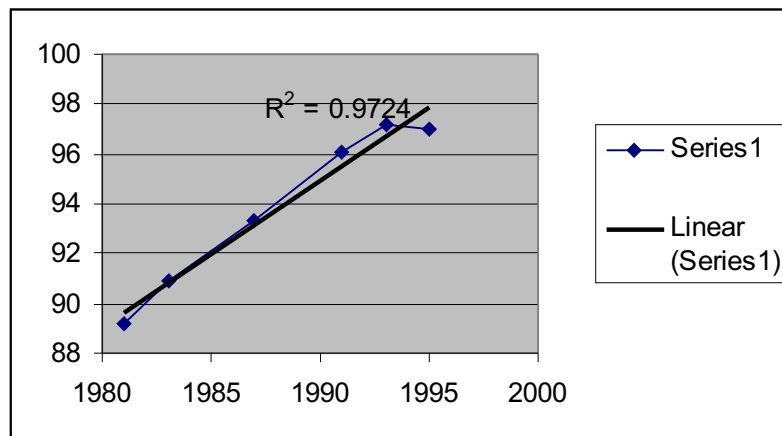

Graph # 8 Rape, UK

Graph # 9 Assault, UK

$R^2 = 0.9978$

Series1

Linear (Series1)

Graph # 10 Roberry UK

Series1

Linear (Series1)

$R^2 = 0.4887$

Graph # 11 Burglary UK

$R^2 = 0.9763$

Series1

Linear (Series1)
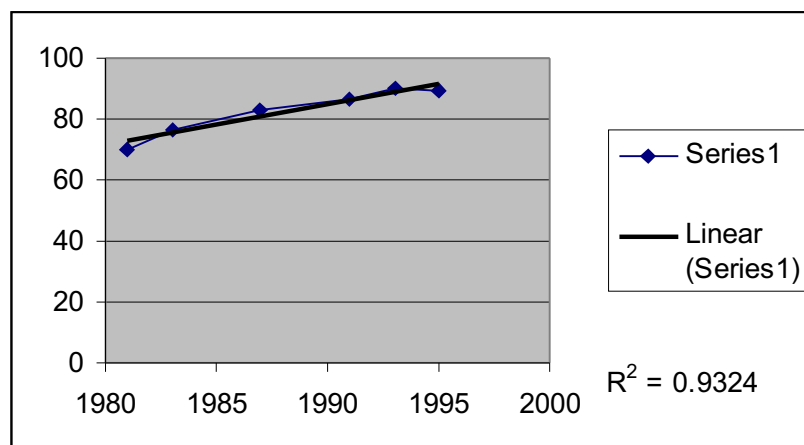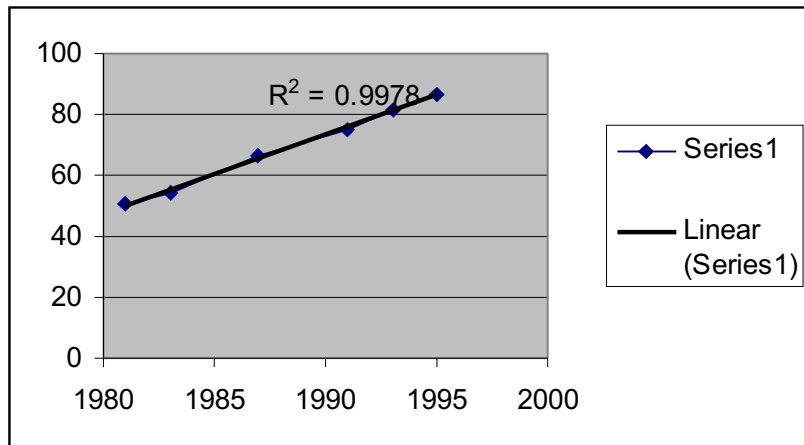
Graph # 11 Motor Vehicle Theft, UK

$R^2 = 0.9724$

Legend: Series1, Linear (Series1)

D: Evaluation

From my investigation, I can conclude that the crime fighting efficiency of the US increased. Looking at part one of my project, and the first graph, I can conclude that although the number of crimes that were unsolved grew in 1981-94, relitavely, the efficiency of the US police force also grew – catching just over 39% of criminals in '81, and 66-67% of criminals in 1994. Every graph shows an increase in crime in the US, but also, an increase in crime fighting efficiency. Basically, the number of cases without a suspect, or remaining unsolved, declined; the Police force became more efficient at catching criminals. Robbery was the only area in which the percentage of cases unsolved and the percentage of cases without an arrested suspect decreased. Burglary showed the least increase in efficiency, with the crimes remaining unsolved decreasing by just under one percentile. US efficiency to catch murder suspects, and convict them, rose the most throughout the period of 1981 to 1994, with efficiency in '81 leaving 60.9% of cases unsolved, and efficiency in '94 leaving 44% of crimes unsolved, an amazing drop of 16.9%.

When assessing part two of the project, we can see that in comparison to the UK, crime efficiency in the US is acutely better. While, in the UK, the numbers of cases left unsolved increased for every crime area, crimes left unsolved in the US decreased in every area. The UK proved least successful at catching those who committed assault.

This project had a few limitations. The unavailability of complete UK data with which to contrast with the UK made the contrast unreliable, as it was conducted in only one field. However, the contrast itself was useful, as it added scope to the project, and the comparison showed how the US police force measured up to those elsewhere. Finding more countries with which to contrast to the US would have made the project stronger. Another limitation was the number of years the study was conducted over. Perhaps given a broader spectrum of years, one could have studied a larger increase in efficiency, and also looked at (if there were any) slides in efficiency level.