Home Office

The heroin epidemic and its role in the crime drop in England and Wales (and elsewhere)

Introduction

• This project is part of a wider HO goal to better understand the drivers of overall crime trends, so that factors can be correctly prioritised going forwards.

• Initial analysis involved looking more closely at crime trends, particularly at the local level. What we were looking for was variation.

• We then looked at crime drop theories in light of this and found that heroin/crack-cocaine use seemed to help explain some of the variations

• Hence the main thrust of this work which consists of:

i) a review of data/research to piece together the epidemic's history
ii) analysis of the crime variation to see if heroin/crack use helps to explain it
iii) the creation of a model using current data on heroin/crack users to back-model initiation trends and estimate crime impacts.

Crime trends: England and Wales

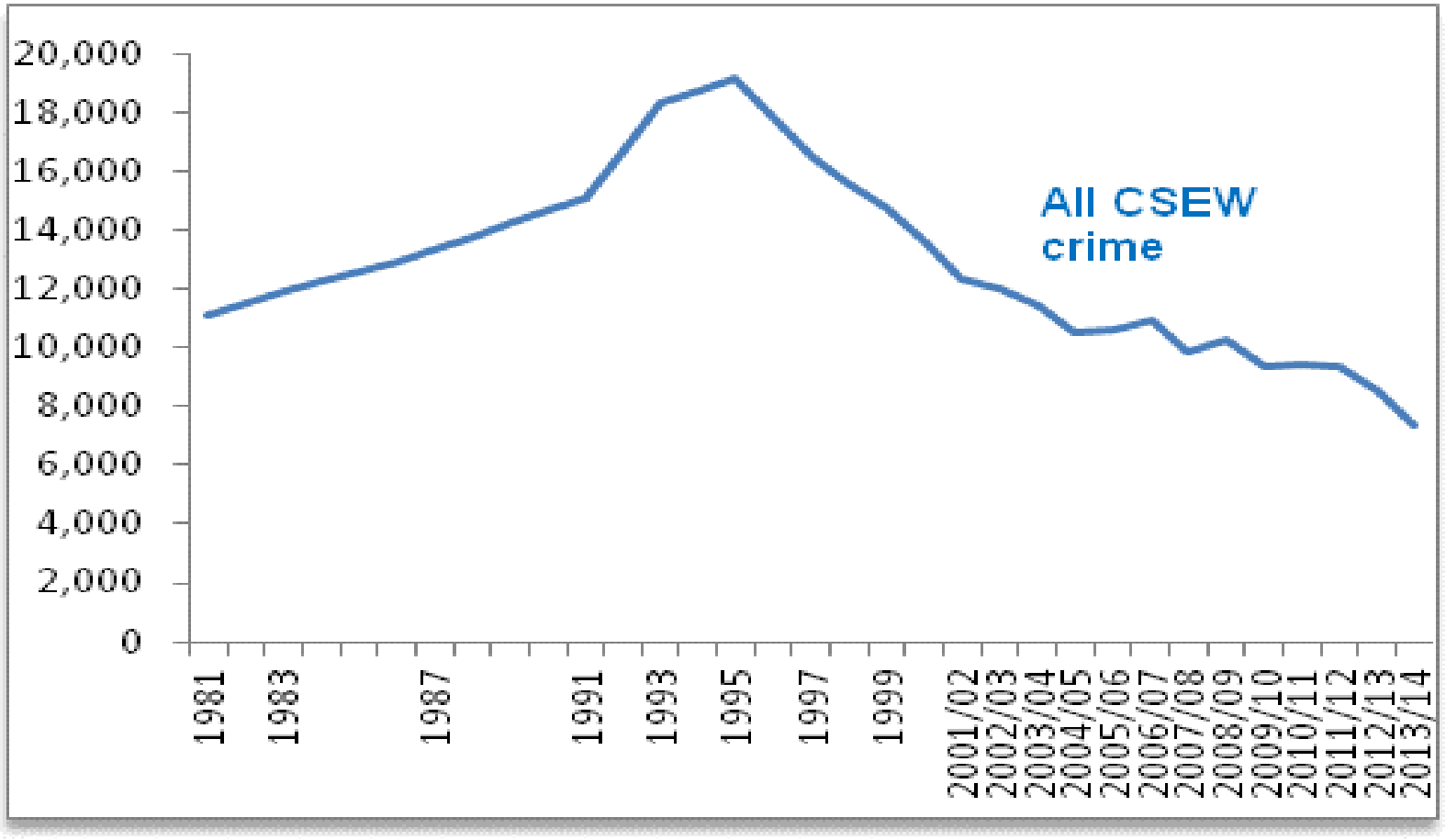


Chart shows CSEW incidents in 000s

Crime trends: England and Wales

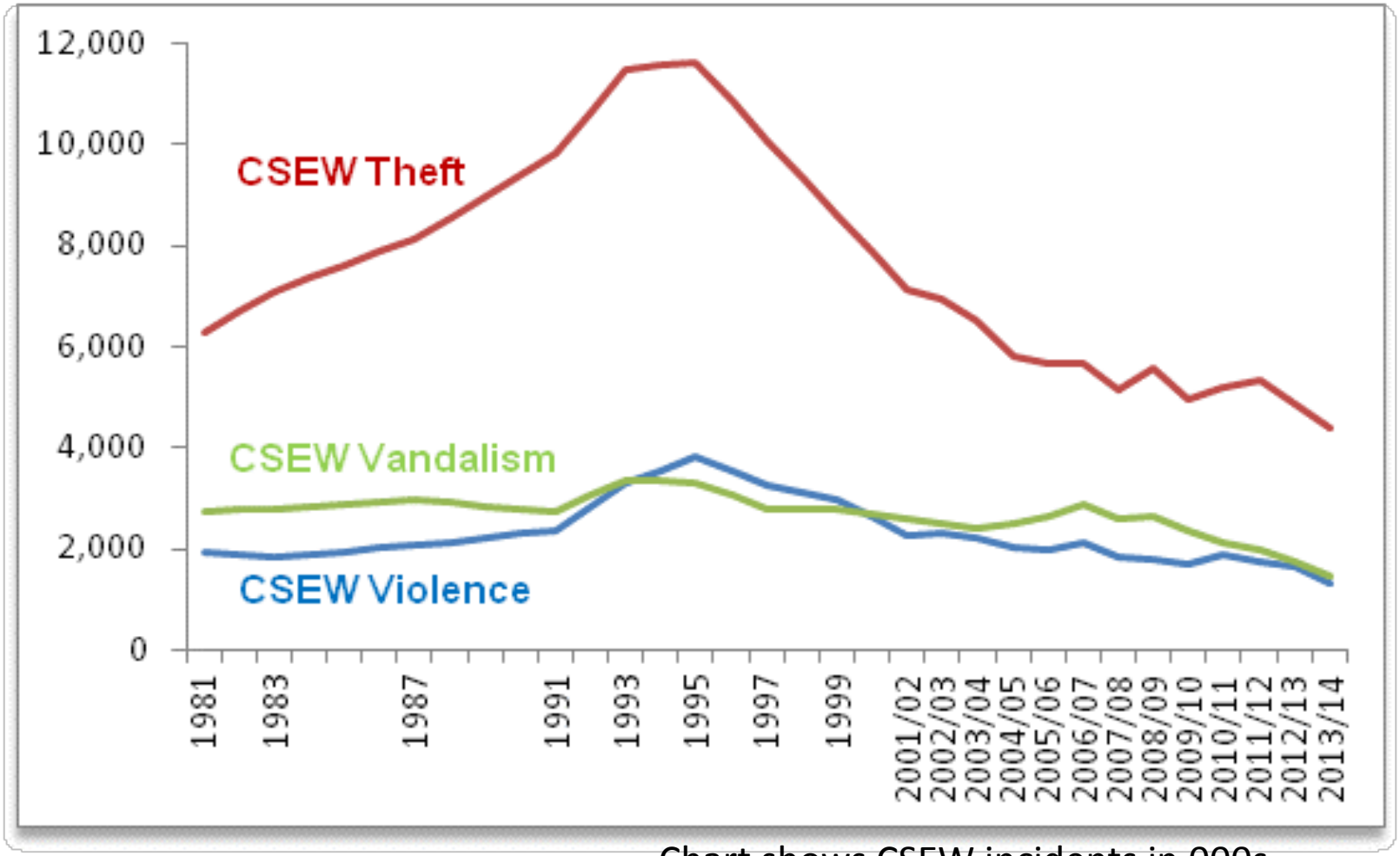
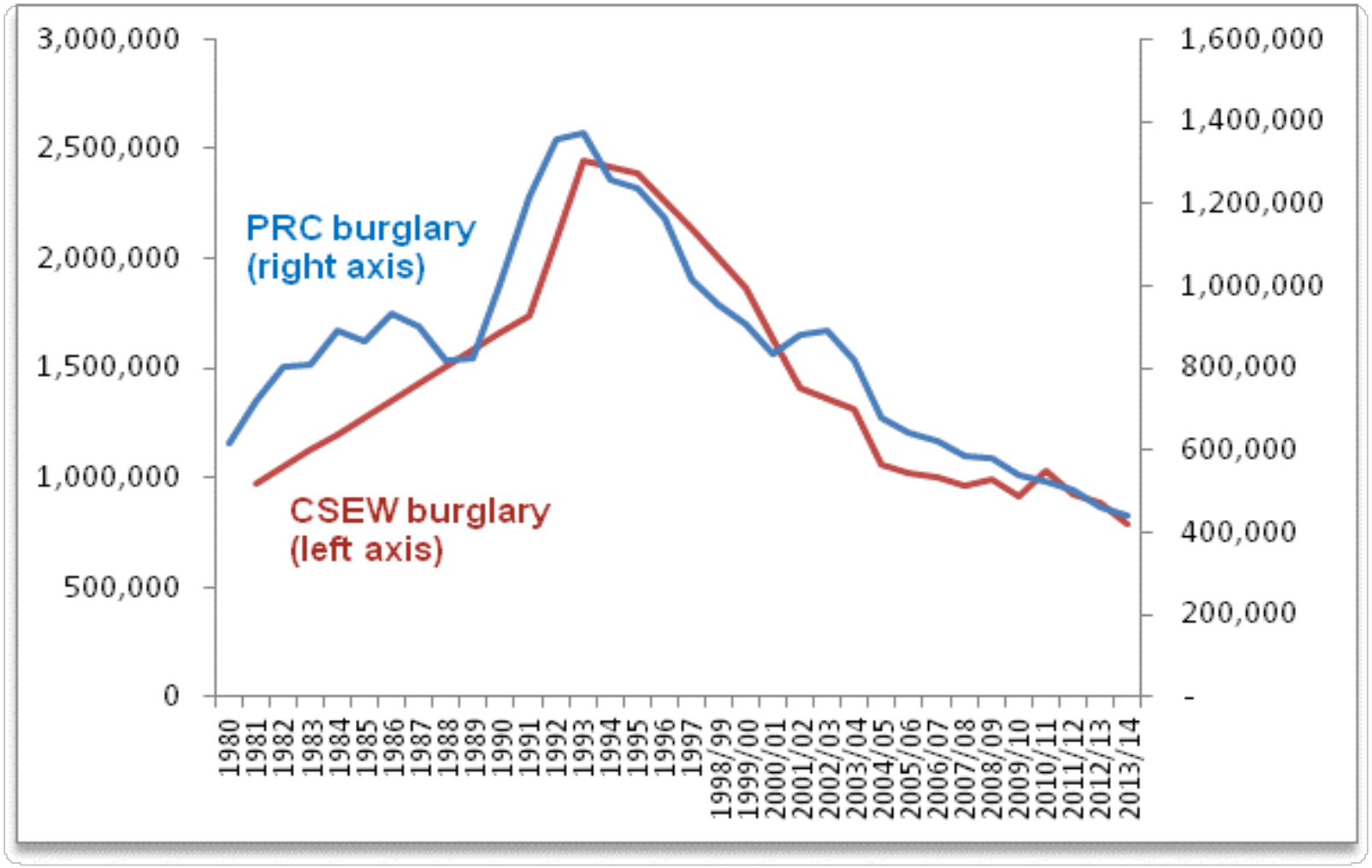
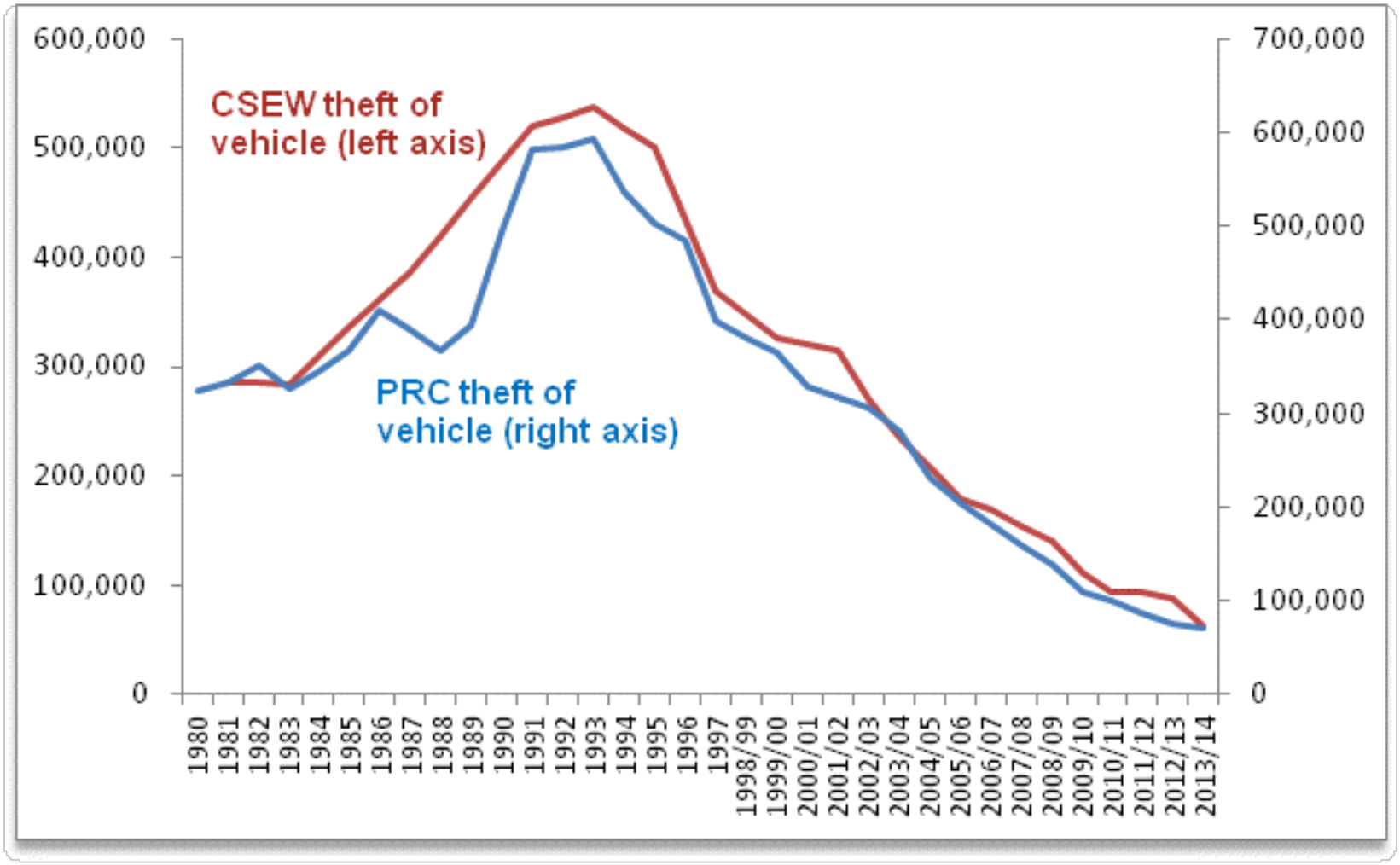


Chart shows CSEW incidents in 000s

Crime trends: England and Wales



Crime trends: England and Wales



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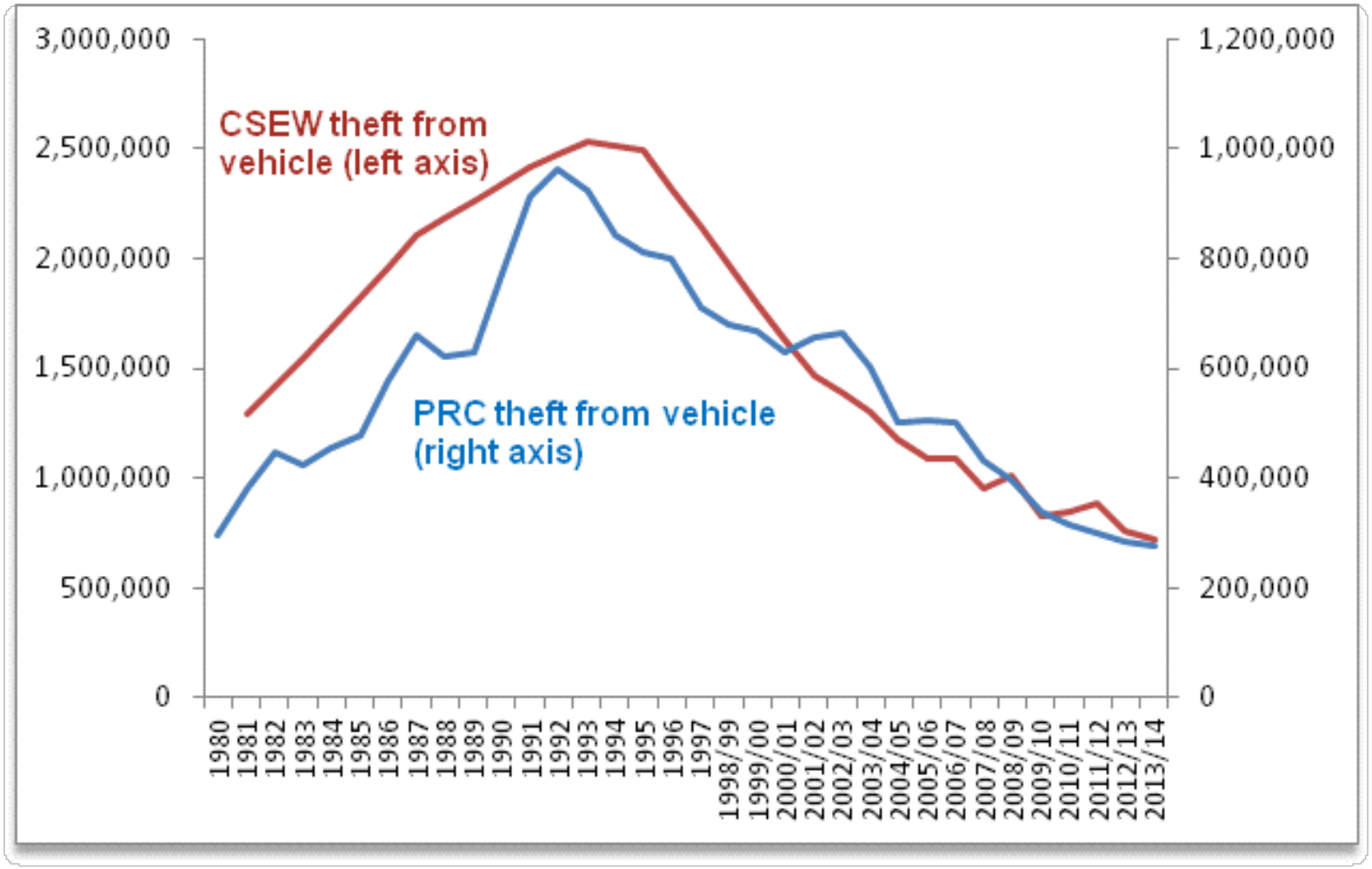
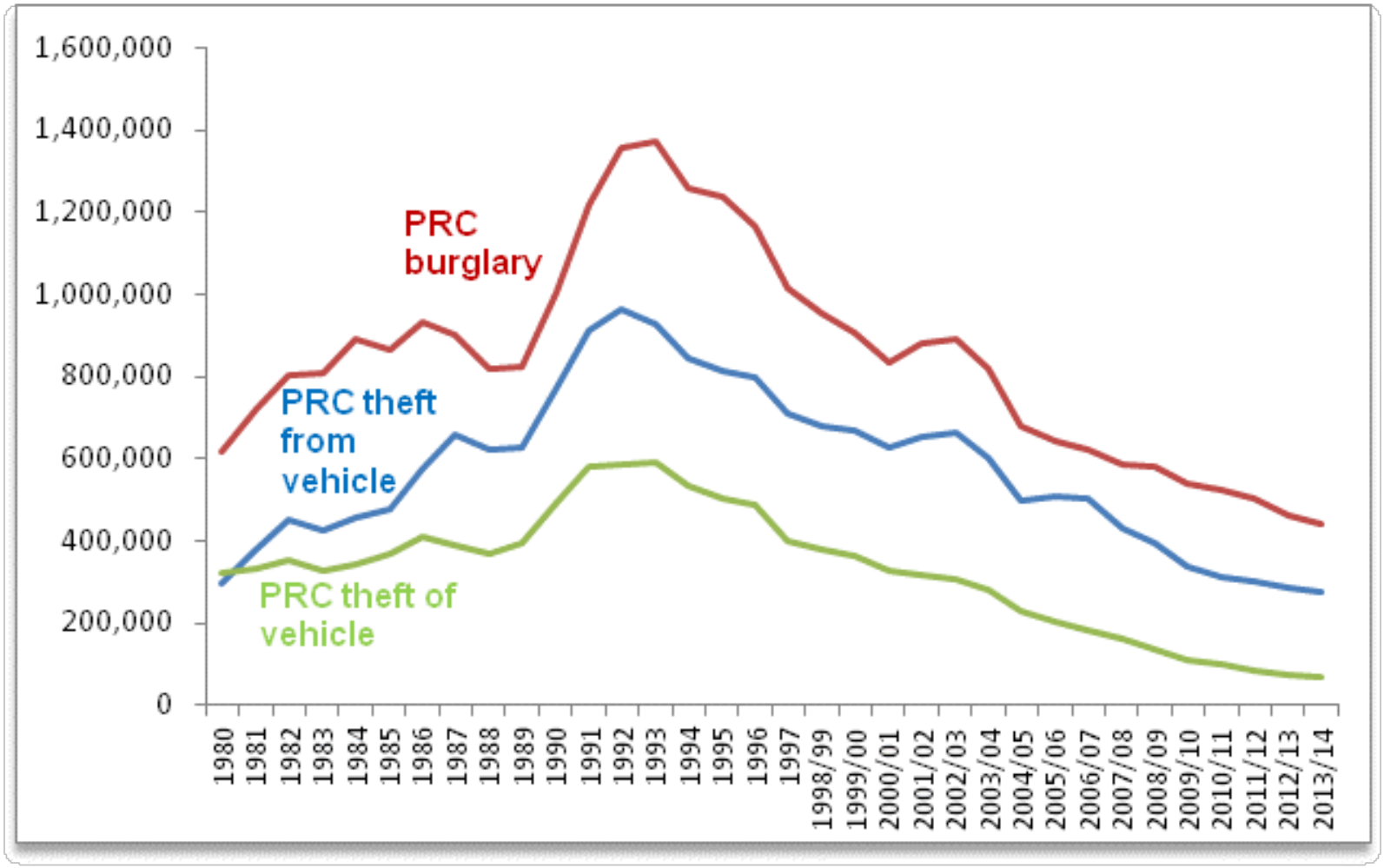
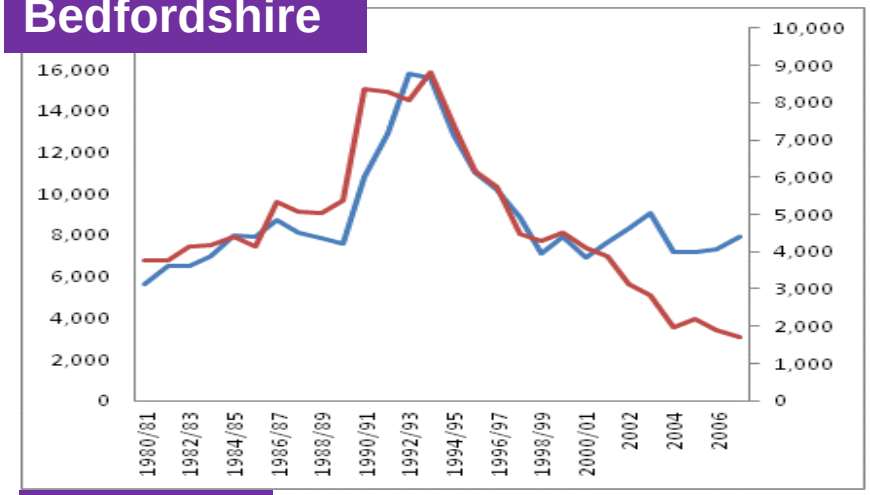


Crime trends: England and Wales

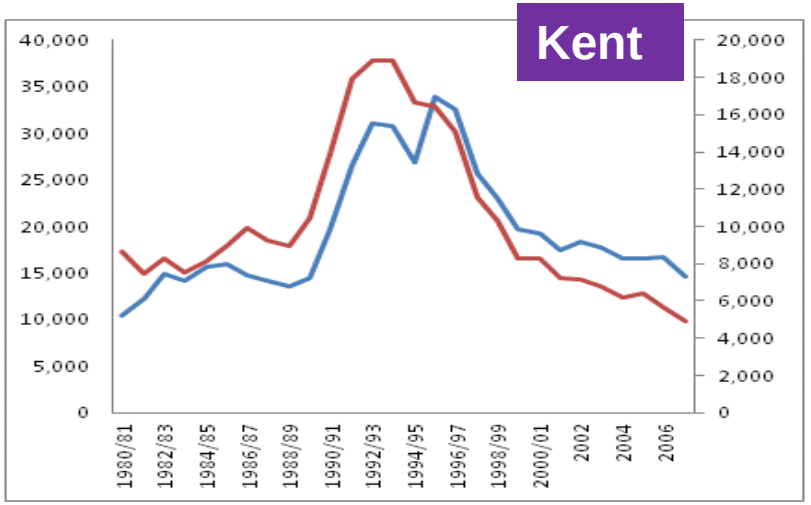


Crime trends: local areas

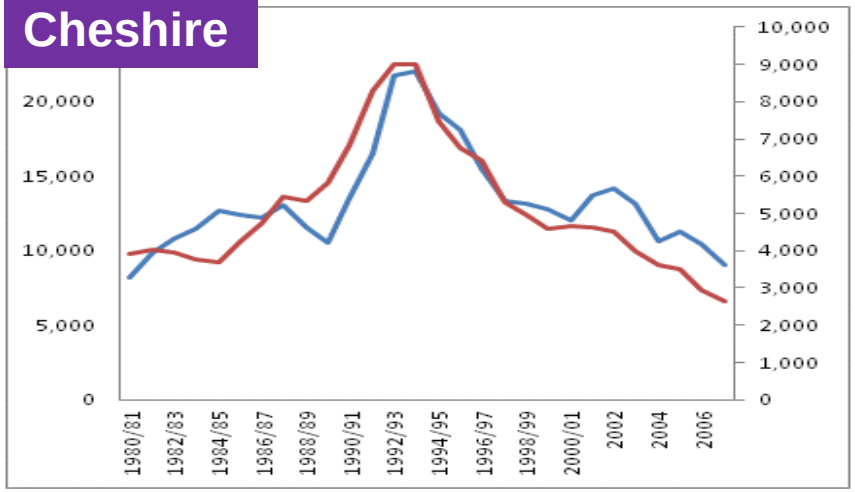
Bedfordshire



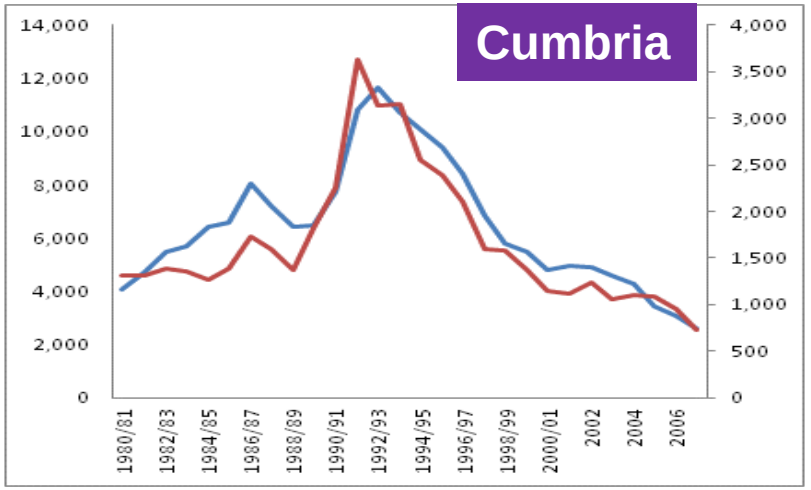
Kent



Cheshire



Cumbria



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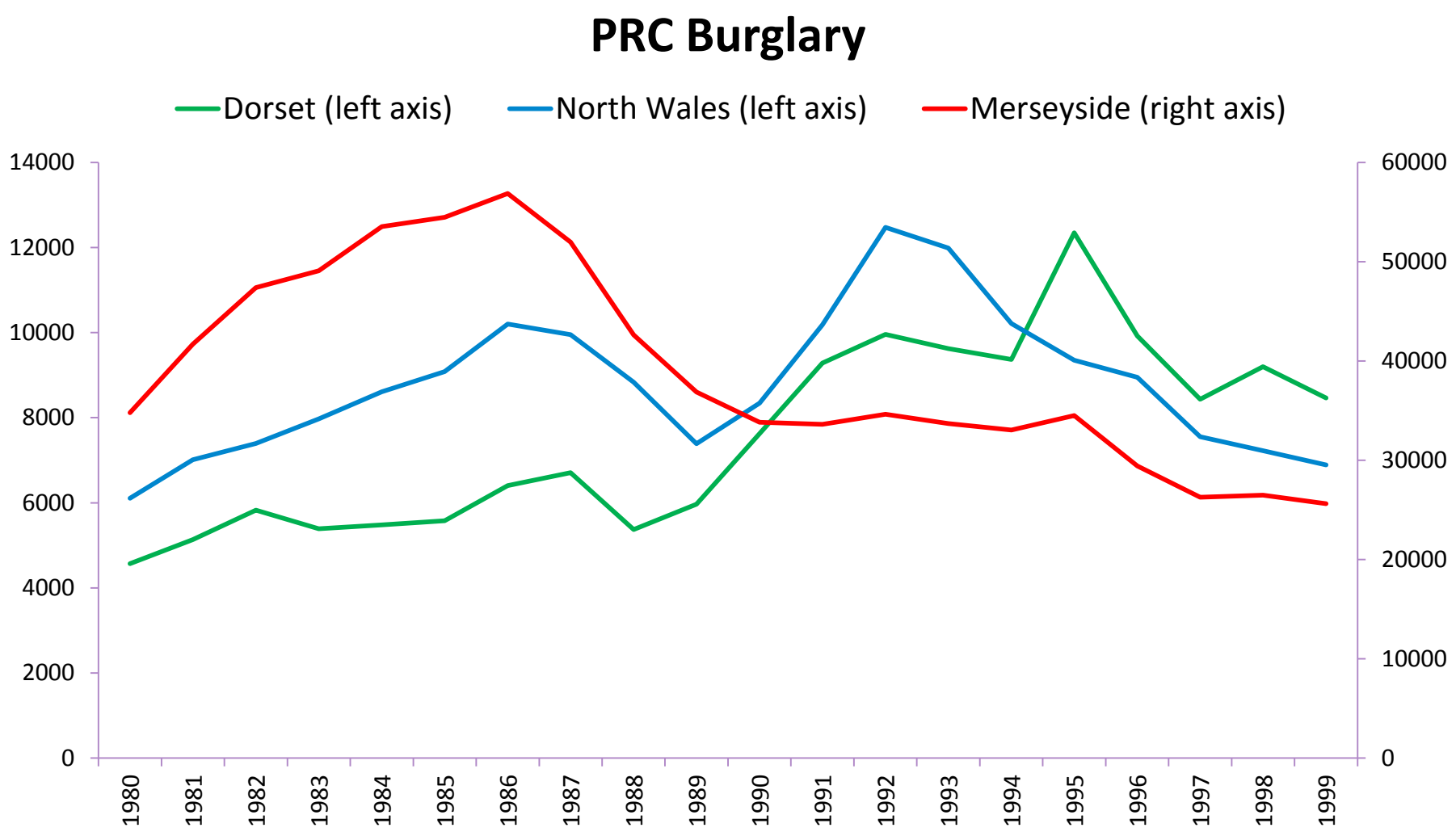
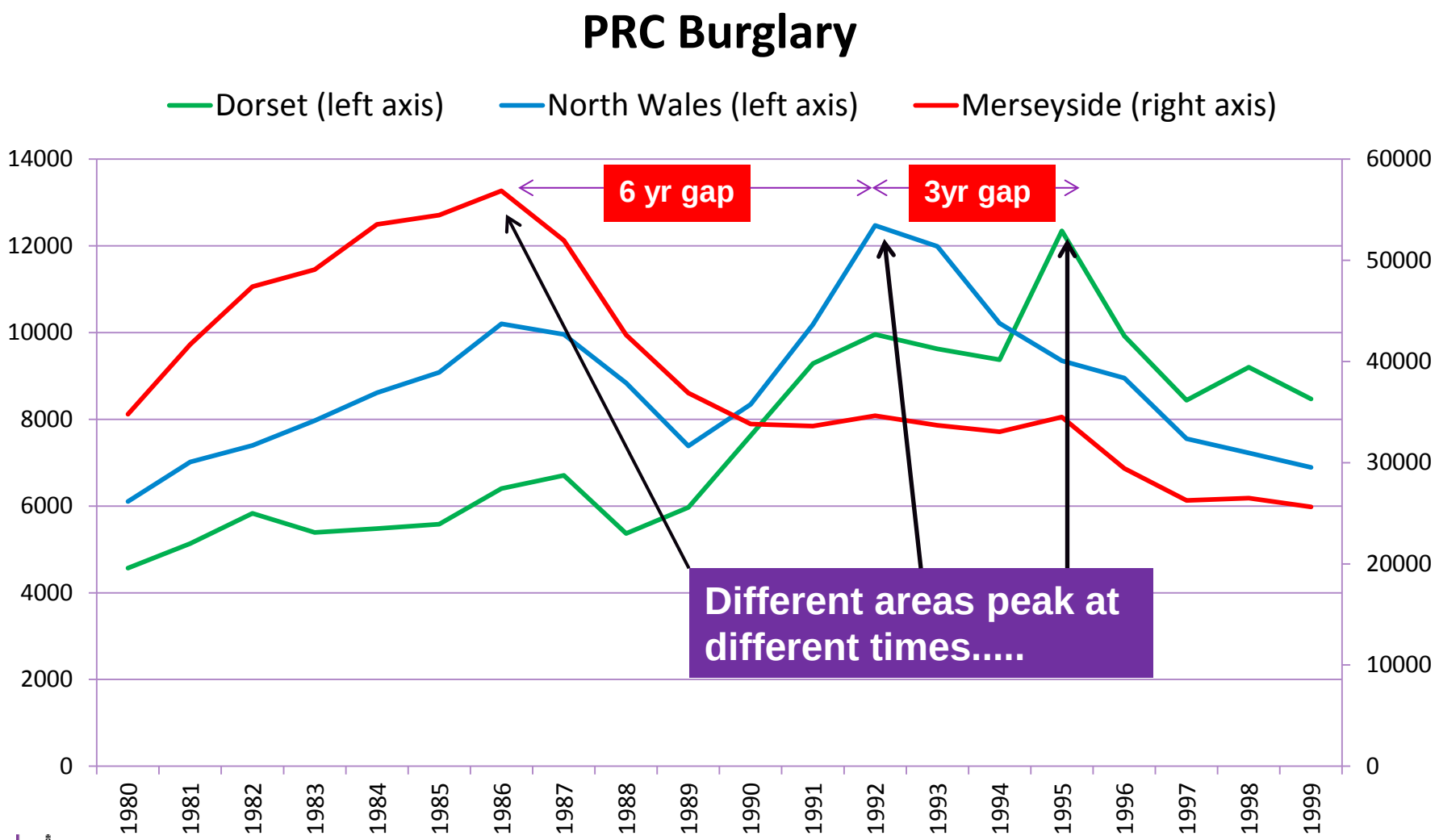
Burglary Theft of vehicle

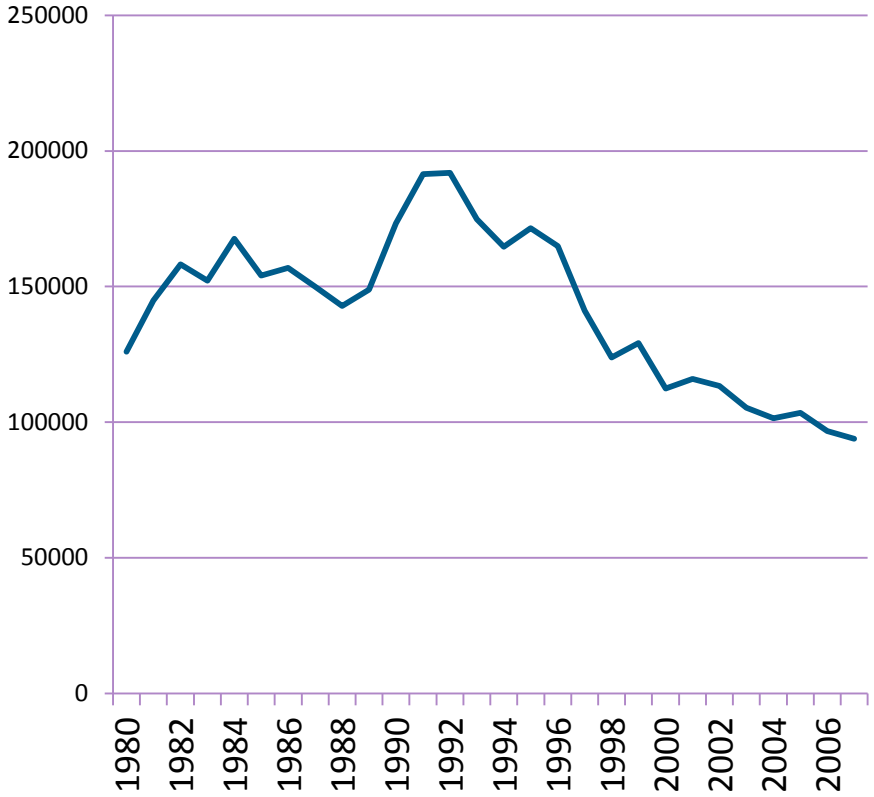
Crime trends: local areas

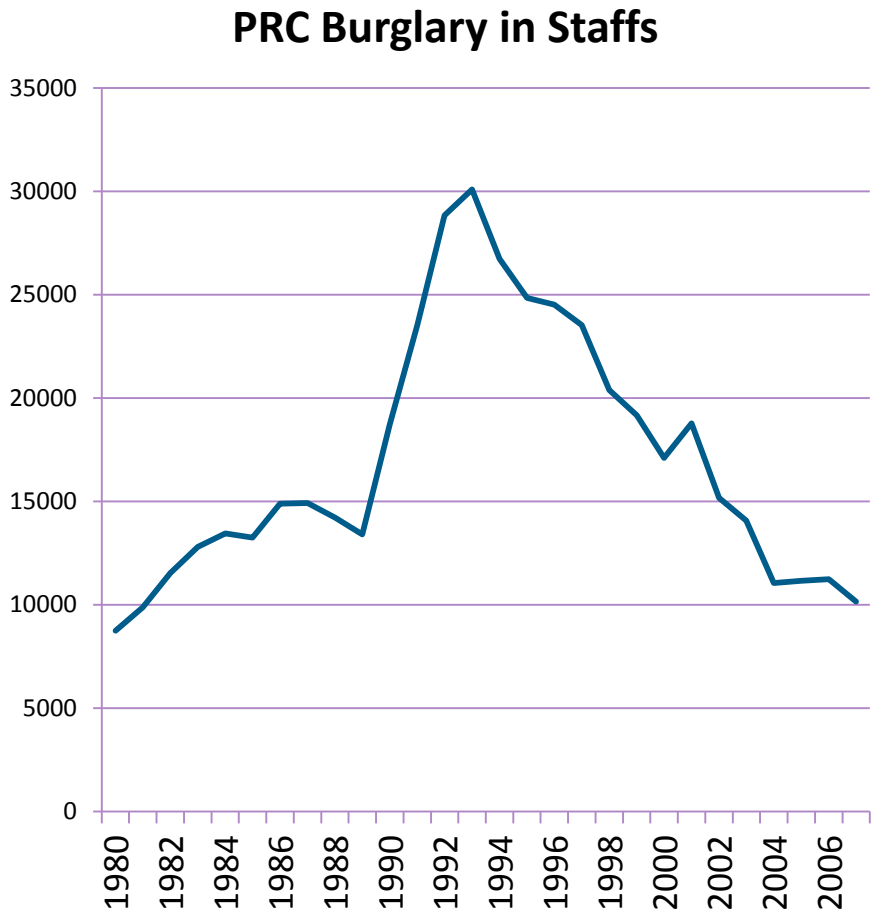


Crime trends: local areas

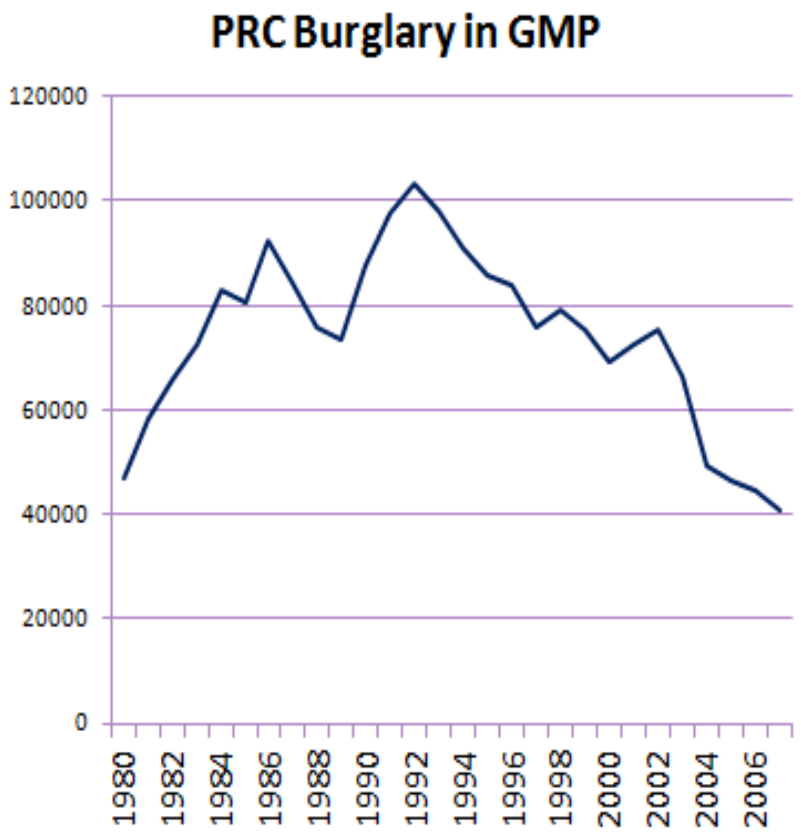


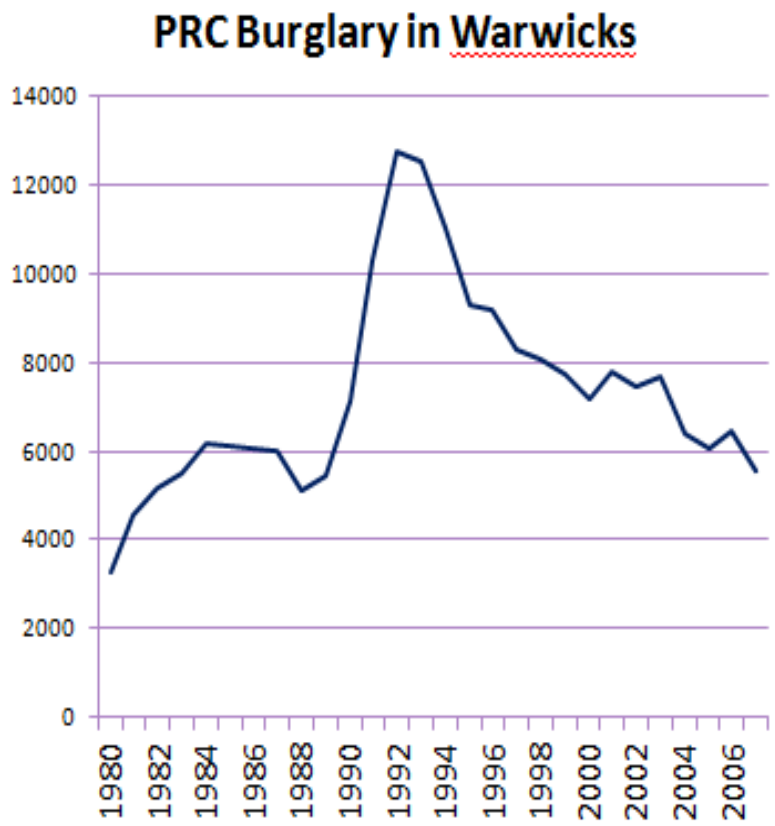
The crime drop: local areas



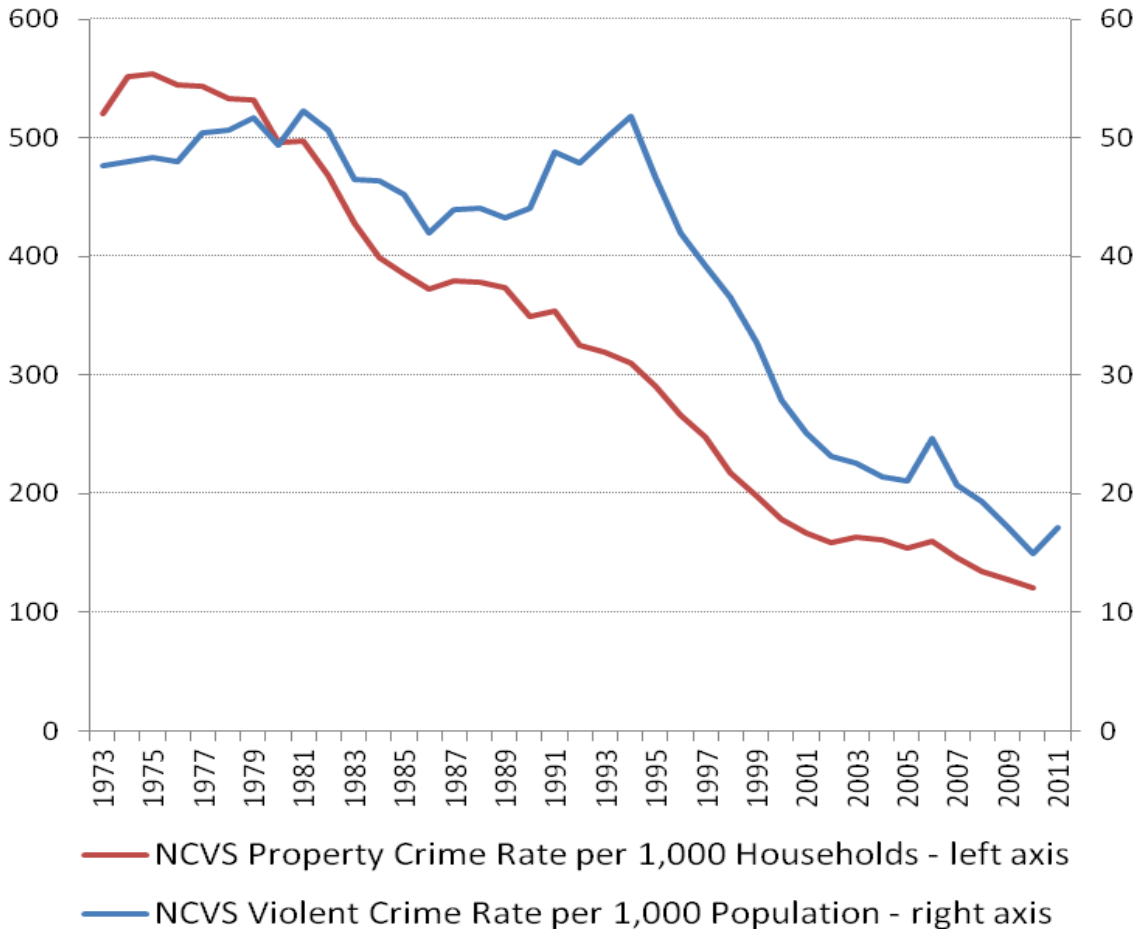


Crime trends: local areas





Crime trends: International



<u>Peaks in Other Nations in Relation to Eng & Wales</u>

Scotland – 2 years earlier

Ireland – 10 years earlier

N. Ireland – no real peak.

Australia – 6/7 year later

Canada – 4 years earlier

W. Europe – concurrent

E. Europe – 8-10 years later

Part 1 summary

1) The highest-volume theft-type crimes rise and fall sharply in the mid-1990s.

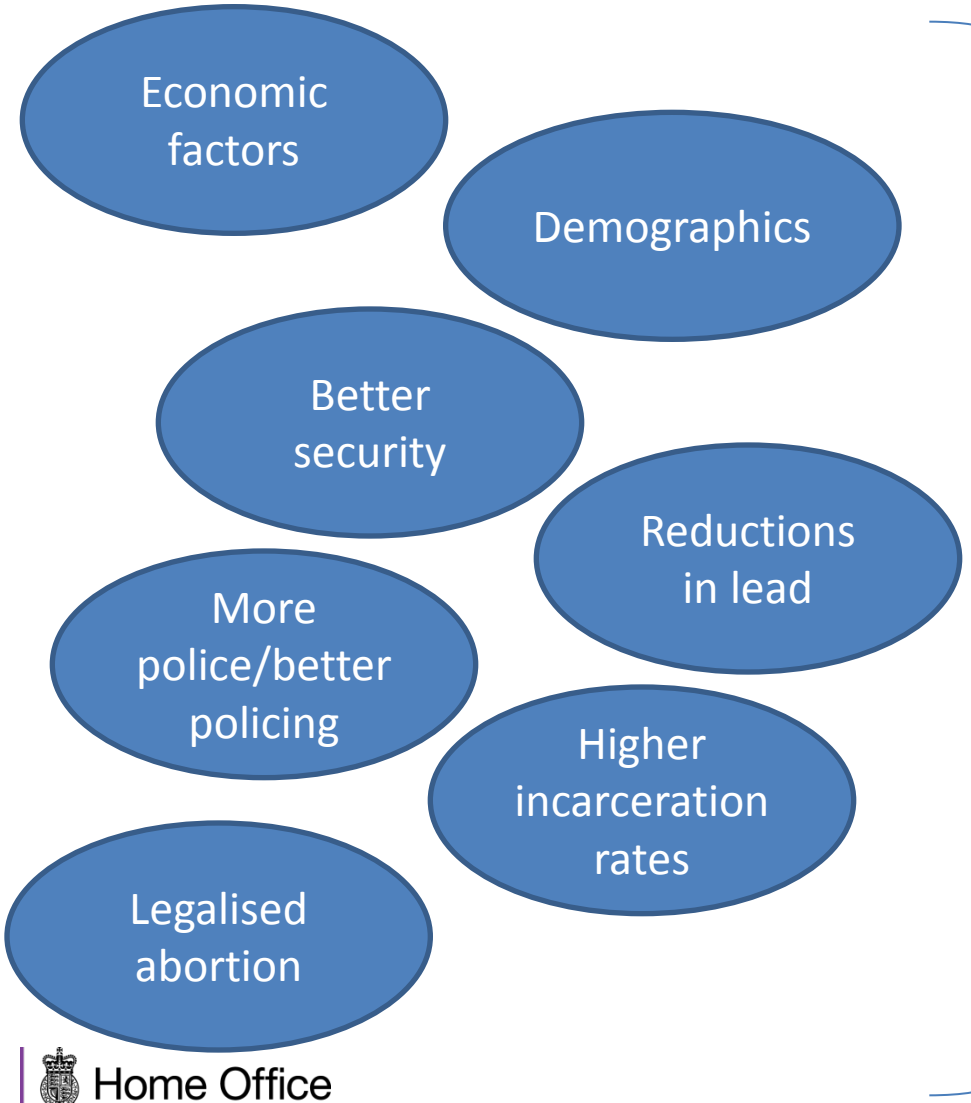
2) Nationally and within areas, different types of theft generally `spiked' together.

3) Between areas, though, there is some variation. Merseyside peaked far earlier. Less urban areas had particularly sharp spikes.

4) Theft peaked later in E+W than in the US and Canada, Scotland and Ireland but earlier than in Australia and E. Europe.

WHY?

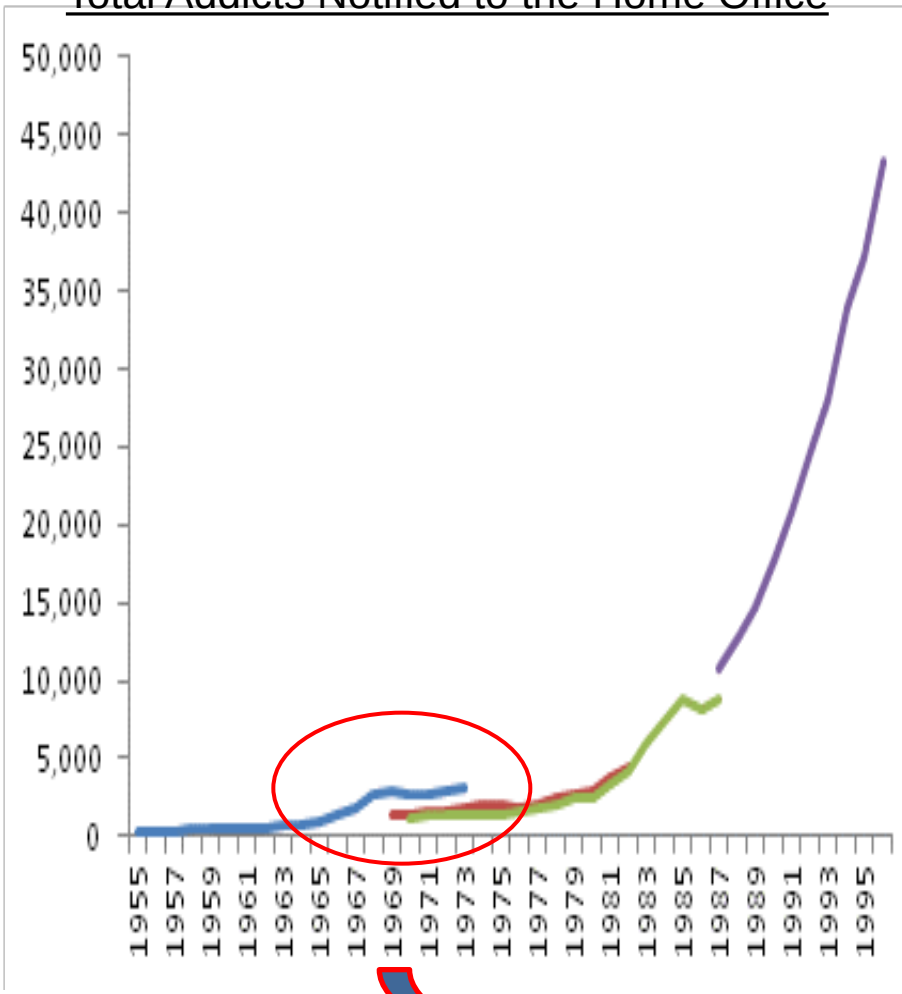
Crime drop theories



All have some support, but none seemed to explain the local variation we uncovered (e.g. Merseyside) or the international variation (e.g. why did burglary and many other types of theft start falling so much earlier in the US?)

Part 2: The heroin epidemic in England and Wales

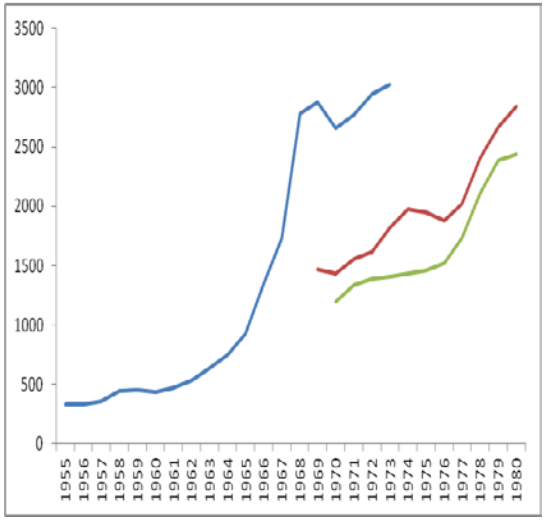
Total Addicts Notified to the Home Office



Data will be:

1) **Lagged**

2) **Undercount**



Part 2: The heroin epidemic in England and Wales

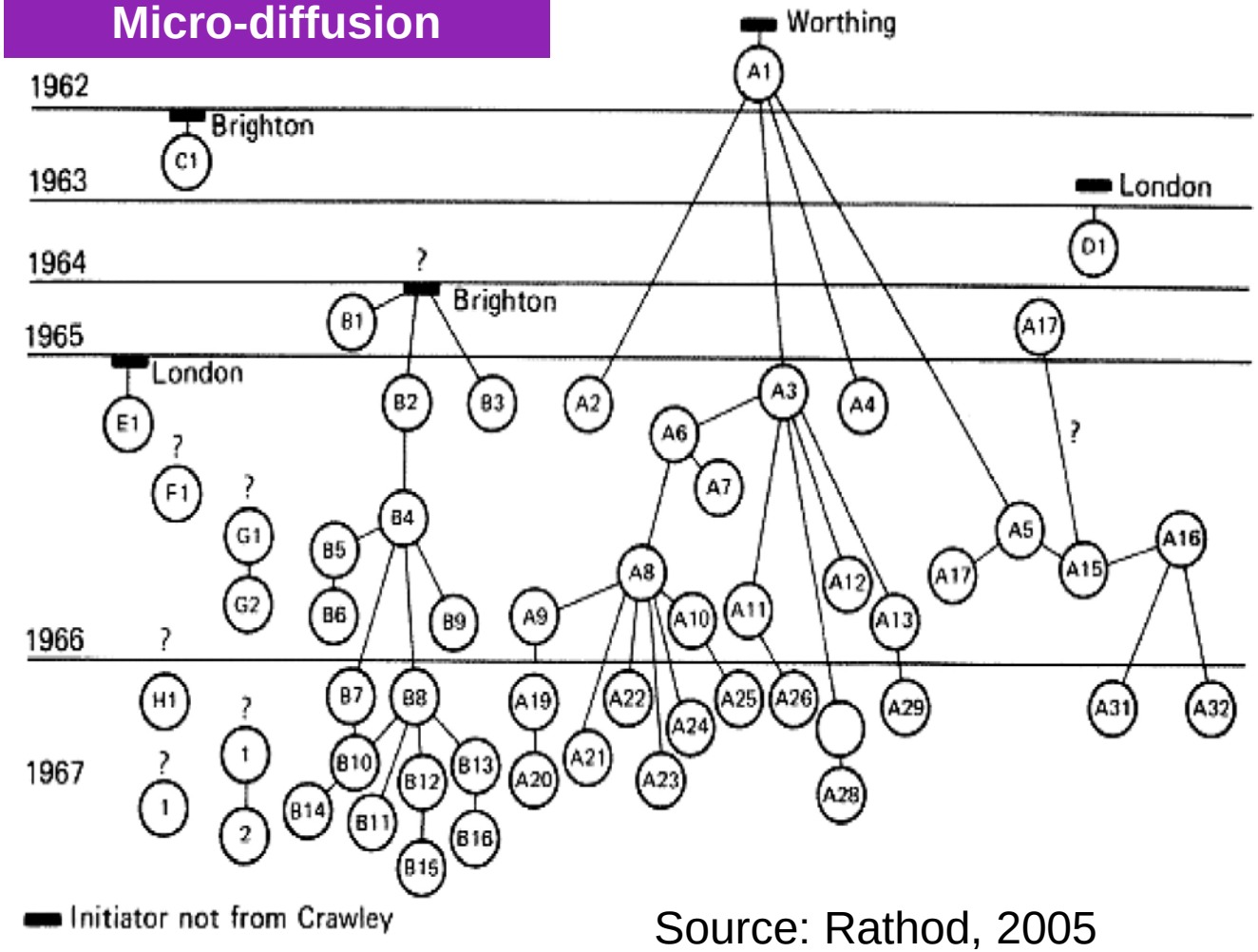
- The number of heroin users (crack came later) rose sharply in the 1960s, but steadily in the early 1970s (AI totals were circa 2000-4000 users).
- This changed in the late 70s with the opening of new supply routes from the Middle East.

- **Geography**: Use confined largely to London
- **Users**: Middle-aged (25-35) and middle class (bohemian).
- **Type of Heroin**: Injectable Heroin

- **Geography**: Use spreads across all the UK.
- **Users**: Young (16-24), working class, unemployed (1980s, end of manufacturing industries).
- **Type of Heroin**: Smoking Heroin (easier as no injecting required and thought to be non-addictive).

What epidemics look like...micro-diffusion

Micro-diffusion



Source: Rathod, 2005

Wirral Study

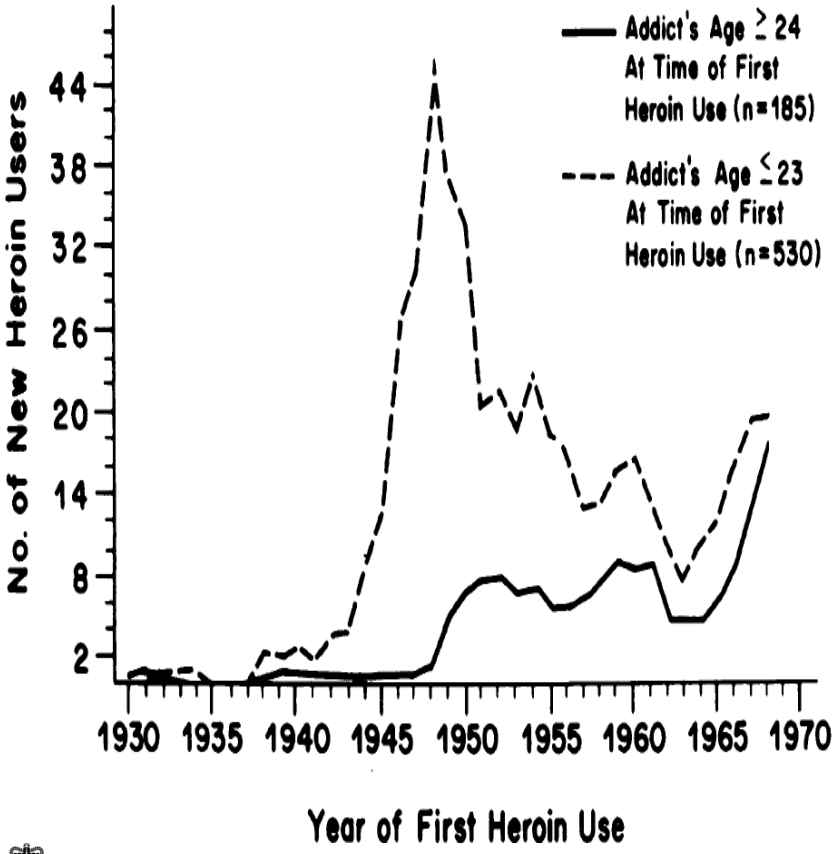
Initiation by friend/relative: stranger/pusher ratio

9:1

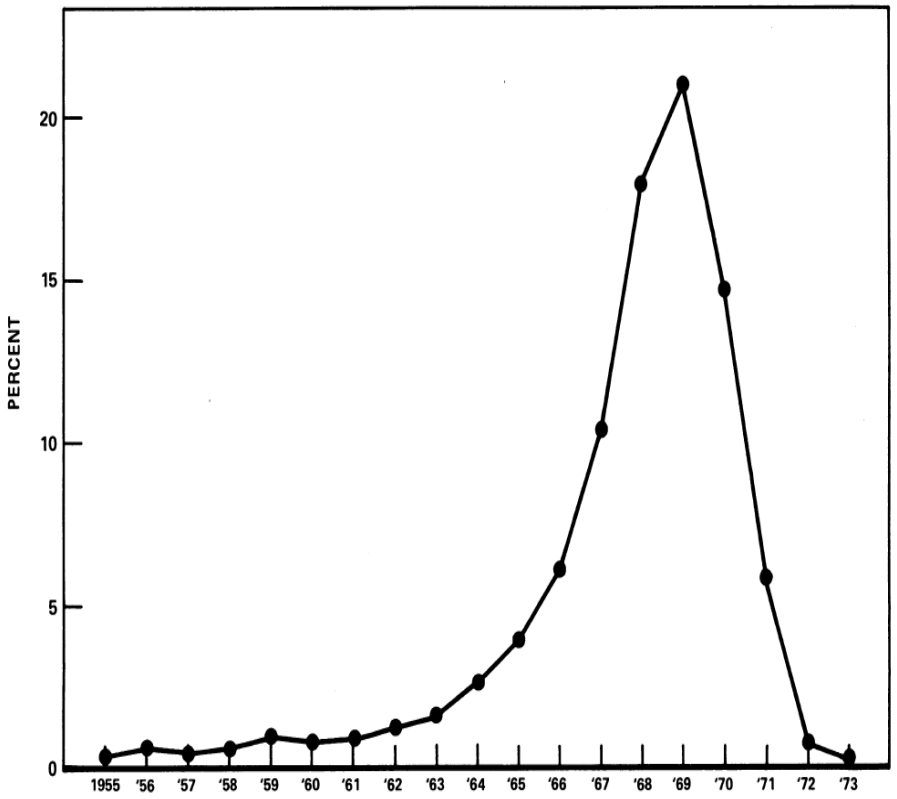
Source: Parker et al, 1988

What epidemics look like....new users

Year of First Use Among Heroin Users in Chicago



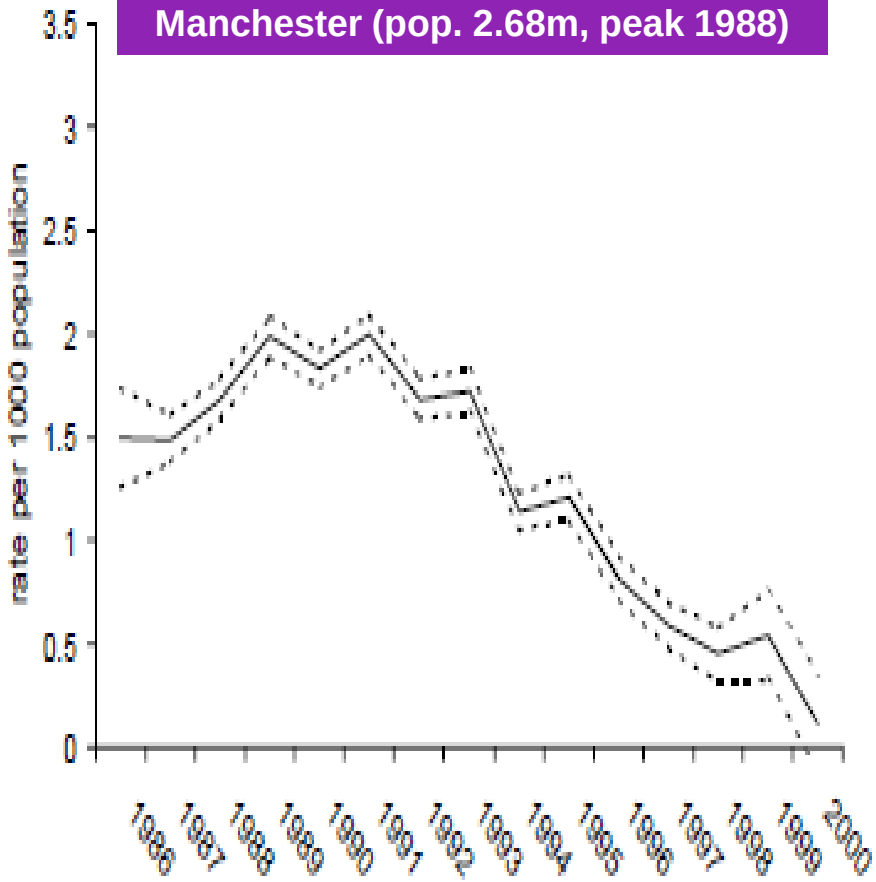
Year of First Use Among 15,000 Heroin Users in Washington



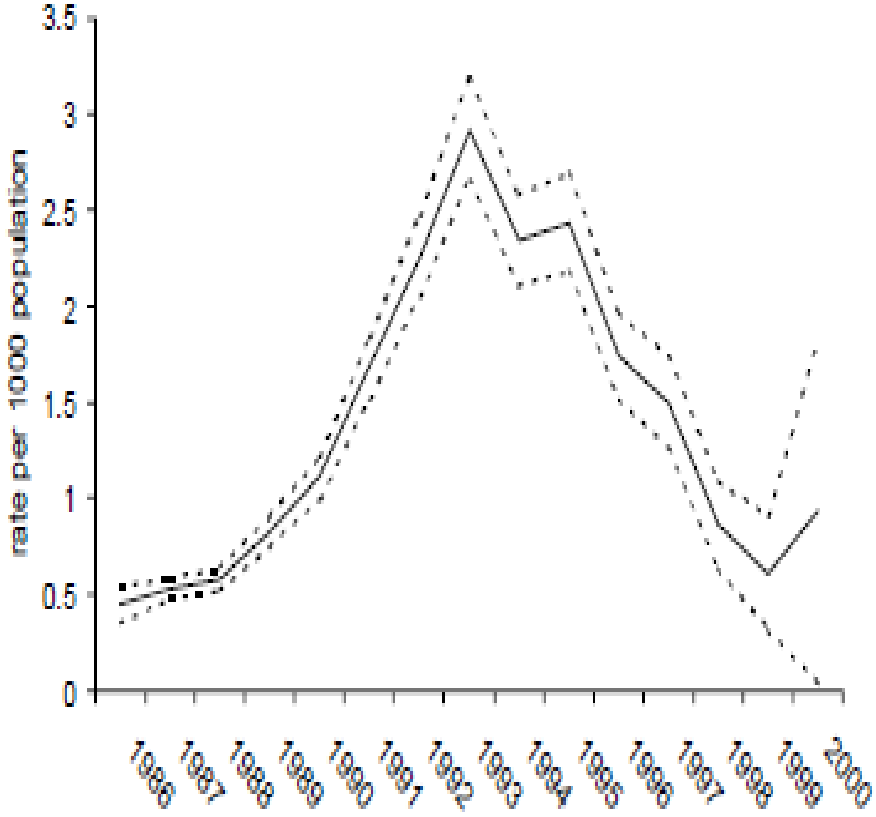
Source: Greene, 1974

What epidemics look like.... Macro-diffusion

New Heroin Users in Greater Manchester (pop. 2.68m, peak 1988)



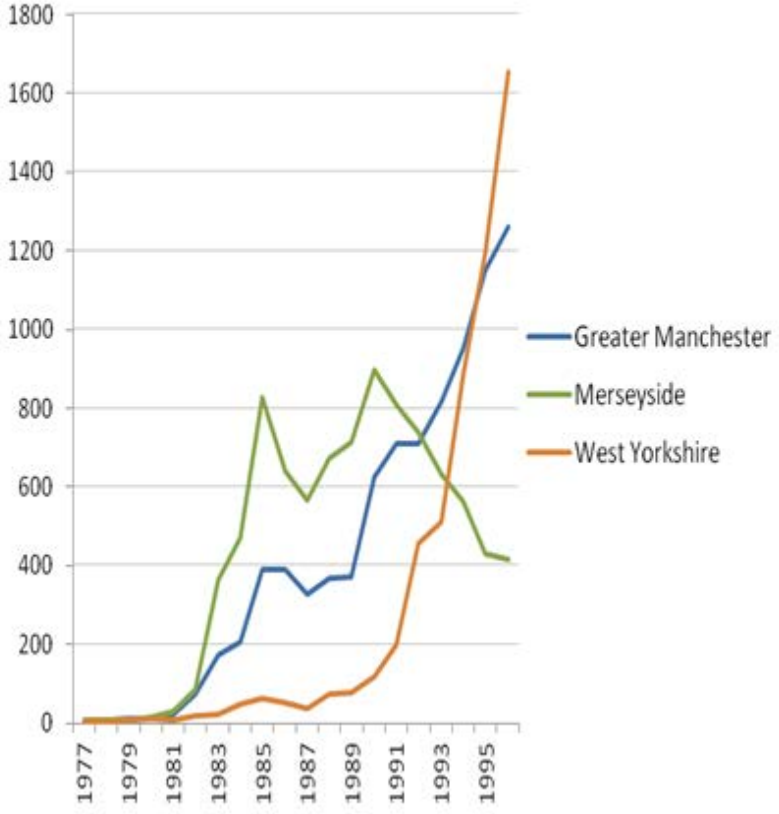
New Heroin Users in Bolton (pop. 139,000, peak 1992)



Source: Millar et al, 2002

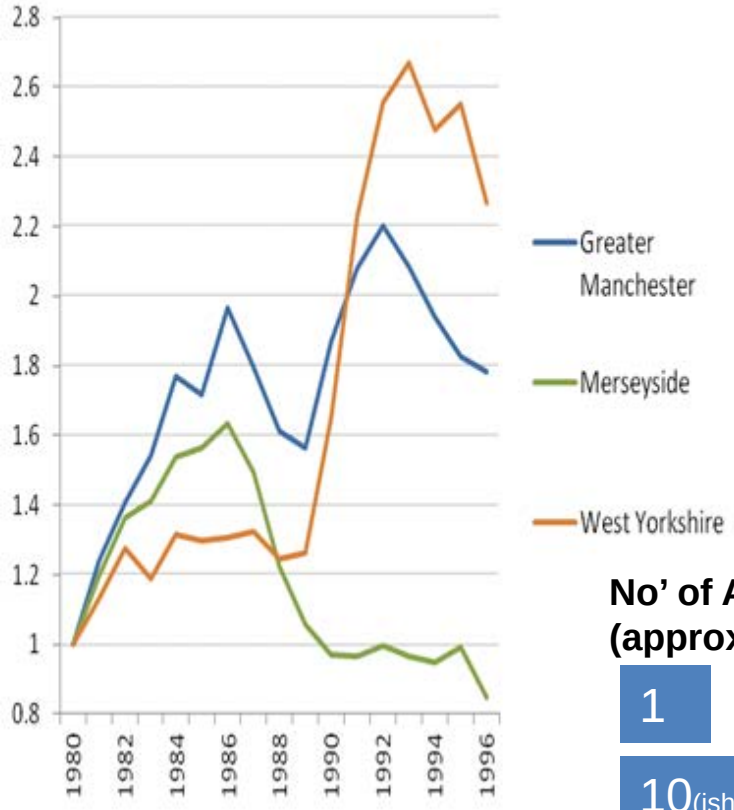
Correlation with crime?

New Heroin Users



Source: Addicts Index

Police recorded burglary



Source: ONS, police recorded crime

No' of Areas (approx)

1	First-wave of epidemic only
10(ish)	Both waves
30(ish)	Second wave only

Home Office

Quantitative analysis. Fixed effects regression.

The full panel dataset of 42 police forces in England and Wales contained:

- recorded crime volumes from 1981-1996 for burglary, theft of vehicle and theft from vehicle
- new heroin users from 1981-1996 (Addicts Index – issues!)
- total reported heroin users from 1987-1996 (ditto)
- claimant count rate by area from 1983-1996.

$$C_{it} = \alpha_{it} + \beta_1 H_{it} + \beta_2 (U/N)_{it} + \beta_3 U_{it} + \beta_4 N_{it} + \beta_5 H(U/N)_{it} + \eta F_i + \gamma T_t + \varepsilon_{it}$$

C is crime (burglaries, theft of vehicles or theft from vehicles are used);
α is a constant;
H is numbers of heroin users (both new and total users were tested)
U is the number of claimants and U/N is the unemployment rate,
N is total population
F is a vector of force-level fixed effects
T is a vector of time dummies
ε is a random error term .

Special thanks to Steve Machin at LSE, who helped with this analysis

Fixed effects regression results

Several model variants attempted:

Heroin variables: Significant at the 1% level in all but one specification

Unemployment variables: Sporadically significant

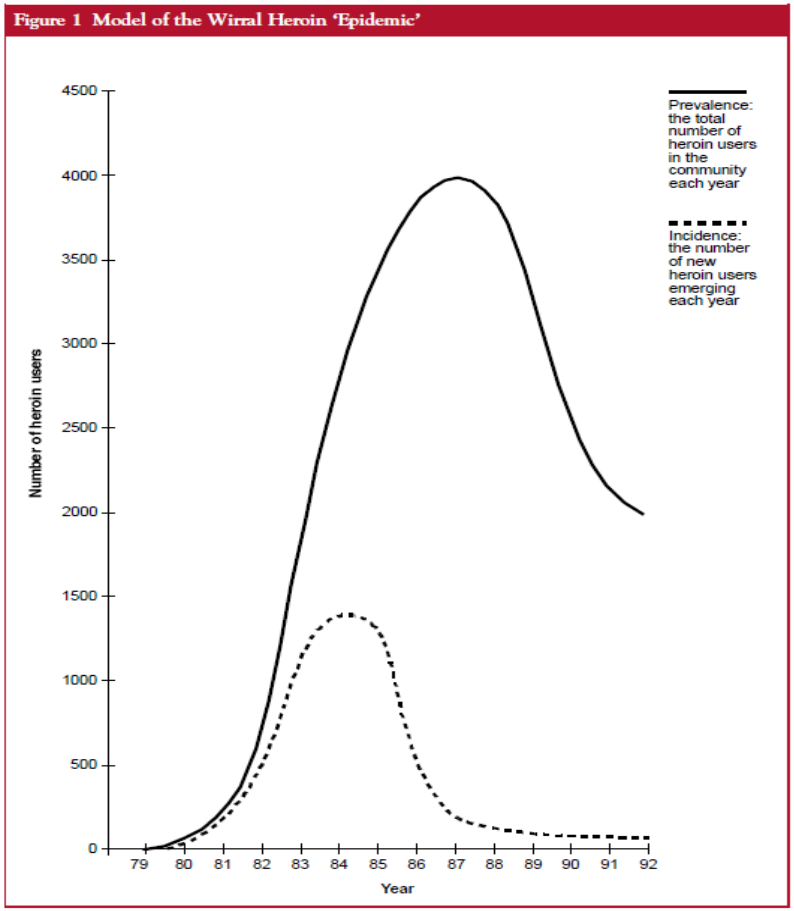
Population: Non-significant

Heroin/UE interaction: significant for vehicle crimes but not burglary

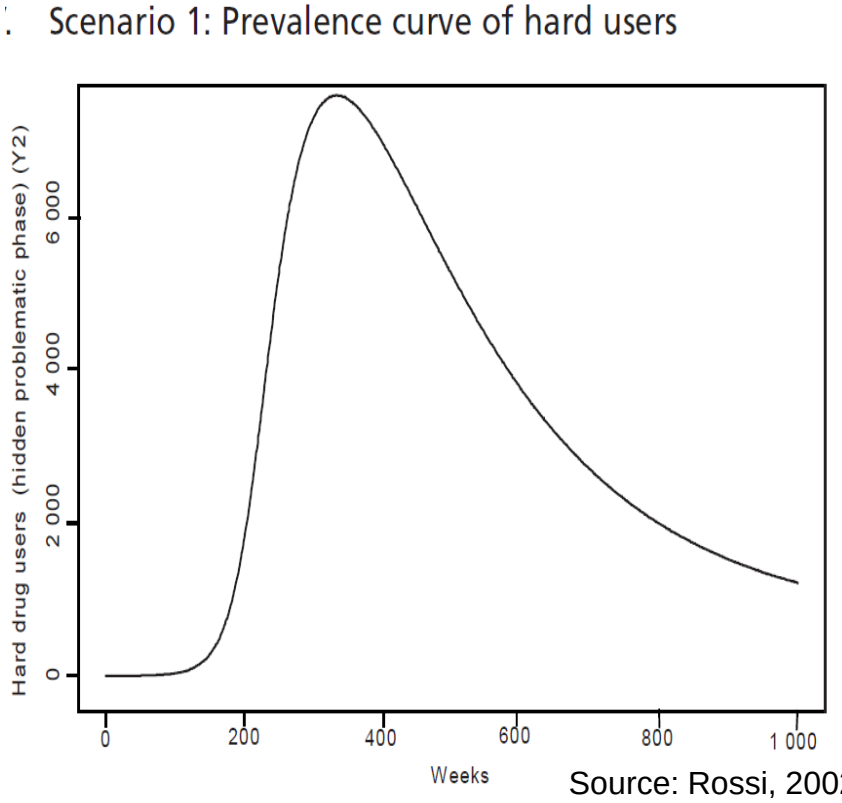
	Burglary	Theft of vehicle	Thefts from vehicle
Proportion of the increase in crime 1984-93 explained by total heroin users	35% (9-60%)	30% (-16-77%)	44% (29-59%)
Proportion of the increase in crime 1981-93 explained by new heroin users	48% (33-63%)	41% (3-80%)	48% (29-68%)
Proportion of the increase in crime 1984-93 explained by total heroin users (Using instrumental variable measurement error-correction approach)	50% (25-74%)	45% (6-84%)	48% (37-58%)

Special thanks to Steve Machin at LSE, who helped with this analysis

Total users



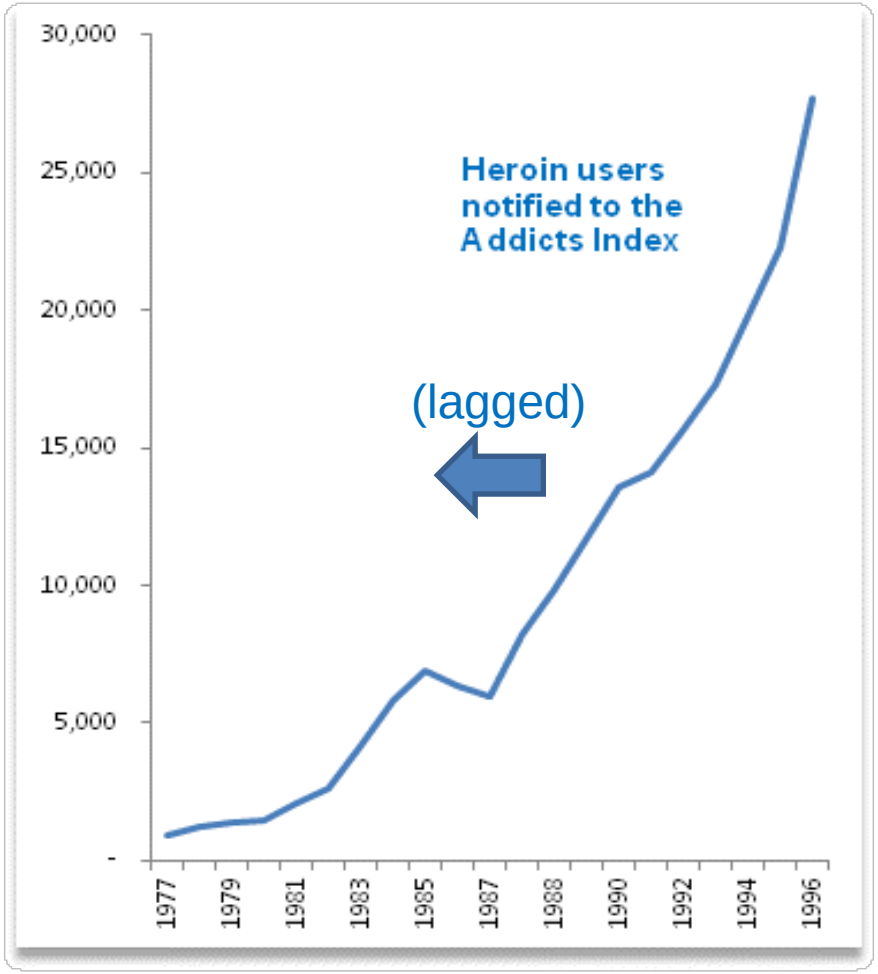
Source: Parker et al., 1998

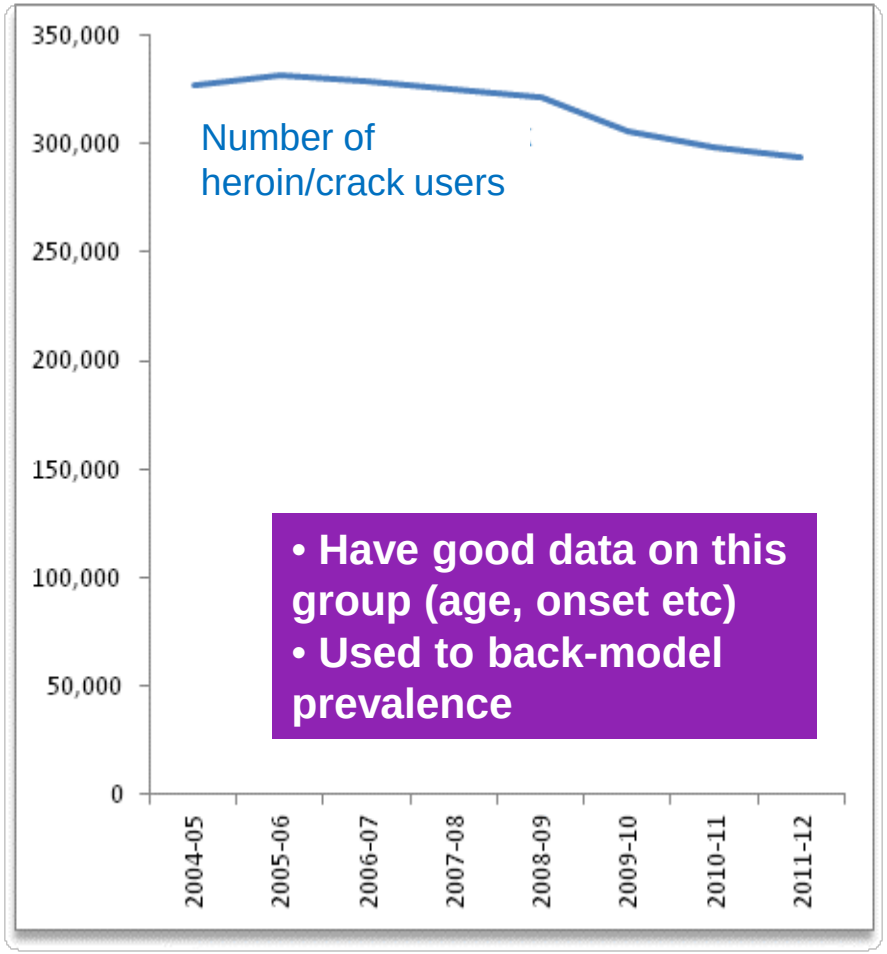


Source: Rossi, 2002

- **Evidence suggests most may quit within a year or two (Vietnam; Kaya et al., 2004)**
- **Treatment picks up the flatter part of the wave? (i.e. Govt always a few years behind)**

When was the peak?

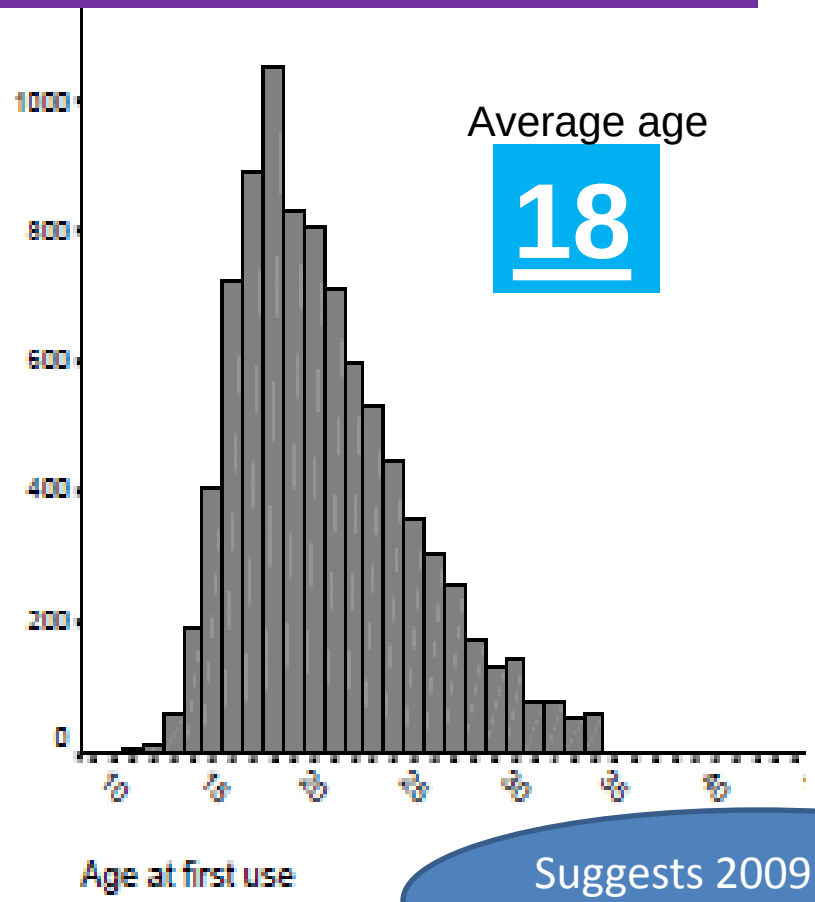




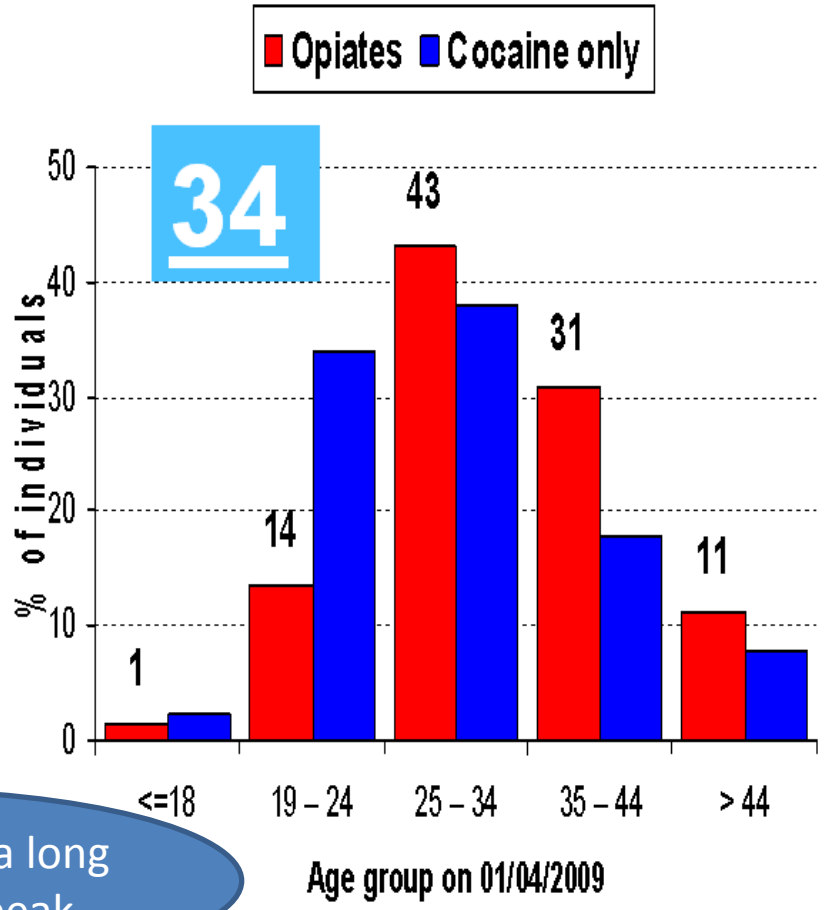
Source: Hay et al., 2014

When was the peak?

Age Distribution at Initiation (close to reality at epidemic peak)

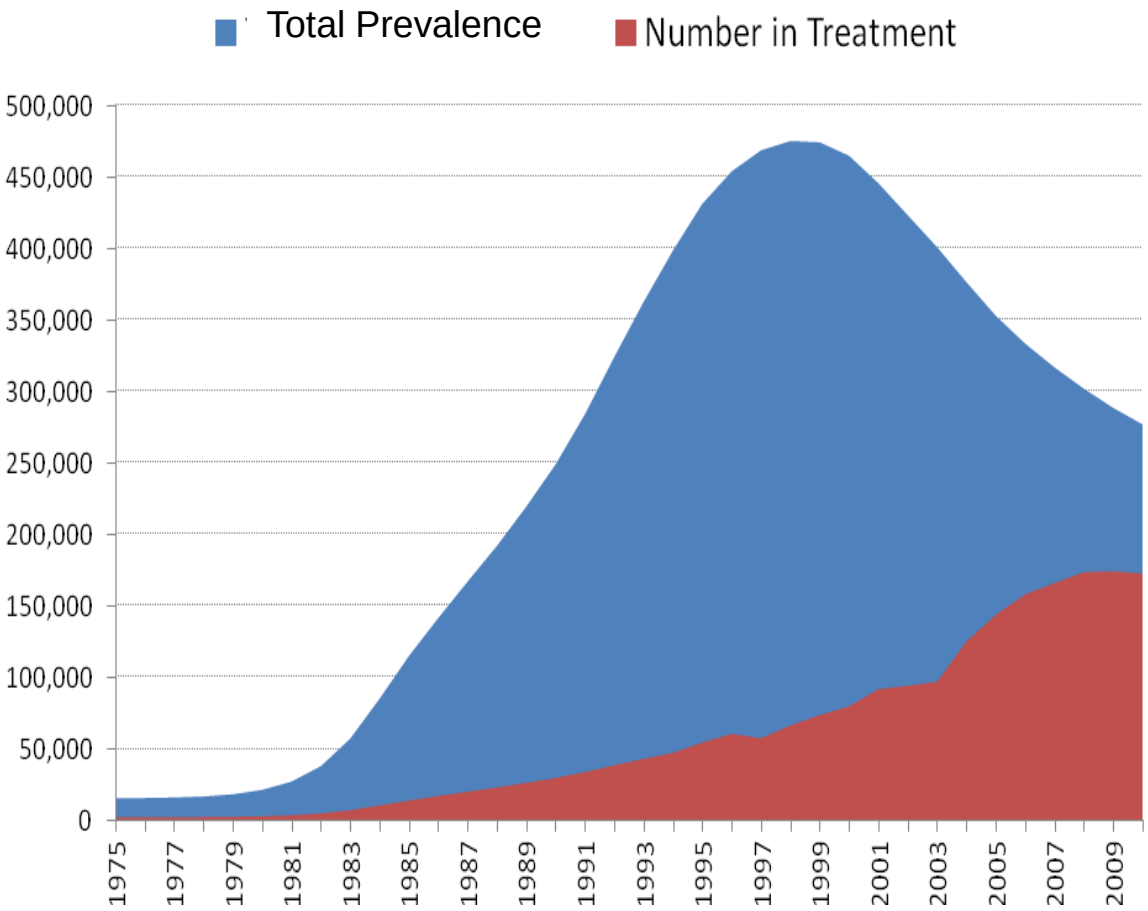


Age Distribution of heroin/Crack Users in 2009, Drugs Data warehouse



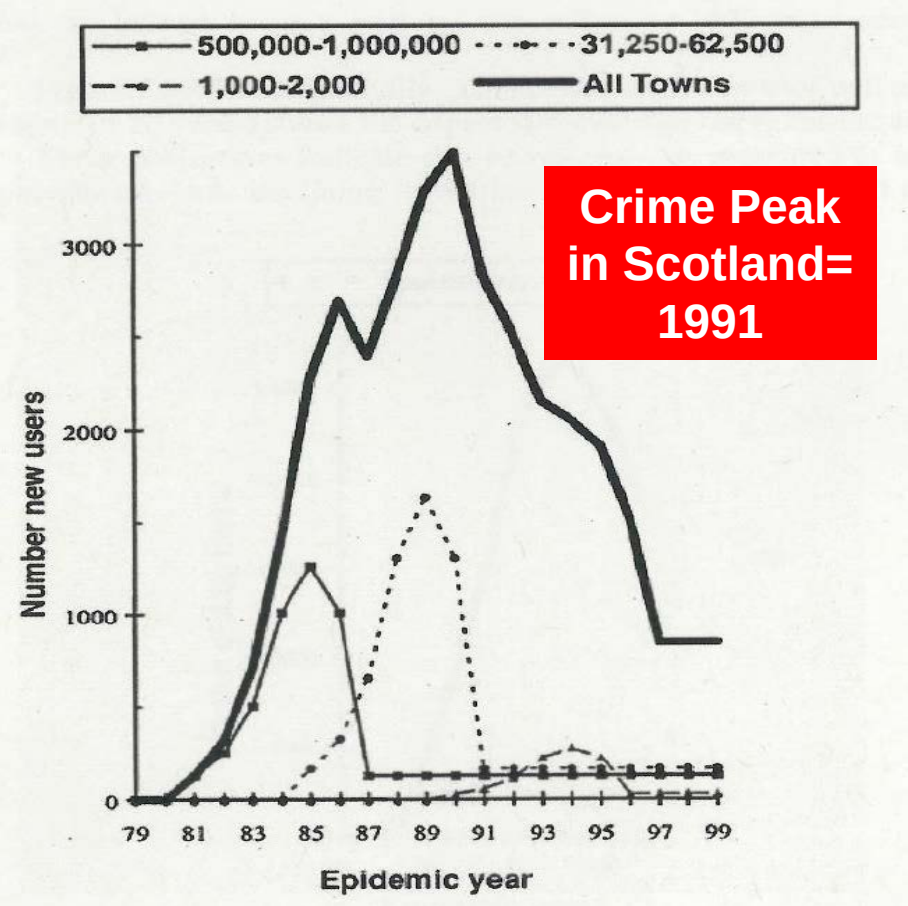
Suggests 2009 is a long time *after* the peak

Modelled prevalence (total population)



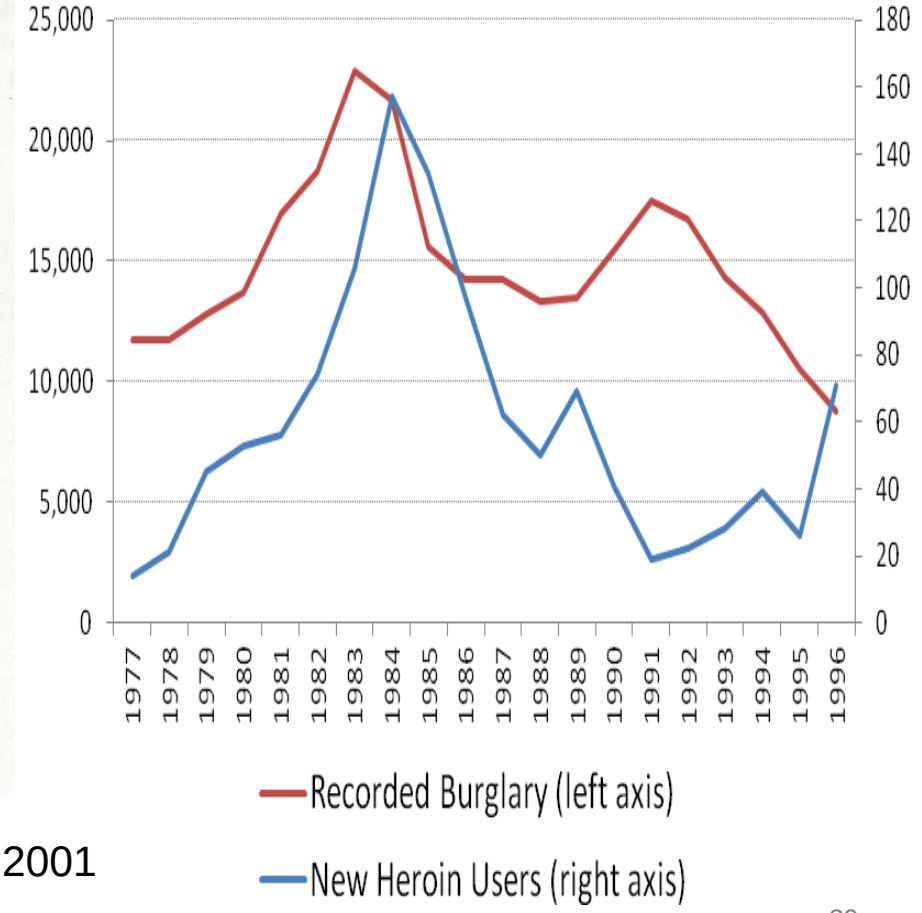
Actual data on current cohort shows 2% annual avg fall

And internationally? (Scotland)



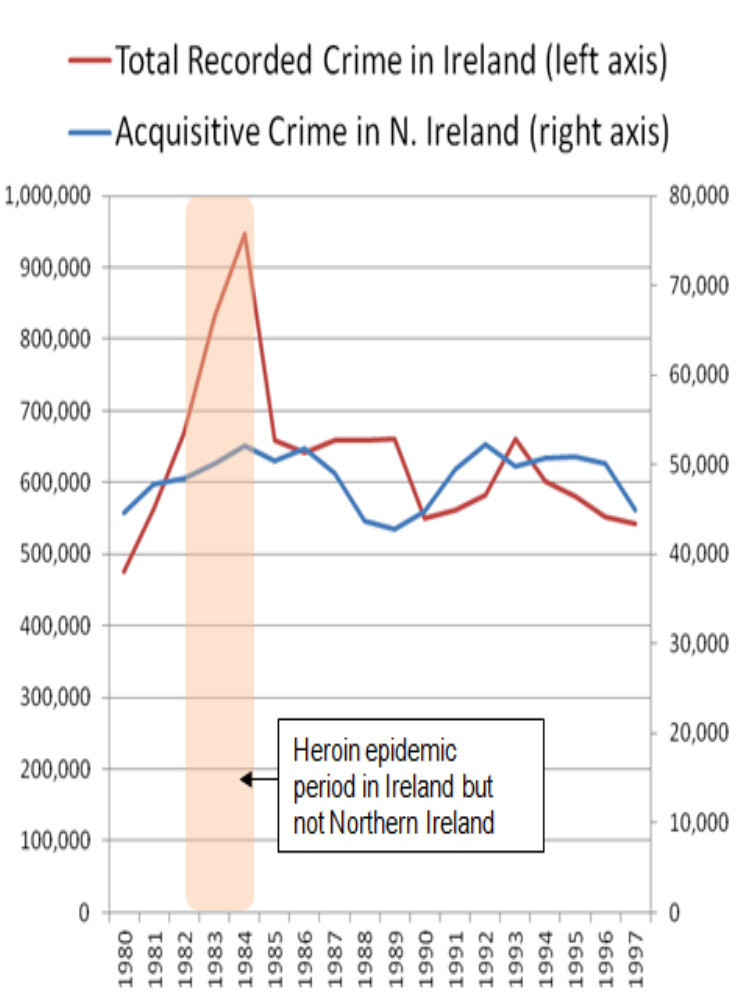
Crime Peak in Scotland= 1991

Burglary and new heroin users in Edinburgh

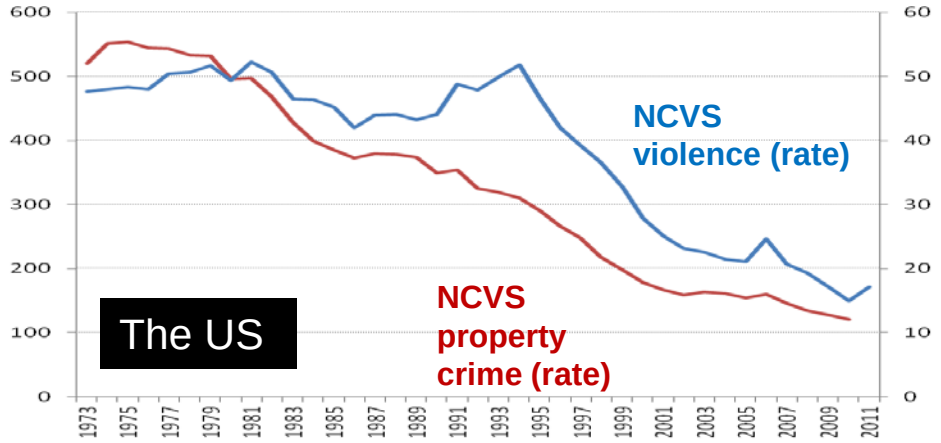


Source: Ditton & Frischer, 2001

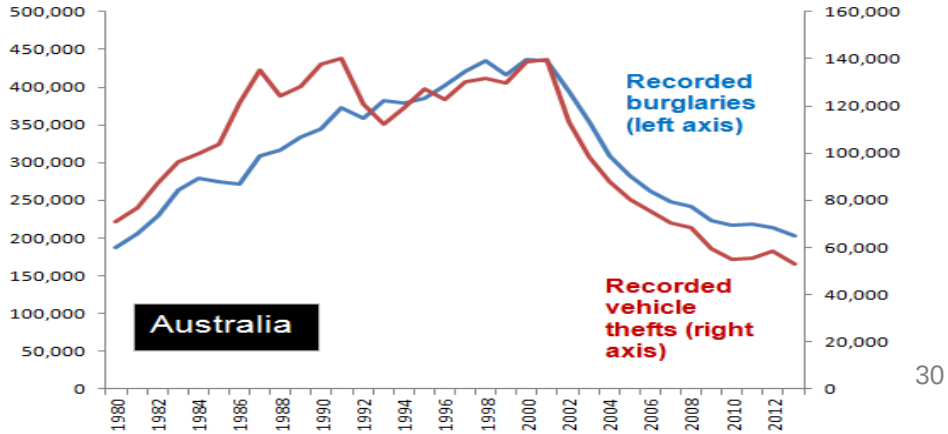
International correlation – Ireland, Australia and the US.



In the US, heroin incidence probably peaked between 1971 and 1977 (Hughes & Rieche, 1995).



In Australia, users rose to around 2000 when there was a sharp reduction (Degenhardt et al., 2004).



Crime by heroin/crack users

Arrestee survey: of 15,847 arrestees, n = 1699 were weekly users of heroin or crack-cocaine. The self-reported offending of the 1,699 is shown below:

	Total offences	Offences per individual
Domestic Burglary	2,352	1.4
Commercial Burglary	4,396	2.6
Theft of Vehicle	2,662	1.6
Theft from Vehicle	5,931	3.5
Theft from Person	2,528	1.5
Robbery	719	0.4
Shoplifting	300,952	177.1
Other Theft	43,335	25.5
Violence	2,212	1.3
Criminal Damage	13,443	7.9
Total	**378,530**	**223**

Similar volume and versatility of offending in 36 other studies.....

But....

- Minor theft
- Skewed
- Offenders first, heroin use second....
- Other risk factors
- Offending vs treatment vs community studies

Source: Boreham et al., (2006)

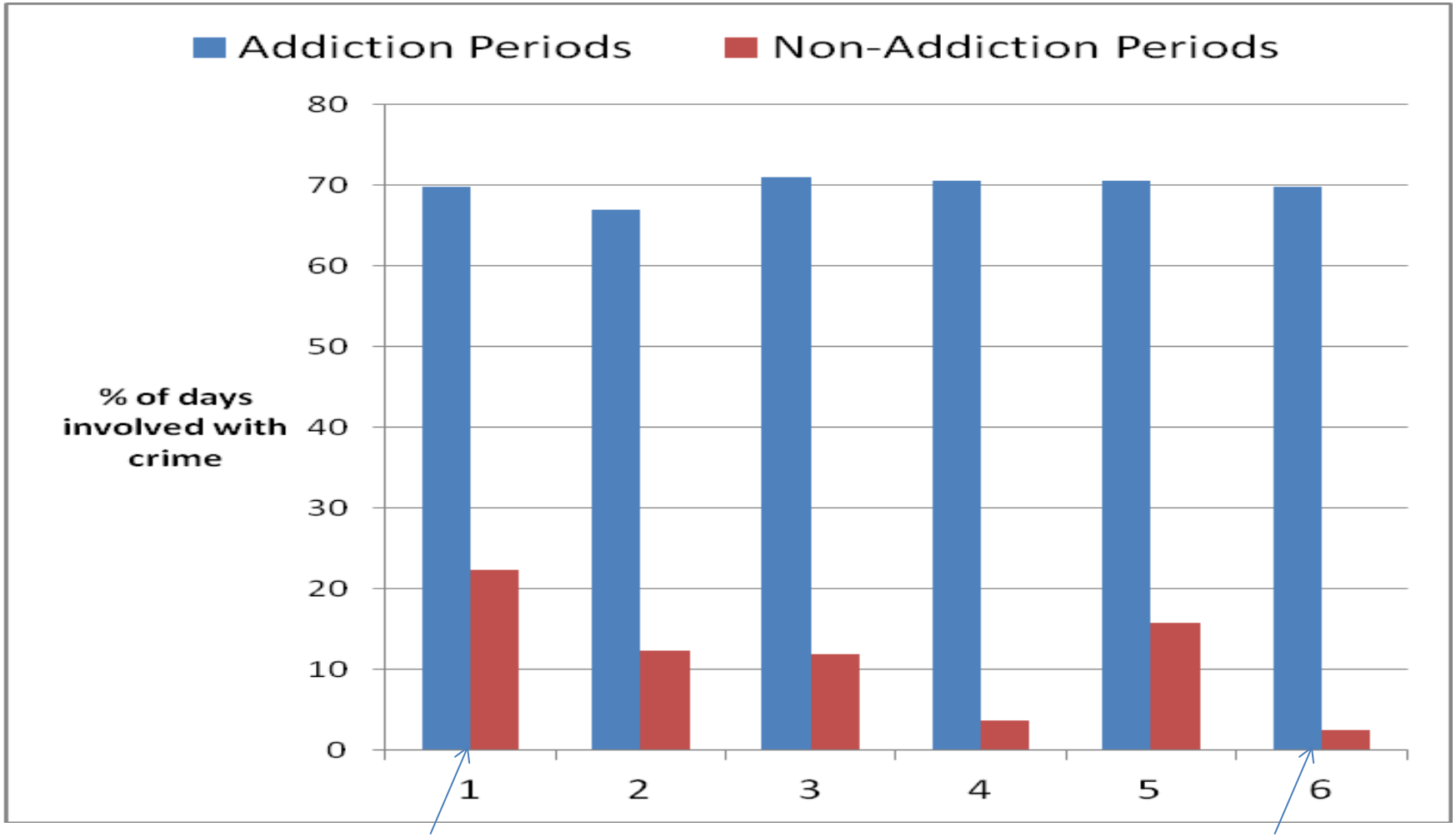
Crime by heroin/crack users

All respondents — *Oct 2003–Sept 2006*

Number of acquisitive crimes in last 12 months	Take HC weekly			Do not take HC weekly			Total		
	2003-04 %	2004-05 %	2005-06 %	2003-04 %	2004-05 %	2005-06 %	2003-04 %	2004-05 %	2005-06 %
Total									
None	16	17	19	71	69	70	61	61	64
1-52 crimes	21	22	20	20	20	19	20	20	19
53-365 crimes	28	30	30	7	8	7	11	11	10
366+ crimes	35	31	31	3	3	3	9	8	7
Any acquisitive crimes	84	83	81	29	31	30	39	39	36

Source: Boreham et al., (2006)

Crime by heroin/crack users

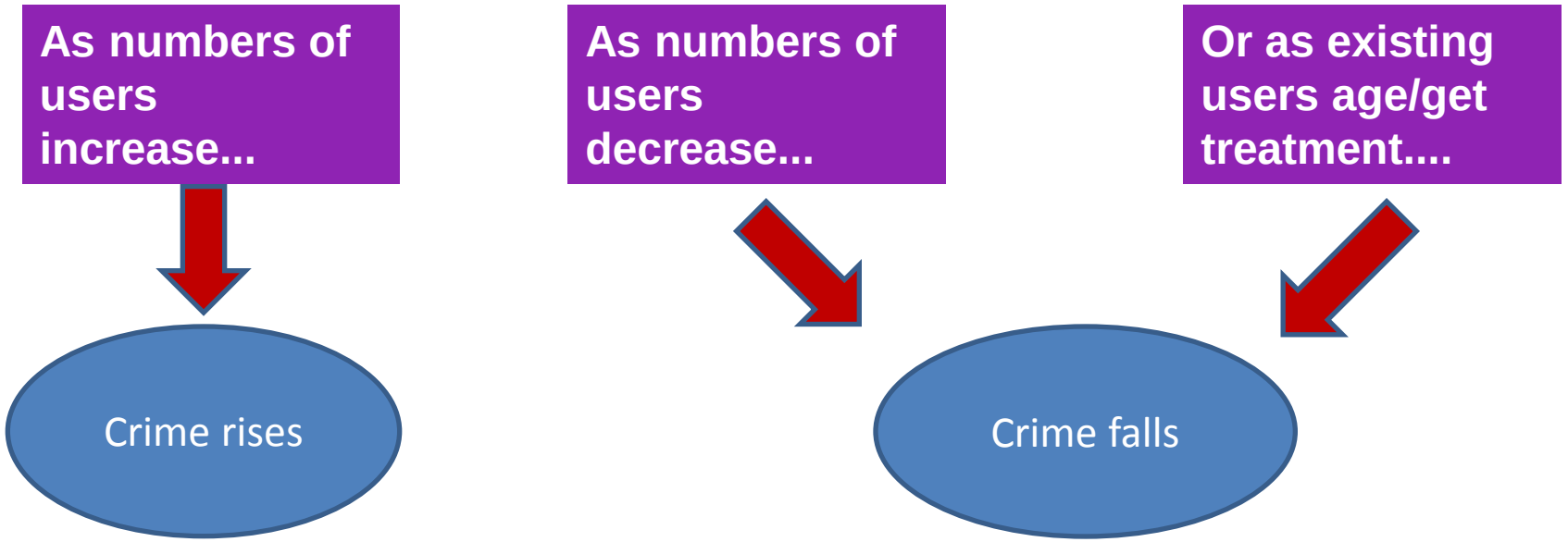


815/887 days

342/690 days

Source: Ball et al., (1983)

The model: basic hypothesis



Number of users over time X Average number of crimes

(accounting for other factors, e.g. treatment, and those issues below)

Issues

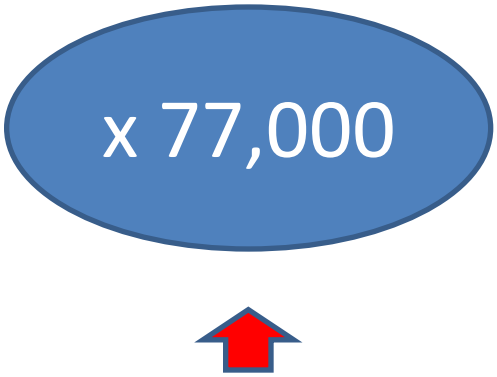
Counterfactual: how many crimes would these individuals have committed anyway? (used longitudinal evidence – slide 31)

Extrapolation: arrestee/treatment populations may not be representative

Modelling numbers of crimes

Arrestee survey: The self-reported offending of the sample of 1,699 weekly heroin/crack users is shown below. If sample is representative (which it was designed to be) around 77,000 of *all* arrestees would be heroin/crack users.

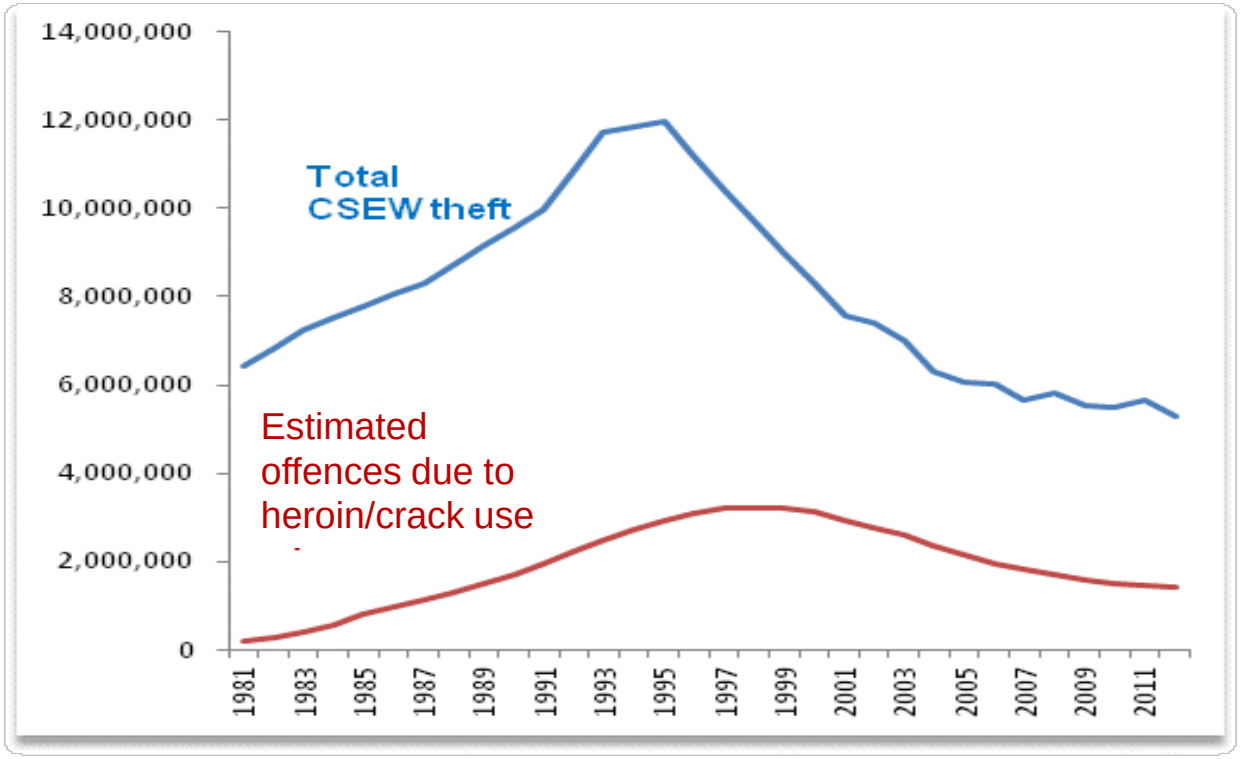
	Total offences	Offences per individual
Domestic Burglary	2,352	1.4
Commercial Burglary	4,396	2.6
Theft of Vehicle	2,662	1.6
Theft from Vehicle	5,931	3.5
Theft from Person	2,528	1.5
Robbery	719	0.4
Shoplifting	300,952	177.1
Other Theft	43,335	25.5
Violence	2,212	1.3
Criminal Damage	13,443	7.9
Total	**378,530**	**223**



So NOT extrapolating to total population..... (total heroin/crack population at this time = circa 300,000)

Source: Boreham et al., (2006)

Results



	Treatment approach	Arrestee Survey/OCJS approach
Estimated percentage of CSEW acquisitive crime rise explained (1981–95)	54.9%	77.0%
Estimated percentage of CSEW acquisitive crime fall explained (1995–2012)	28.9%	32.9%

Conclusions

1) We have data on numbers of heroin/crack users and the amount of crime they say they commit. If correct, then heroin/crack use has to be an important factor for overall crime trends (though diminishing...).

2)Local/international correlation provides further evidence. But clearly, other factors were involved too.

3) Heroin users are not homogenous and should not be treated as such.

4) Current cohort are mostly long-term users, who will have experienced most existing interventions/treatments.

Where we are now.....

A "PERFECTLY pleasant" but prolific shoplifter with 130 convictions to his name has been jailed for 34 weeks. The 43-year-old was under a drug rehabilitation order at the time in connection with a burglary offence in 2014. "He wants to be away from heroin" his lawyer said. (Plymouth Herald, 2015)

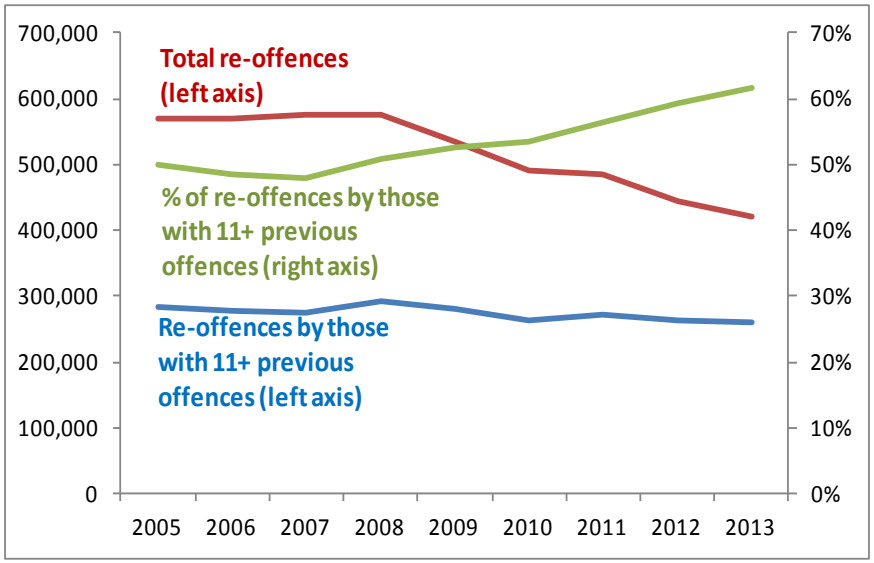
Long-term heroin addict jailed for continual shoplifting (The Northern Echo, Mar 2014)

Repeated shoplifter, 38 , with lifelong addiction to drugs and alcohol, is jailed for 77 days. (West Briton, Mar 2014)

A 40-year-old man in court for shoplifting with 67 previous offences … stole to fund a heroin habit (Daily Post, North Wales, Mar 2014)

- Though crime has fallen more than 30% since 2005, the re-offending rate has been largely flat over that period (down just 0.7 percentage points).

- Analysis suggests the main reason for this is that although fewer young people are becoming criminals, a recalcitrant group of prolific offenders (with 11+ previous cautions/convictions) continues to offend at a high rate.



Any questions?

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EXTRA SLIDES
(not part of presentation)

Part 3: Method 2 – crime-study results.

In a US study, a cohort of just 239 heroin users self-reported more than 80,000 crimes over the past year (Inciardi, 1983).

Over two-thirds of high-rate offenders in an arrestee sample reported using heroin/crack. This group was responsible for over half of all reported offences. (NEW-ADAM).

Analysis of UK survey data suggest OCUs commit about 200 crimes a year on average (Bryan et al., 2013).

A sample of just over 1000 drug treatment seekers admitted to more than 21,000 acquisitive crimes in the previous 3 months alone (NTORS).

But....

- *Minor* theft
- Skewed
- Offenders first, OCUs second.
- Other risk factors

The crime drop: England and Wales

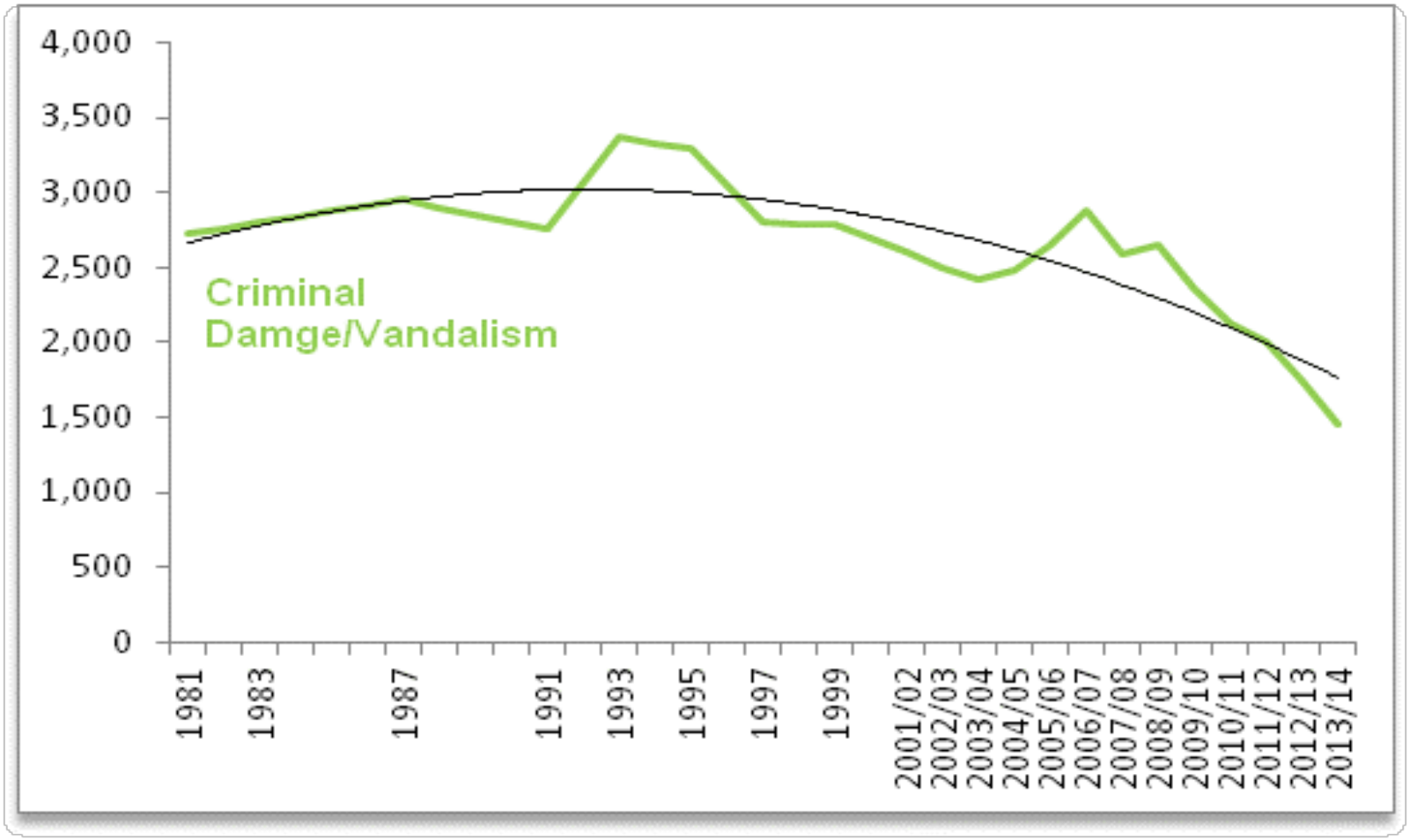
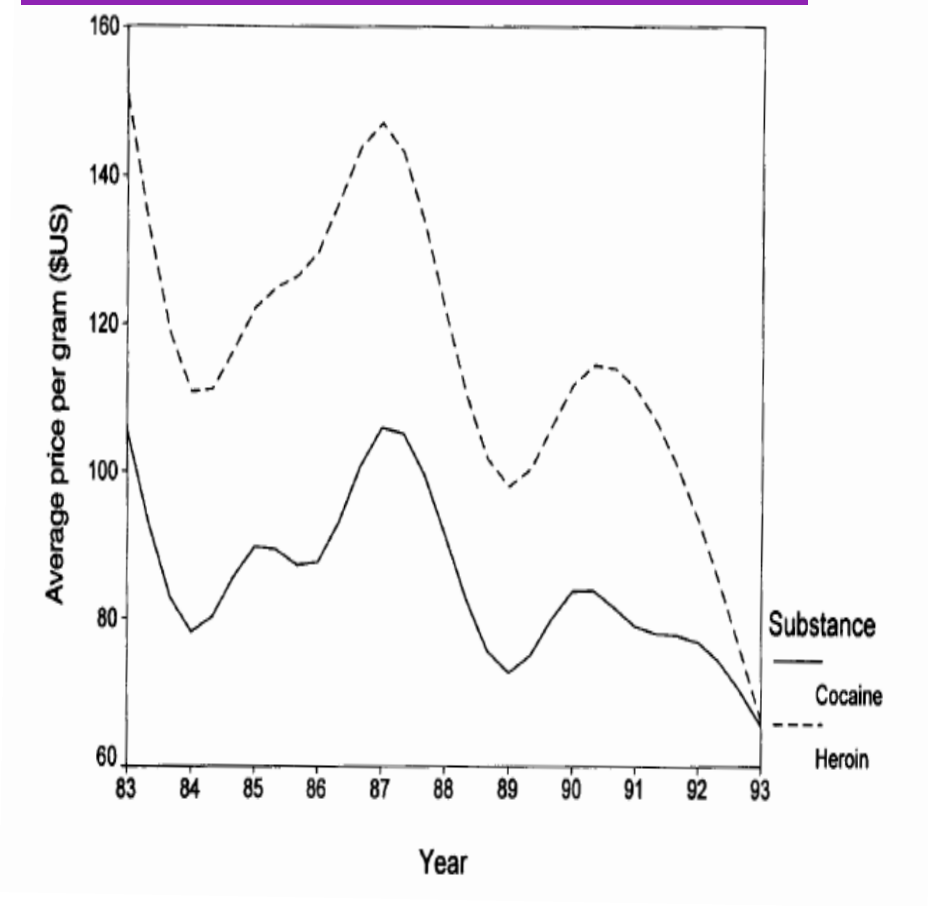


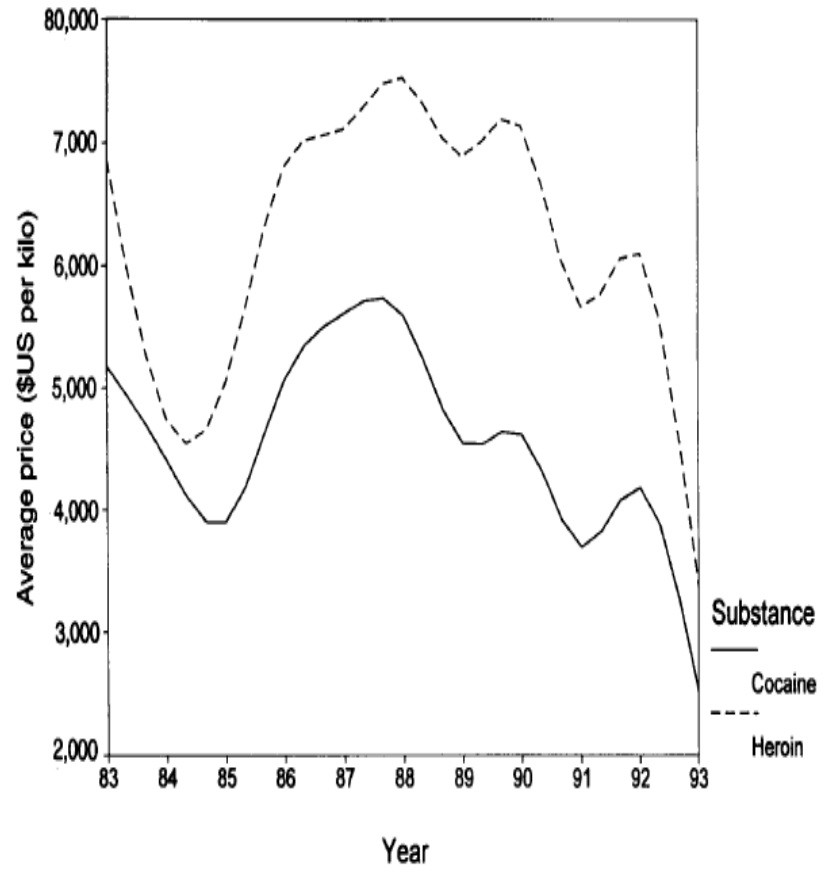
Chart shows CSEW incidents in 000s

The epidemic peak

Heroin/cocaine price estimates: street price



Heroin/cocaine price estimates: wholesale price



Vietnam

Just over one third of a random sample of 451 Vietnam veterans reported having used heroin whilst serving, 27% reported regular use and 20% said they were addicted. But a year after returning, only 1% of the same sample were addicted.

The heroin epidemic in England and Wales: driver of crime?

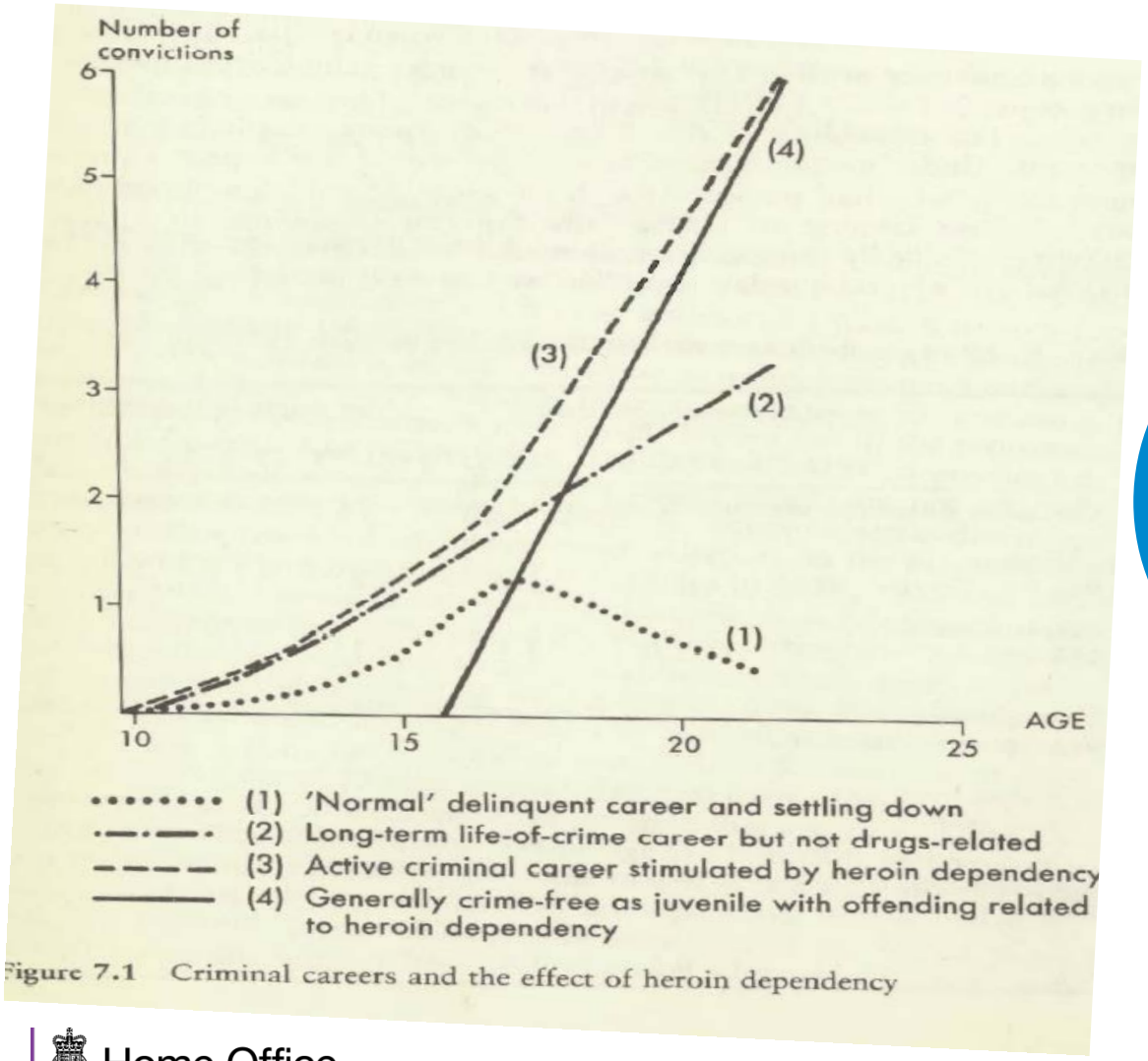
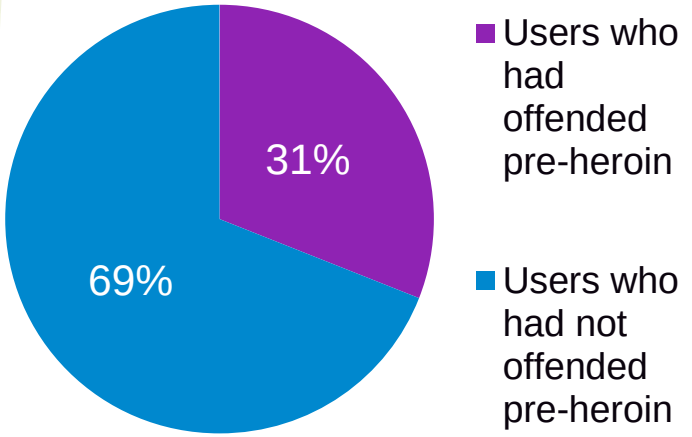
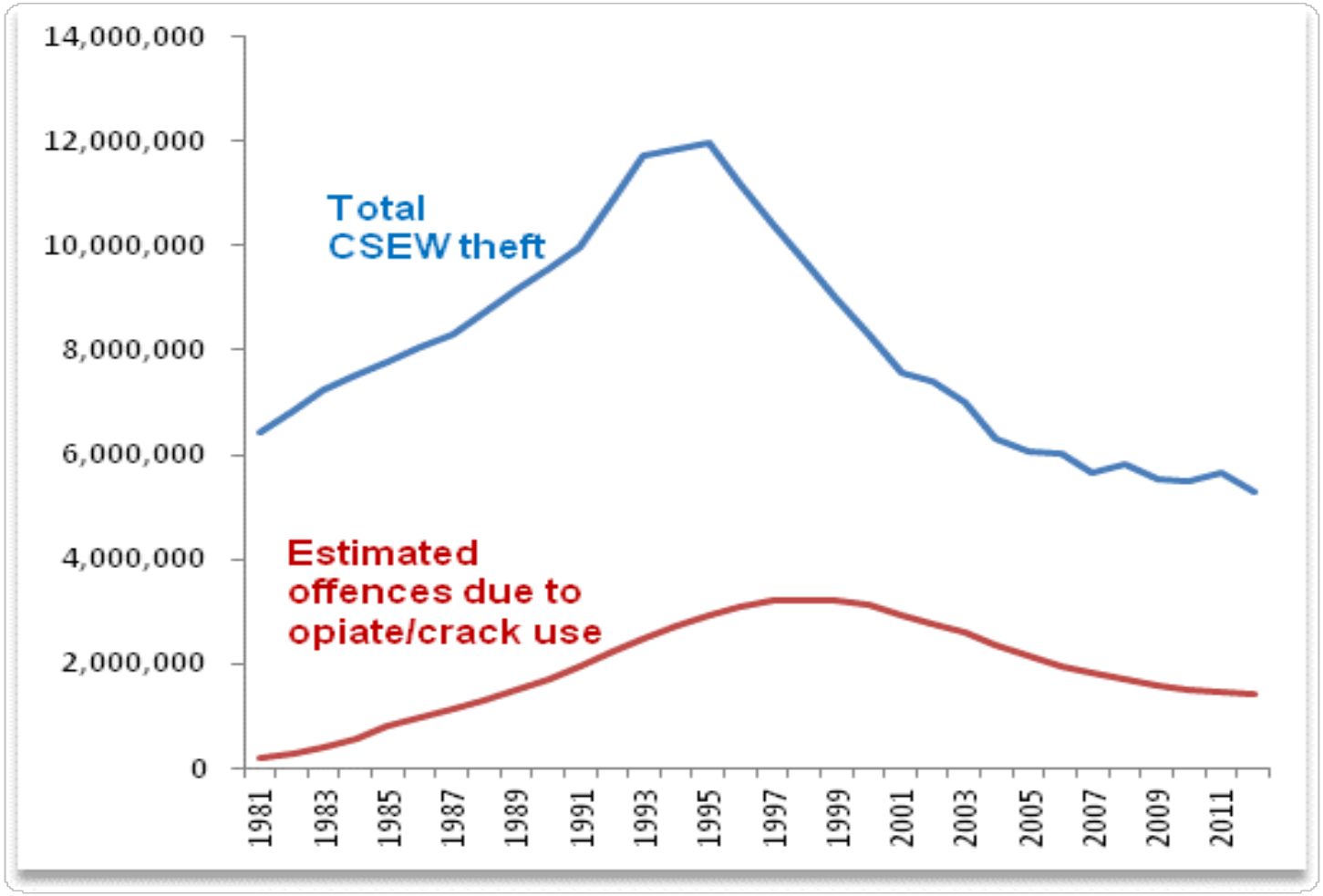
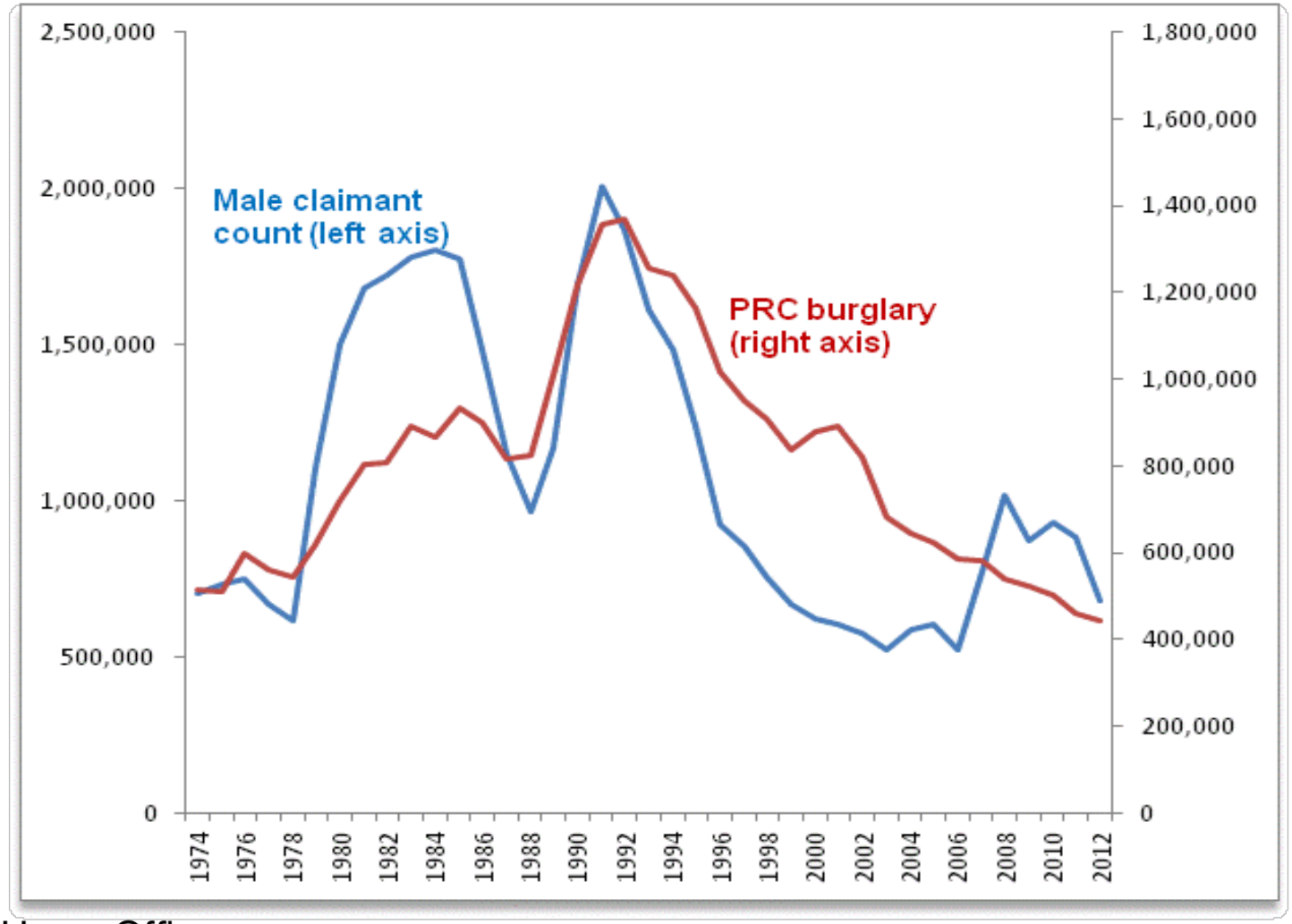


Figure 7.1 Criminal careers and the effect of heroin dependency



The model results



Crime drop theories: The Economy