

Over the past ten years, big rises in commodity prices led to a boom in metal crime in the UK, which was followed by a bust. Research by **Tom Kirchmaier, Stephen Machin, Matteo Sandi and Robert Witt** shows that a combination of policing and policy change played a key role in reducing metal theft.

In many historical episodes, the extent of criminal activity has displayed booms and busts. One very clear example is the case of metal crime, where in the face of big increases in value driven by world commodity prices, the incidence of metal thefts in the UK (and elsewhere) rose very sharply in the 2000s. Early in the current decade, metal thefts fell dramatically again.

Our research studies the roles of prices, policing and policy in explaining these crime dynamics. The evidence indicates that each played a significant part in shaping the boom and bust in metal crime. Its initial rapid rise into a crime boom was driven by big rises in commodity prices. The subsequent police intervention and a change in government policy explain the subsequent crime 'bust'.

Metal theft

Big increases in commodity prices, in particular in the prices of metals, occurred worldwide in the 2000s. This substantively increased metal values and, as a result, there was a spectacular increase in metal crimes in many places. But as with other (crime) booms, a bust followed, at least in the context of the UK: metal theft has fallen very rapidly since near the beginning of the current decade.

Figure 1 shows data from the British Transport Police, which record metal theft peaking twice in 2008, and then again in 2010 and 2011. It then fell following Operation Tornado, a police operation launched in 2012, and fell once more after the Scrap Metal Dealers Act of 2013.

Metal crime: the impact of prices, policing and policy

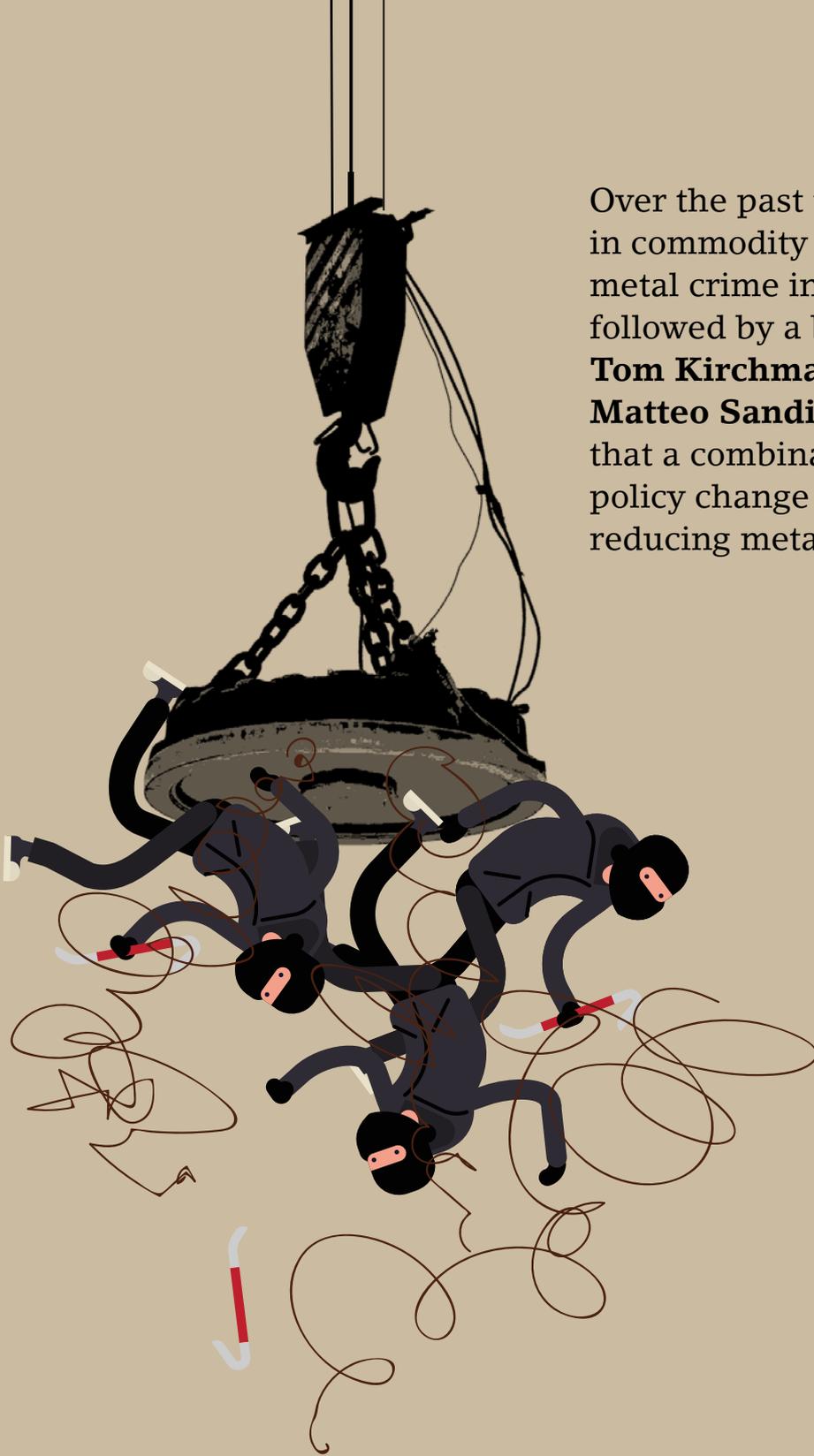


Figure 1:
Metal theft in England and Wales
 (data from the British Transport Police)

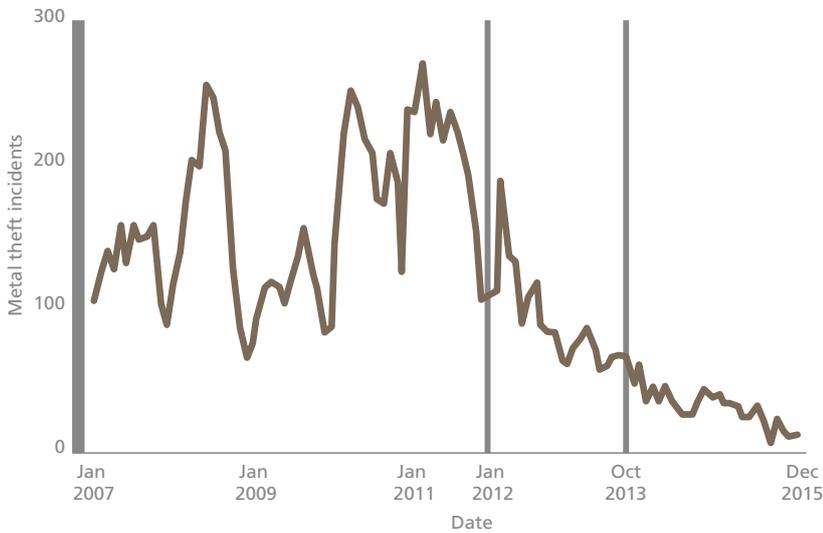


Figure 2 shows metal theft levels after empirically controlling for the impact of scrap metal prices. We show that before January 2012, the levels were essentially flat, which indicates that metal prices are strong drivers of metal crime, in line with the idea that changing economic returns shape crime.

But the rapid upward and downward trends are not only due to price changes. The second part of our study is motivated by the fact that by 2011, the scale of metal theft in the UK had reached unprecedented levels. As a response, the British Transport Police introduced an anti-metal crime policy: Operation Tornado

was trialled across the police forces of Northumbria, Durham and Cleveland in early 2012.

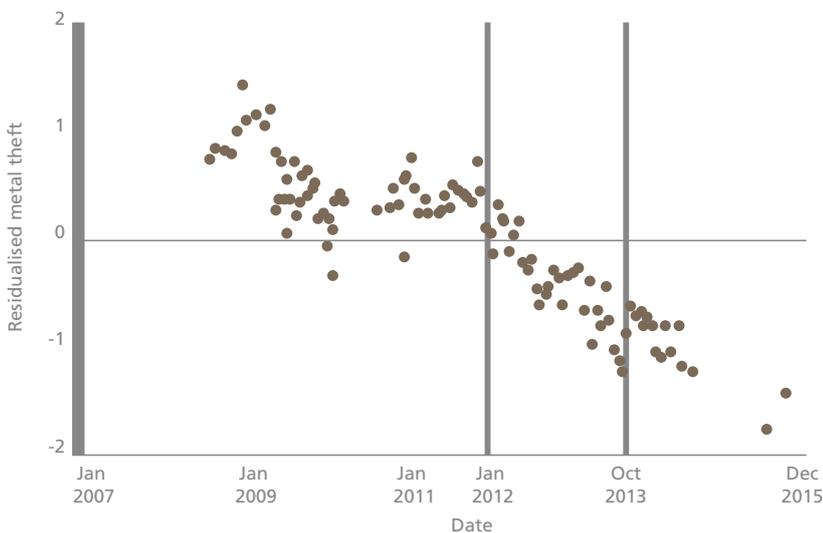
Our analysis documents that the policing response of the British Transport Police in 2012 reduced metal crime by an estimated 30% within a few months.

It also shows that the tougher regulatory system introduced by the Scrap Metal Dealers Act in 2013 hindered the economic activity of pre-existing scrap metal dealers, reflecting the reduced market size for potential metal criminals to sell what they have stolen.

We can show that both Operation Tornado and the Scrap Metal Dealers

Operation Tornado, the British Transport Police response to metal crime, was highly effective

Figure 2:
Metal theft, after controlling for scrap metal prices



The 2013 Scrap Metal Dealers Act made it more difficult for potential metal criminals to sell what they steal

Figure 3:
Metal crime: predicted and realised levels



Act – which forbade cash transactions and required the seller to provide formal identification – were indeed responsible for the strong reduction in metal theft by comparing the observed levels with our prediction of expected levels in the absence of both initiatives – see Figure 3.

Finally, we show that the turnover of scrap metal dealers in England and Wales fell by around 17% between 2014 and 2015. Turnover per employee of scrap metal dealers also fell by an estimated 15%, which suggests that the drop in turnover is not explained by disproportionate rates of dismissal of employees by the scrap metal dealers.

Most importantly, the EBITDA margin, as depicted in Figure 4, also fell considerably. This is likely to have been the result of the reduced scope for potential metal criminals to sell what they have stolen to scrap metal dealers, and by association reflects the diluted economic returns of metal crime under the new regime.

Conclusions

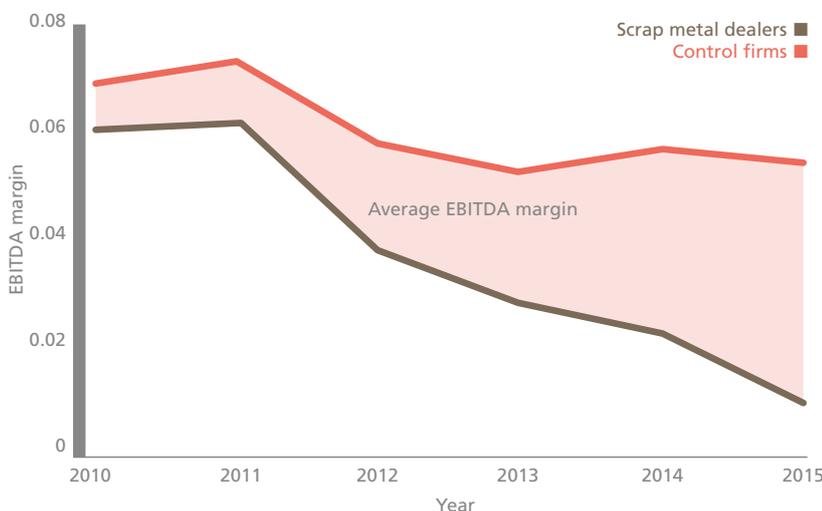
The pattern of UK metal crime over the past ten years is probably one of the more extreme cases of a crime boom and bust for which there is evidence. But the basic notion of crime dynamics embodied in the

boom and bust is a broader one that applies to other crimes.

Our study shows that while policing is clearly very important in reducing crime, it cannot solve all problems by itself. Some contributing factors are clearly outside the control of the police, including, in this case, the world market price for scrap metal. In addition, legislation is needed to suppress crime levels.

Metal prices are strong drivers of metal crime

Figure 4:
EBITDA margin of scrap metal dealers



This article summarises ‘Prices, Policing and Policy: The Dynamics of Crime Booms and Busts’ by Tom Kirchmaier, Stephen Machin, Matteo Sandi and Robert Witt, CEP Discussion Paper No. 1535 (<http://cep.lse.ac.uk/pubs/download/dp1535.pdf>).

Tom Kirchmaier of Copenhagen Business School is a visiting senior fellow in CEP’s community and labour markets programmes. **Stephen Machin** is director of CEP. **Matteo Sandi** is a research economist in CEP’s education and skills programme. **Robert Witt** of the University of Surrey is a research associate in CEP’s community programme.