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Occasional Paper

Organised Vehicle Theft in the UK

Trends and Challenges

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Occasional Paper

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Contents

Executive Summary

In the 20 years before 2013, the number of vehicle thefts in the UK declined. This trend has since reversed. Data from the UK Home Office indicates that incidences of vehicle theft have risen by 75% in the past decade. This increase – combined with the emergence of new, technologically enabled methods of stealing vehicles and the export of stolen vehicles to international markets – has led to speculation on the organisation and professionalisation of contemporary vehicle theft. Both law enforcement and the vehicle manufacturing industry are aware of these developments. However, little research has been carried out on the subject, particularly within a UK-specific context.

This paper is the first open access and contemporary analysis of typologies, trends and responses to vehicle theft in the UK. Its analysis of the evolving dynamics of vehicle theft and the markets that underpin it aims to inform policymakers, law enforcement and the private sector. The paper also explores claims of criminal convergence and provides novel typologies of vehicle theft and an overview of the obstacles that law enforcement and the private sector face.

The research findings depict a vehicle security ecosystem that has less resilience and fewer resources than before. Manufacturers are caught in an expensive 'arms race' in the face of rapid technological innovation by criminals, a problem exacerbated by legislative loopholes. The negative impacts of under-resourcing, de-prioritisation and cross-jurisdictional constraints on law enforcement create further problems.

The paper provides wide-ranging, cross-sectoral recommendations. These include promoting preventive action across sectors, pursuing alternative and innovative funding models for a national coordination architecture to counter vehicle theft, and urgently filling existing research and intelligence gaps. Each recommendation addresses existing weaknesses identified in the research. Taken together, they form the basis of a preventive, effective and sustainable response.

Introduction

Across the UK, since 2013–14, there has been a 75% rise in the number of domestic vehicle thefts, reaching 136,396 in 2022–23, reversing 20 years of decreases (with only a brief decrease during the Covid-19 pandemic).[1] According to the Home Office, there were 129,127 police-reported cases of 'unauthorised taking of a motor vehicle' in England and Wales in 2023–24, a slight decrease from 130,035 incidents in 2022–23.[2] Even accounting for the rise in the number of vehicles on the road over the same period, theft rates in the UK rose from 2.71 to 4.42 cases per 1,000 privately owned cars between 2014 and 2023.[3]

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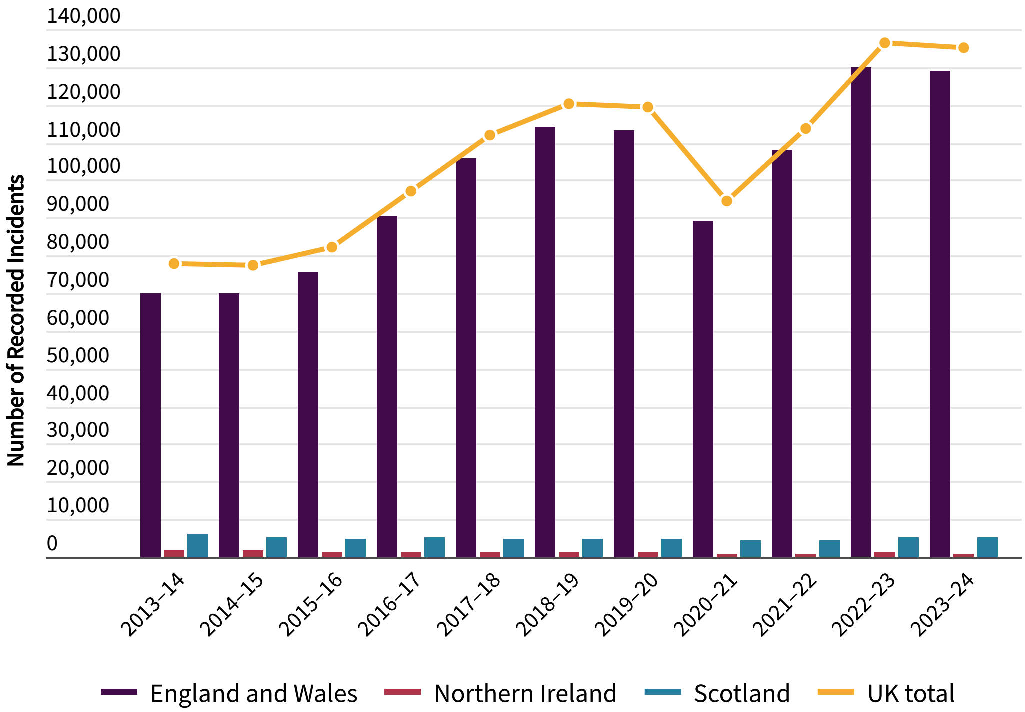
1. Trends in Scotland and Northern Ireland differ from those in England and Wales. In Scotland, vehicle theft rates have been steady at around 5,000 per year from 2015–16 (5,028 offences) to 2023–24 (5,090 offences). The only significant variation was a 15% drop in 2020–21, which coincided with Covid-19 pandemic-related decreases elsewhere in the UK. See Scottish Government, 'Recorded Crimes and Offences', <https://statistics.gov.scot/data/recorded-crime>, accessed 14 April 2025. In Northern Ireland, theft numbers have steadily fallen over roughly the same period, from 2,066 in 2011–12 to 995 in 2023–24, a decrease of more than 50%. See Police Service of Northern Ireland, 'Trends in Police Recorded Crime in Northern Ireland 1998/99 to 2023/24 Revised', 29 November 2024, <https://www.psni.police.uk/about-us/our-publications-and-reports/official-statistics/police-recorded-crime-statistics>, accessed 14 April 2025. The reasons for this variation within the UK are beyond the scope of this paper and would benefit from further research. One possible explanation, however, is the time delay in the diffusion of new theft technology from southeast England to those parts of the UK that are further from Europe and London. According to vehicle-crime experts based in Scotland, it can take up to 10 years for novel theft methods seen in London to reach Scotland, which may explain why theft rates are yet to significantly rise there; author interview with law enforcement official, online, 11 December 2024.
2. HM Government, 'Police Recorded Crime Open Data Police Force Area Tables, Year Ending March 2013 Onwards', last updated 30 January 2025, <https://www.gov.uk/government/statistics/police-recorded-crime-open-data-tables>, accessed 14 April 2025.
3. Department for Transport and Driver Vehicle Licensing Agency, 'Vehicle Licensing Statistics Data Tables: VEH0103: Licensed Vehicles at the End of the Year by Tax Class: Great Britain and United Kingdom', last updated September 2024, <https://www.gov.uk/government/statistical-data-sets/vehicle-licensing-statistics-data-tables>, accessed 14 April 2025; Office for National Statistics (ONS), 'Crime in England and Wales: Appendix Tables', 30 January 2025, <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/crimeinenglandandwalesappendixtables>, accessed 14 April 2025; Scottish Government, 'Recorded Crimes and Offences'; Police Service of Northern Ireland, 'Annual Trends in Police Recorded Crime 1998/99 to 2023/24'.

Figure 1: Vehicle Theft in the UK



Sources: Office for National Statistics, 'Crime in England and Wales: Appendix Tables', <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/crimeinenglandandwalesappendixtables>, accessed 14 April 2025; Scottish Government, 'Recorded Crimes and Offences', <https://statistics.gov.scot/data/recorded-crime>, accessed 14 April 2025; Police Service of Northern Ireland, 'Trends in Police Recorded Crime 1998/99 to 2023/24', <https://www.psni.police.uk/about-us/our-publications-and-reports/official-statistics/police-recorded-crime-statistics>, accessed 14 April 2025.

Amid the increase, law enforcement, manufacturers and victims have identified differences between theft in the 1990s and today. Vehicle theft was previously considered a crime dominated by unorganised and opportunistic criminals; today, it is more commonly associated with sophisticated keyless theft methods. Reports of vehicles stolen to order and exported via containerised shipping for distant markets also indicate that vehicle theft is not predominantly carried out by unorganised criminals and joyriders.

Significant economic and wider harms stem from this type of contemporary crime. These extend beyond the loss of the vehicle's value. For instance, thefts have contributed to an 82% rise in the cost of car insurance quotes since 2021,[4] compounded by increasing repair costs and vehicle prices, and wider economic pressures.[5] Dented consumer confidence and increased insurance costs, in turn,

4. ONS, 'Inflation and Price Indices', <https://www.ons.gov.uk/economy/inflationandpriceindices>, accessed 20 February 2025; Abbas Panjwani, 'The Rising Cost of UK Car Insurance', House of Commons Library, 13 August 2024.
5. Association of British Insurers, 'Trends Impacting Motor Insurance Premiums', 23 February 2024, <https://www.abi.org.uk/products-and-issues/choosing-the-right-insurance/motor-insurance/insurance-

have a negative impact on manufacturers and the market at large. Home Office figures published in 2018 stated that theft of individual or private passenger vehicles costs the UK £700 million, while the theft of commercial vehicles costs the UK £300 million.[6] Adjusted for inflation and increases in thefts, the total economic and social cost of vehicle theft to the UK in 2023–24 is estimated to be at least £1.77 billion.[7] This is a conservative, lower-bound figure, predicated on the average 'individual vehicle cost' (£13,603) rather than the average 'commercial vehicle cost' (£45,927). Furthermore, it is likely that the cost of crime has increased above annual inflation.

Despite the significant negative social and economic consequences, little is known about the novel or changed dynamics of the evolving threat and the cross-sector response. This paper seeks to centralise knowledge on contemporary vehicle theft in the UK and on obstacles to an effective response. This paper has three chapters. Chapter I discusses today's vehicle crime threat landscape and wider domestic and international patterns in organised vehicle theft. Chapter II evaluates responses to the rise in thefts, discussing challenges of enforcement and vehicle security. The final chapter provides conclusions and key recommendations designed for UK policymakers, various levels of law enforcement and the private sector.

Methodology

Researchers conducted a literature review of sources pertaining to vehicle crime in the UK. The literature review examined English-language academic journals, government reports, journalistic articles and other grey literature. This process was complemented by semi-structured interviews with established UK and European experts. From the initial round of interviews, the research team employed snowball sampling to identify further experts across relevant sectors. A total of 34 experts were interviewed spanning various UK police forces, national enforcement agencies, vehicle recovery specialists, engineers and technical specialists, vehicle insurance and finance experts, and vehicle manufacturers. Interviews were conducted between September 2024 and February 2025.

All non-interview data collected and analysed by researchers was open source. As such, the research team faced certain limitations, such as access to non-public

pricing-faqs/trends-impacting-cost-of-insurance/>, accessed 14 April 2025; Panjwani, 'The Rising Cost of UK Car Insurance'.

6. Matthew Heeks et al., *The Economic and Social Costs of Crime,* 2nd edition, Research Report 99 (London: The Stationery Office, 2018).
7. Due to unavailability of public data, the share of commercial vehicles stolen in the total theft figures is unknown. Therefore, researchers were unable to estimate the total social and economic cost using the commercial figures, and used only the non-commercial, individual figures to produce a baseline, conservative estimate.

disaggregated vehicle theft data on makes and models, individual vehicle values and the share of non-commercial theft – the focus of this paper – and of commercial-use vehicles.

The findings of the in-depth literature review and expert interviews were discussed with the UK's leading experts on vehicle crime at a RUSI expert roundtable, held on 5 February 2025. A total of 30 academics, practitioners, civil society and private sector representatives convened at RUSI in London and online to validate and supplement the research.

I. Contemporary Vehicle Theft in the UK

This chapter discusses the novel and dynamic trends in vehicle theft in the UK. Drawn from open sources, public data and interviews, this chapter identifies prominent threats, shifting organised crime actors and drivers of criminality, and proposes typologies representative of the contemporary vehicle crime threat in the UK.

Adaptive and Evolving Criminal Dynamics

A resurgence of vehicle crime in the UK started in 2013–14, ushering in the most significant period of increase since the 1990s. Amid the upturn, speculation on developments in the professionalisation of vehicle thefts has grown, although organised vehicle theft in the UK is not a new phenomenon, and old methods have not been wholly replaced. Research on vehicle thieves in 1993 found only 47% of UK offenders stole vehicles for personal financial gain, indicating significant numbers of joyriders and thrill-seekers.[8] By contrast, the current landscape depicts a crime increasingly driven and committed by organised crime groups (OCGs) for profit.[9]

Today, vehicle theft experts unanimously agree that the nature of the crime has changed.[10] In an increasingly technologically enabled landscape and international market, many OCGs involved in vehicle theft display a high degree of adaptability, exploiting technological vulnerabilities, introducing their own innovations and capitalising on globalised markets and online resale platforms. The contemporary threat landscape, therefore, is characterised by an increasingly dynamic, flexible and swift network of offenders capable of accessing, masking and selling stolen goods with limited resistance. In this way, vehicle theft mirrors wider serious

8. Roy Light, Claire Nee and Helen Ingham, *Car Theft: The Offender's Perspective*, Home Office Research Study No. 130 (London: The Stationery Office, 1993).
9. The Serious Crime Act 2015 defines an organised criminal group as three or more individuals in the commission of a crime, belonging to a group participating or supporting criminal acts with a 'view to obtaining any gain or benefit'.
10. Participants' remarks at RUSI expert roundtable, London, 5 February 2025.

and organised crime (SOC) developments driven by globalisation and the growth of technology and online spaces.[11]

The sophistication and versatility of contemporary vehicle theft is perhaps best evidenced by the emergence of vehicle theft technologies. During the period of record-high thefts in the 1990s, thefts were predominantly perpetrated by breaking into poorly secured vehicles and 'hot wiring': starting a vehicle without a key by accessing the ignition switch. Subsequently, in response to protective measures rolled out by manufacturers and the rise of keyless vehicles, criminals developed the 'relay attack': by 'relaying' or amplifying the signal of a victim's key fob, located within, for example, the owner's home, thieves could trick vehicles into believing the fob was nearby – enabling entry to and operation of the vehicle.

Manufacturers developed countermeasures. In response, certain innovations in vehicle theft – with 'phenomenal capability' – emerged more swiftly than anticipated.[12] Although prices vary, devices targeting higher-end vehicles can sell for more than £20,000, indicating a significant investment by well-resourced OCGs.[13] Notable advancements in the threat method include 'CAN bus' injection attacks,[14] using technically complex means to gain access to an electronic control unit (ECU), and ultimately the engine – all from a device masked as a 'JBL' speaker.[15] According to industry and technical experts, the rapid rate of criminal innovation indicates a significant level of R&D investment.

There are signs that even the device market for vehicle theft is rapidly adapting amid high criminal demand. Bespoke devices previously sold for tens of thousands of pounds. Now, advances in technology have brought down prices and increased availability – with even 'Chinese knockoffs' beginning to appear on the market.[16] Although the technology is sophisticated, a variety of easy-to-access online videos have partially democratised its use, facilitating a wider range of would-be thieves and OCGs.[17]

11. National Crime Agency, 'National Strategic Assessment 2024 of Serious and Organised Crime: Overview of SOC', 18 February 2025, <https://www.nationalcrimeagency.gov.uk/images/campaign/NSA/2024/NSA_2024_Website_-_PDF_Version_1.pdf>, accessed 11 April 2025.
12. Author interview with technical expert, UK, 2 October 2024.
13. Author interview with technical expert, online, 25 October 2024.
14. A 'CAN bus' refers to a vehicle's controller area network, an internal communications network that connects the electronic control units (ECUs) within a vehicle. Criminals gain access to a CAN bus through an exposed ECU, such as the headlights, and connect a CAN injector device that sends messages on the network pretending to be from the smart key receiver, deactivating the immobiliser.
15. Ken Tindell, 'CAN Injection: Keyless Car Theft', Canis Automative Labs CTO blog, 3 April 2023, <https://kentindell.github.io/2023/04/03/can-injection/>, accessed 19 February 2025.
16. Author interviews with law enforcement, UK, 15 February 2025.
17. Author interviews with technical experts, online, 24 and 30 October 2024.

Reports of groups carrying ‘shopping lists’ of specific makes and models and the existence of vehicle-specific theft technology indicate a ‘stolen-to-order’ OCG operation.[18] These tech-enabled thefts, however, are not the sole method: they largely represent theft of higher-value vehicles. More broadly, OCGs have engaged in identity and document fraud, securing leases or loans on desired vehicles, only to alter their identities and resell them domestically or abroad.[19] And while OCGs have developed sophisticated theft tools, ‘conventional’ means of vehicle theft persist, including stealing unlocked cars or car key burglary.

The trend towards sophistication affects more than just how vehicles are stolen. Increasingly, the speed at which vehicles can be taken, their identities masked or changed and subsequently sold – whether as a whole or in parts – speaks to a more streamlined criminal landscape. In the words of a police vehicle crime lead, ‘a vehicle [can be] stolen in one county, [and] the vehicle can be in another county – with cloned plates – before anyone has been able to report the vehicle as stolen’.[20] The fast-paced landscape has also developed a more prominent international dimension: since the pandemic, an increasing number of vehicles – stolen through fraudulent, high-tech or conventional means – are probably being speedily shipped overseas.

At the Port of Dover – where ferries to continental Europe run every 30 minutes – vehicles can be loaded up before victims, lenders or the police are able to react.[21] Although some vehicles are left to ‘cool off’ before export – a deliberate process that criminals use to assess whether stolen vehicles are being tracked – others are stolen, loaded and out of the UK within a day.[22] A comprehensive review of export trends for stolen vehicles has not taken place in the UK. However, analysis of organised vehicle theft across six EU countries identified a ‘comprehensive logistical process’ through which stolen vehicles were sent to destination markets.[23] UK-based experts from law enforcement, manufacturers and recovery specialists confirmed this finding, noting a marked increase in stolen vehicles being tracked to destinations such as Cyprus, the UAE and the Democratic Republic of the Congo (DRC). Experts also expressed concerns that port security remains problematic, characterised by a disproportionate focus

18. Author interview with law enforcement official, online, 19 November 2024; author interview with law enforcement officials, UK, 13 February 2025.
19. 2KBW Chambers, ‘Operation KIJANG – Industry Partners Debrief’, 14 March 2024, <https://2kbw.com/operation-kijang-industry-partners-debrief/>, accessed 19 February 2025; author interview with law enforcement official, online, 17 February 2025.
20. Josie Hannett, Alex Bish and Jonathan Fagg, ‘“In 60 Seconds the Car Was Started and Stolen”’, *BBC News,* 23 August 2024.
21. Author interview with law enforcement official, online, 17 February 2025.
22. *Ibid.*; author interview with technical expert, online, 1 November 2024.
23. Atanas Rusev et al., ‘Organised Vehicle Crime in Europe’, Center for the Study of Democracy, 2023.

on imports and an inability to forensically examine exported vehicles and their parts.[24]

The online domain plays an equally significant role, both domestically and internationally. Vehicle thieves in the 1990s recounted stealing certain models for orders that were placed interpersonally or through an intermediary.[25] Now, online marketplaces have accelerated these transactions, with greater, direct reach to potential buyers. Unlike other illicit commodities (which are immediately identifiable as such), vehicles and their parts are not inherently illegal. Therefore, they can largely circulate freely on online marketplaces and be sold without substantial oversight or threat of sanction.[26]

Organised Vehicle Crime Groups

Various types of observed OCGs are driving vehicle crime in the UK and internationally. The offenders and accompanying operations vary by group, with four common typologies emerging from publicly available data and interviews with law enforcement and experts (Table 1).

Table 1: Typology of OCGs for Vehicle Crime

Typology	Description
Organised Fraud and Online Resale	• An OCG uses fraudulent identities to secure leases or financing for vehicles. Paying only the minimum down-payment required, the buyers become the legal owners/lessors of the vehicle, having signed a lease or financing agreement under a false or stolen identity. These groups typically prepare all fraudulent documentation in advance, which enables swift masking of the vehicle. In removing vehicle-identifying information and swapping registration plates, the groups can avoid suspicion or detection from automatic number plate recognition technology. • The OCG then ‘clones’ the vehicle, requesting replacement documentation from the Driver and Vehicle Licensing Agency (DVLA) predicated on copied information for a similar vehicle to that which was stolen. With the registration plates and other requisite information obtained from the DVLA, the vehicles are sold online via vehicle-specific or general online marketplaces to unsuspecting buyers.

24. Participants’ remarks at RUSI expert roundtable, London, 5 February 2025.
25. Light, Nee and Ingham, *Car Theft*.
26. Author interview with enforcement official, online, 11 February 2025; author interview with enforcement officials, online, 15 February 2025; author interview with enforcement official, online, 17 February 2025.

Typology	Description
Street-to-Chop Shop Horizontal Organisation	• Local 'street level' OCGs seize unlocked or less secure vehicles, committing thefts more opportunistically. Stolen vehicles are brought to 'chop shops',[27] often equipped with signal jammers to prevent tracking, where they are stripped of valuable parts. The chop shop is operated by a distinct, more specialised OCG. This OCG is further served by multiple local OCGs providing 'crime-as-a-service' where they are paid per vehicle and play no further role in the vehicle alteration or resale process. • The OCG operating the chop shop will take desirable parts to be resold direct to consumers online, or to complicit or unwitting businesses, or to be used to repair or upgrade vehicles at below market rate. Chop shops can be permanent business sites or temporarily rented garages and storage units. Less valuable parts of the vehicle may be sold for scrap metal or discarded and recovered by police, even if the vehicle is damaged beyond repair. Parts may be sold internationally.
End-to-End Vertically Integrated OCGs	• A single OCG controls each step of the supply chain, from theft to sale or export. These OCGs organise the theft of vehicles directly, employing specific thieves to obtain desired vehicles. Vehicles are subsequently passed along the chain and delivered to the OCG's facilitators or mechanics, who often operate a chop shop or front business. • Domestically, the OCGs resell parts of or entire vehicles to criminal or unsuspecting individuals or businesses. Internationally, the OCGs deliver the vehicles to their associates in another country, often in Eastern Europe, for resale. • These groups are most commonly associated with 'legacy' or longstanding vehicle theft rings operating in the UK and Europe. They are highly integrated groups often organised around family, ethnicity or nationality. Newer, integrated groups are usually closely geographically linked in towns or neighbourhoods.
Network-Based Theft for International Markets	• An OCG specialising in the thefts of specific, high-value vehicles. Groups are probably equipped with high-tech theft devices specific to the makes and models requested by 'fences' (handlers of stolen goods) or intermediaries, which may also include chop shops or seemingly licit businesses. Vehicles are stolen and transported to loading sites. The OCG receives a payment per vehicle, in line with its value. • Another OCG specialising in export and transport (potentially a shipping agent) sources desired vehicles from across multiple police force areas. Vehicles are loaded into shipping containers for export to destination markets using diverse methods, either falsely declaring the contents of the container or providing false vehicle registration and chassis numbers in the standard shipping note created for export. • The OCG maintains contact with wholesale/individual consignees or OCGs in destination markets, delivering stolen 'ordered' vehicles.

Source: Author interviews with law enforcement, various locations across the UK, September 2024 and February 2025.

These four examples demonstrate variation among OCGs. The typologies illustrate that 'organisation' within the criminal landscape refers to more than vertical integration within a single organisation. In some cases, 'organisation' refers to the ability of groups to coordinate their activity themselves – ranging from street-level groups to domestic and international facilitators – rather than operating strictly within a unified structure. None of the above typologies or actors are mutually exclusive. Rather, they are fluid and dynamic, evolving to suit access, opportunity and demand. Critically absent from typologies, and

27. Locations where stolen vehicles are disassembled.

urgently requiring further research, is information on the brokers, intermediaries or OCG leaders orchestrating the trade at the highest level.[28]

Likewise, there is little understanding of how vehicle theft may intersect with and rely on other forms of criminality, and to what extent vehicle theft may form part of the wider criminal portfolios of OCGs. Longstanding OCGs that have been previously identified by law enforcement as specialised in vehicle theft have been reluctant to engage in other crime types.[29] As vehicle theft presents a low-risk, high-reward venture, there is little incentive for vehicle crime-specific OCGs to engage in higher-risk activities. However, the low-risk, high-value nature of the crime type may incentivise wider OCG involvement to diversify their criminal portfolios.

For instance, OCGs' use of sophisticated technology, combined with the increasing digitisation of vehicle registration systems, creates avenues for organised identity and insurance fraud. OCGs have used false identification documents to obtain finance agreements worth millions of pounds for high-value vehicles, before altering, reselling or shipping them overseas.[30] The OCGs engaged in organised vehicle-linked fraud demonstrate awareness of the market. Groups deliberately make fraudulent claims for amounts that are below thresholds that trigger more in-depth checks, and subsequently identify smaller financial service providers without capacity to perform enhanced due diligence.[31] Furthermore, identity theft is of growing concern.[32] Potentially sourced from illicit or dark-web data brokers, a victim's information can be used to fraudulently secure financing, for chop shop rentals or to register a vehicle.

The illicit financial flows (IFFs) driving organised vehicle crime also create supplemental avenues for money laundering. In addition to the laundering of illicit proceeds of sale, vehicles themselves – owing to their liquidity and high value – are ideal conduits for the concealment of ill-gotten gains. Officials explicitly noted the use of vehicles as currency, to transact or settle outstanding debts.[33]

Common tropes, including links to forced labour in chop shops, the exploitation of minors to steal vehicles, and overlaps with county lines (criminal networks

28. Participants' remarks at RUSI expert roundtable, London, 5 February 2025.
29. Author interview with law enforcement representatives, London, 13 February 2025.
30. *BBC News*, 'Stolen Luxury Cars Found in Thailand Return to UK', 31 October 2024; 2KBW, 'Operation KIJANG'; National Vehicle Crime Intelligence Service (NaVCIS), 'NaVCIS Assist Hertfordshire Police in £2 Million Car Finance Fraud Investigation', 24 April 2024, <https://navcis.police.uk/navcis-assist-hertfordshire-police-in-2-million-car-finance-fraud-investigation/>, accessed 21 February 2025.
31. Author interview with industry expert, online, 29 October 2024.
32. Author interview with law enforcement official, UK, 17 February 2025.
33. Participants' remarks at RUSI expert roundtable, London, 5 February 2025.

connecting urban centres and rural areas) have yet to be widely substantiated.[34] Nevertheless, enforcement officials repeatedly attribute this lack of evidence to an absence of investigations, rather than a shortage of 'polycriminal' activity. The prevailing view among experts speaks to the need for further enquiry.[35]

Growth and Internationalisation of Theft Markets

The sophistication of vehicle thefts in the UK cannot be understood separately from the demand for stolen vehicles and parts. Illicit trade responds to market gaps, both domestically and abroad.

Over the past decade, vehicles and their parts have become significantly more complex and expensive. The cost of a new vehicle grew approximately 90% from 2014 to 2024, driven by new features and modern systems.[36] Moreover, incident claims and repairs for increasingly popular electric vehicles were approximately 25.5% more expensive than for traditional internal combustion engine vehicles.[37]

Since 2020, the stolen second-hand vehicle and parts market in the UK has also benefited from external shocks, chiefly the Covid-19 pandemic. The pandemic disrupted UK supply chains, reducing available parts for manufacturing and repairs.[38] Price distortions probably compounded these impacts. Such distortions were caused by fears of tariffs and bureaucratic delays that were themselves spawned by the UK's departure from the EU's single market.[39] Cumulatively, these events precipitated a temporary, dramatic reduction in the availability of parts and second-hand vehicles, thereby increasing their value.[40] In other organised acquisitive crimes such as metal and copper theft, the interrupted

34. National Police Chiefs' Council (NPCC), '316 Stolen Vehicles Recovered in Intensification Week', press release, 25 September 2024, <https://news.npcc.police.uk/releases/316-stolen-vehicles-recovered-in-vehicle-crime-intensification-week>, accessed 19 February 2025.
35. Participants' remarks at RUSI expert roundtable, London, 5 February 2025.
36. LeaseCar, 'Inflation on the Road – How Has Cost Ownership Changed in the Last Decade?', 21 October 2024, <https://leasecar.uk/blog/inflation-on-the-road/>, accessed 20 March 2025.
37. Thatcham Research, 'Report Highlights Risks to Battery Electric Vehicle Adoption', 5 July 2023, <https://www.thatcham.org/report-highlights-risks-to-battery-electric-vehicle-adoption-if-repair-and-insurance-sector-concerns-are-not-addressed/>, accessed 14 April 2025.
38. Zhitao Xu et al., 'Impacts of Covid-19 on Global Supply Chains: Facts and Perspectives', *IEEE Engineering Management Review* (Vol. 48, No. 3, August 2020), pp. 153–66.
39. *Car Dealer Magazine*, 'Investigation: How Brexit Has Led to a Parts Crisis for Independent Garages in the UK', 5 April 2021, <https://cardealermagazine.co.uk/publish/investigation-how-brexit-has-led-to-a-parts-crisis-for-independent-garages-in-the-uk/220502>, accessed 14 April 2025; Peter Campbell and Michael Pooler, 'Brexit Triggers a Great Car Parts Race for UK Auto Industry', *Financial Times*, 30 July 2017.
40. *ITV News*, 'Priced Out?: The Rising Costs of Your Car', 4 April 2024.

supply led to increases in their value and thefts.[41] It is important to note the lagged effect observed in shortages and pricing, particularly in the context of Covid-19. Amid lockdowns and stay-at-home orders, burglaries and acquisitive crimes fell significantly – vehicle thefts included.[42] However, the lagged effect of the price distortions, in addition to existing price pressures, culminated in high prices and low availability.

OCGs seized these opportunities, stealing vehicles and capitalising on high returns with relatively low risk, including taking advantage of online marketplaces, as there is a growing body of evidence on the sale of stolen vehicles and parts on the dark web. In fact, stolen parts also circulate in significant volume in seemingly licit marketplaces.[43] Recent investigations demonstrated sales in plain view, often on platforms such as eBay, where malign actors can resell stolen parts at or below market value without need for bespoke verifications.[44] From these platforms, vehicle parts can be sold to complicit or unwitting businesses, effectively laundering stolen components to be resold for vehicle repairs, rebuilds, resales or upgrades.[45] These repairs can be dangerous, as stolen parts may be fitted to vehicles that have been written off and are unsafe to drive.[46] The ability to profit from disrupted or cost-prohibitive supply, combined with minimal risk of sanction, encourages OCG involvement and stimulates criminal R&D into novel theft methods. In turn, this undercuts legitimate businesses, which may be unable to compete on price with stolen goods re-entering the market, thus further entrenching criminal enterprises.[47] Exact figures or estimates of the penetration of ill-gotten parts and vehicles into the aftermarket

41. Aiden Sidebottom et al., 'Theft in Price-Volatile Markets: On the Relationship Between Copper Price and Copper Theft', *Journal of Research in Crime and Delinquency* (Vol. 48, No. 3, February 2011), pp. 396–418.
42. Tom Kirchmaier and Carmen Villa-Llera, 'Covid-19 and Changing Crime Trends in England and Wales', Covid-19 Analysis Series No. 13, Centre for Economic Performance, 17 December 2020, <https://cep.lse.ac.uk/_new/publications/abstract.asp?index=7660>, accessed 14 April 2025.
43. Author interview with representative of law enforcement, online, 11 February 2024; Europol, *EU Serious and Organised Crime Threat Assessment (SOCTA) 2021* (Luxembourg: Publications Office of the European Union, 2021), p. 87; James Mutch, 'Gang Took Apart Stolen Cars in Radcliffe Chop Shop and Listed £125,000 Worth of Parts on eBay', *Bury Times*, 30 March 2022, <https://www.burytimes.co.uk/news/20031337.gang-took-apart-stolen-cars-radcliffe-chop-shop-listed-125-000-worth-parts-ebay/>, accessed 14 April 2025.
44. Mutch, 'Gang Took Apart Stolen Cars in Radcliffe Chop Shop and Listed £125,000 Worth of Parts on eBay'; Neil Keeling, 'The Undercover eBay Sting that Led to Police Smashing Open £240k "Chop Shop" Hidden in Mill', *Manchester Evening News,* 10 February 2021, <https://www.manchestereveningnews.co.uk/news/greater-manchester-news/undercover-ebay-sting-led-police-19802910>, accessed 14 April 2025; author interview with law enforcement representative, online, 11 February 2024.
45. Europol, *EU Serious and Organised Crime Threat Assessment (SOCTA) 2021*, p. 87.
46. Mike Ruff, 'Pair Jailed for "Superficially" Repairing BMWs with Stolen Parts Before Selling on eBay', *Garage Wire,* 5 April 2019, <https://garagewire.co.uk/news/pair-jailed-for-superficially-repairing-bmws-with-stolen-parts-before-selling-on-ebay/>, accessed 14 April 2025; author interview with industry expert, UK, 2 October 2024.
47. Rusev et al., 'Organised Vehicle Crime in Europe'.

industry do not exist, as publicly available, industry-wide or targeted audits have not been conducted.

Beyond the domestic market, law enforcement and manufacturers have noted the growth in criminal exports of vehicles and their constituent parts – particularly since the pandemic.[48] Notwithstanding this, the transnational dimension of vehicle crime is not novel. Early typologies include the eastward flow of vehicles stolen from Western Europe immediately following the collapse of the Soviet Union. Criminal organisations seized on the high demand and low supply in post-Soviet markets.[49] Over three decades later, shipments bound for Central Asia, the Middle East and West and Central Africa indicate that organised vehicle criminals are benefiting from similar dynamics at scale. Like the UK, developing and underserved markets have faced the quandary of disruptive supply shocks, increasing product prices and persistent demand. In fact, the values of and demand for such products are higher in non-UK and European markets.[50] In countries and regions that are already underserved by traditional manufacturers and supply chains, both for parts and vehicles, the illicit market has filled the gap.

Local distribution and availability of new and second-hand parts is scarce across almost all high-theft destination countries for UK and European stolen vehicles. As such, transnationally operating OCGs seize on the relatively higher prices in destination markets.[51] In sating domestic and international demand at scale, the OCGs behave like organised criminal businesses,[52] reacting to demand in an otherwise licit market – although little remains known of the decision-makers and exact operating structures of the OCGs involved in vehicle theft.

Some of the most prominent destination countries mentioned by industry experts and law enforcement officials were the DRC in Central Africa, Georgia in the Caucasus and the UAE in the Middle East. In the cases of Georgia, Cyprus and the UAE – increasingly prominent destinations for high-value vehicles from the UK – it is believed such deliveries serve both local and regional demand. Vehicles often arrive at second-hand dealerships or scrapyards where they are sold into other Middle Eastern and North African countries, and as far as Russia.[53]

48. Author interview with law enforcement officials, London, 13 February 2025; participants' remarks at RUSI expert roundtable, London, 5 February 2025.
49. Jurg Gerber and Martin Killias, 'The Transnationalization of Historically Local Crime: Auto Theft in Western Europe and Russia Markets', *European Journal of Crime, Criminal Law and Criminal Justice* (Vol. 11, No. 2, January 2003), pp. 215–26.
50. Rusev et al., 'Organised Vehicle Crime in Europe'.
51. Author interview with academic, online, 20 September 2024.
52. Chris Allen, 'Organised Criminal Business: A Synopsis of Organised Crime and How It Operates Through an Entrepreneurial Lens', *LPC Journal of Policing and Crime* (Vol. 1, No. 1, 2025), pp. 59–79.
53. Anton Troianovski and Jack Ewing, 'How Russia's Rich Get Their Luxuries Now', *New York Times*, 14 May 2023; author interview with industry expert, UK, 2 October 2024.

Low availability and, by extension, affordability on the licit market represent an opportunity for criminal markets. Through these, OCGs can intervene and increase potential profits as they seek to meet demand for vehicles and the parts needed to service them.[54] In jurisdictions such as Thailand, where tariffs and taxes can nearly double the cost of imported vehicles,[55] there is greater incentive to smuggle stolen vehicles that can be sold at, or below, licit market prices. In other countries, such as Georgia and Azerbaijan, demand for stolen vehicles may be an unintended consequence of economic sanctions levied by the UK and its partners. Following Russia's full-scale invasion of Ukraine, trade data indicates persistent demand for vehicles in these countries – likely facilitated by UK exports to countries neighbouring Russia – that, in turn, are moved across the border.[56] Analogous examples have emerged of vehicles vanishing from UK streets and reappearing in Moscow.[57] This international dimension of vehicle theft is left largely unchecked, with minimal attention paid to outgoing cargo from the UK.

54. John Eck and Tamara Madensen, 'Using Signatures of Opportunity Structures to Examine Mechanisms in Crime Prevention Evaluations', in Johannes Knutsson and Nick Tilley (eds), *Evaluating Crime Reduction Initiatives,* Crime Prevention Studies Vol. 24 (Cullompton: Willan Publishing, 2009), pp. 59–84.
55. Export.gov, 'Thailand - Import Tariffs', 9 August 2019, <https://legacy.export.gov/article?id=Thailand-Import-Tariffs>, accessed 19 February 2025.
56. UN Comtrade, 'Trade Data', <https://comtradeplus.un.org/TradeFlow>, accessed 14 April 2025. The authors used Comtrade data to replicate the figures originally reported in Ed Conway, 'Surge in Sale of UK-made Cars to Russia's Neighbours Shows How It's Beating Sanctions', *Sky News,* 12 March 2024.
57. Matt Oliver, 'How Britain's Stolen Range Rovers and Rolls-Royces Ended Up on the Streets of Moscow', *The Telegraph,* 20 April 2024.

II. A Static, Siloed Response

The UK faces a multidimensional vehicle crime challenge that demands an equally multilayered response. The technical expertise, means and know-how that exist within many sectors can facilitate a sustained and evolutionary response. While historical trends illustrate meaningful and ongoing developments, gaps within the national response impede progress.

Exploits and Manufacturer Innovation

The role of security measures features prominently in the vast majority of literature produced during and following the UK's vehicle theft surge in the early 1990s. The most notable development was the introduction of the electronic engine immobiliser, which prevents unauthorised starting of the engine. To start the immobiliser-equipped engine, a key or key fob must be inserted or physically present to transmit a unique cryptographic key to the vehicle's ECU.

There was a profound, positive impact of electronic immobilisers in the 1990s and early 2000s. In the Netherlands, their introduction led to an estimated 40% decrease in thefts,[58] and in the US there was an estimated 80% reduction in thefts of vehicles fitted with immobilisers compared with vehicles without them.[59] By employing a preventive approach, manufacturers cost-effectively implemented a victim-oriented crime prevention tool, circumventing the need to rely on criminal justice infrastructure.[60]

However, in 2013, the trend in the UK was reversed. According to experts in industry and law enforcement, this coincided with the widespread introduction of keyless and remote-start vehicles – introducing a novel vulnerability to the generally successful security system.[61] A variety of advanced immobiliser bypass technologies emerged to exploit manufacturers' remote access features. 'Relay attacks' became the means of circumventing immobilisers, using signal repeaters to extend the reach of a key fob and then transmit the unique code to the vehicle's ECU. Several affected manufacturers rolled out software and other fixes. As previously described, the exploits and methods to circumvent the countermeasures

58. Jan C van Ours and Ben Vollaard, 'The Engine Immobiliser: A Non-Starter for Car Thieves', *Economic Journal* (Vol. 126, No. 593, June 2016), pp. 1,264–91.
59. Graham Farrell, 'The Great American Car Crime Decline', *Security Journal* (Vol. 38. No. 10, January 2025).
60. Van Ours and Vollaard, 'The Engine Immobiliser'; author interview with academic, online, 8 November 2024.
61. Participants' remarks from RUSI expert workshop, London, 5 February 2025.

soon followed, pitting criminal developers and vehicle manufacturers against each other in an 'arms race', with each side seeking to out-develop the other.

The rise in vehicle thefts since 2013 indicates that manufacturers may have launched the process of security innovation too late. It is difficult to create safeguards against threats that have yet to materialise. However, specific exploits in keyless entry systems were raised as early as 2012.[62] Increased manufacturer efforts to safeguard vehicles only followed the recent significant rise in thefts – responding to pressure from increasing insurance costs and consumers directly.[63] As seen with the introduction of electronic immobilisers, significant reductions in thefts occur only after delays.[64] While new fleets are equipped with the requisite security features, the vast majority of pre-existing vehicles remain vulnerable.

Judging from the UK's history, improvements to vehicle security likely represent the most significant countermeasure to increasing thefts in the short and long term. Recent vehicle theft statistics indicate certain manufacturers have succeeded in rolling out security measures to stem the increases in theft.[65]

Where reductions have been observed, they are not symmetrically distributed. Rather, publicly and privately held data demonstrate a pronounced effect on makes and models that received significant investment and security upgrades. Therefore, while overall theft figures decline, this positive trend is largely driven by a select few vehicle types or manufacturers which have fixed existing vulnerabilities. The abrupt impact has even prompted a degree of displacement. Early data and anecdotal evidence from law enforcement indicate an atypical increase in home burglaries in which victims' car keys have been stolen – an indication of a potential reversion to 'conventional' means of stealing specific, security-improved vehicles to meet illicit market demand.[66]

Innovating in-step with vehicle theft technology limits manufacturers to reactive fixes and potentially expensive recalls – the wider-scale positive effects of which may only be observed months or years later. Furthermore, the rapid rate of criminal innovation has probably undermined confidence that such fixes can

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62. Stephen Mason, 'Vehicle Remote Keyless Entry Systems and Engine Immobilisers: Do Not Believe the Insurer that This Technology is Perfect', *Computer Law & Security Review* (Vol. 28, No. 2, April 2012), pp. 195–200.
63. Author interview with academic, online, 7 November 2024.
64. Graham Farrell and Rick Brown, 'On the Origins of the Crime Drop: Vehicle Crime and Security in the 1980s', *Howard Journal of Crime and Justice* (Vol. 55, No. 1–2, May 2016), pp. 226–37; Farrell, 'The Great American Car Crime Decline'.
65. HM Government, 'Police Recorded Crime Open Data Police Force Area Tables, Year Ending March 2013 Onwards'.
66. Author interview with industry expert, UK, 2 October 2024; author interview with representatives of law enforcement, online, 21 October 2024; participants' remarks at RUSI expert roundtable, London, 5 February 2025.

have sustained positive effects. This is particularly relevant for insurers, which adjust premiums based on mid- to long-term trends.[67]

While manufacturers can invest in protective measures, the rate of criminal innovation threatens their ability to sustain a technological edge. Academics and industry have long indicated loopholes in legislation.

One distinct loophole is Right to Repair legislation.[68] Regulations designed to protect consumers from monopolistic manufacturer control over repairs may have unintended consequences: providing malign developers with detailed insight into protective mechanisms and technology. Such technology can then be exploited, giving criminal developers 'the keys to the fortress'.[69] With OCGs showing that they can adapt to new security rollouts, this legislative exploit may accelerate the pace at which new theft devices become available. Most vehicles across manufacturers are designed with common security systems that are used in many different markets, such that accessing manufacturer designs in one jurisdiction can compromise security in another that falls outside the scope of Right to Repair legislation.

The current UK government's Crime and Policing Bill is designed to address other legislative gaps.[70] Originally included in the previous government's 2024 Criminal Justice Bill, measures include a ban on 'electronic devices for use in vehicle theft', with broad language to encapsulate all electronic devices for which there is reasonable suspicion that the possession, development or supply exists in connection with vehicle theft.[71] Confiscation of such devices would empower law enforcement – and ultimately manufacturers – with insight and intelligence into emerging technology and networks.[72] In the case of the most expensive equipment, confiscation of a single device can reduce an organisation's ability to target specific vehicles for a period of up to three weeks, as there are few such devices in circulation.[73]

Some of the still-legal devices are listed for purchase online. The legality of the manufacturing, sale and possession of such devices in the UK makes it difficult

67. Author interviews with industry experts, UK, 2 October 2024.
68. Lorraine Conway, 'Right to Repair Regulations', House of Commons Library Research Briefing No. 9302, 24 September 2021.
69. Author interview with technical and industry experts, UK, 2 October 2024; participants' remarks from RUSI expert workshop, London, 5 February 2025.
70. HM Government, 'Vehicle Theft Equipment to be Banned under New Government Law', 24 February 2025, <https://www.gov.uk/government/news/vehicle-theft-equipment-to-be-banned-under-new-government-law>, accessed 25 February 2025.
71. House of Commons, 'Criminal Justice Bill', 2024, Article 3.
72. Author interview with industry expert, UK, 2 October 2024.
73. Author interview with technical expert, UK, 2 October 2024; validated at RUSI expert roundtable, London, 5 February 2024.

for the country to engage with partners abroad to jointly tackle manufacturers or distributors.

Resourcing, Prioritisation and Enforcement

Several media outlets in the UK have alleged a de facto 'decriminalisation' of vehicle theft amid significant increases in theft and perceptions of ineffective law enforcement.[74] Of course, vehicle theft has not been decriminalised. However, the consequences of widely held perceptions of decreased risks of offending may be a key factor in the proliferation of the crime type. Drawing from available studies on the UK's previous experience with increased vehicle theft, a study of offenders' motivations in 1990 found a low perceived 'likelihood of sanction'[75] to far outweigh considerations related to the variety and scope of sentences.[76] Even among those who faced custodial sentences, the 'threat' of incarceration was a more potent deterrent than the actual 'experience' of custody.[77] The fall in charge rates for vehicle theft from 9.2% in 2013–14 to just 2.6% in 2023–24 therefore represents a weakening of the most relevant deterrent factor potentially influencing would-be car thieves or OCGs.[78]

The decrease in charge rates reflects two realities: law enforcement's reduced ability to investigate such crimes; and vehicle theft becoming more organised and mobile. The former could exacerbate the latter, as rigid, under-resourced law enforcement is increasingly facing adaptable and well-resourced OCGs.

The domesic and transnational mobility that characterises contemporary vehicle theft has proved particularly challenging. Unlike law enforcement, OCGs do not face obstacles when working across jurisdictions. Domestically, the cross-county enforcement difficulties are so significant that certain OCGs may be exploiting the jurisdictional limitations that face police forces by deliberately moving stolen vehicles across force areas.

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74. Tom Jervis, 'Shock as Data Shows One Third of Drivers Think Car Theft is Decriminalised in the UK', *Auto Express*, 26 September 2024, <https://www.autoexpress.co.uk/news/364460/shock-data-shows-one-third-drivers-think-car-theft-decriminalised-uk>, accessed 14 April 2025; Ollie Corfe and Neil Johnston, 'Car Theft in London "Decriminalised" as Met Fails to Solve Nine in 10 Cases', *The Telegraph*, 3 January 2025.
75. Light, Nee and Ingham, *Car Theft*, p. 59.
76. Paul J Slobodian and Kevin D Browne, 'A Review of Car Crime in England and Wales', *British Journal of Social Work* (Vol. 31, No. 3, June 2001), pp. 465–80.
77. Light, Nee and Ingham, *Car Theft*, pp. 63–64.
78. HM Government, 'Outcomes Open Data Year Ending March 2006 to Year Ending March 2014', last updated 30 January 2025, <https://www.gov.uk/government/statistics/police-recorded-crime-open-data-tables>, accessed 14 April 2025; HM Government, 'Outcomes Open Data, Year Ending March 2024', <https://www.gov.uk/government/statistics/police-recorded-crime-open-data-tables>, accessed 14 April 2025.

Seizures at ports provide a useful example of how the cross-county nature of modern vehicle theft can frustrate enforcement. Often, interdicted containers contain up to four vehicles, all from different force areas. For example, a container could be seized in Felixstowe with vehicles that may have been stolen from Greater London, Essex and Warwickshire. Within a domestic policing environment based on territory, there are fundamental and structural questions as to who should be required or is otherwise incentivised to deploy scarce resources to investigate vehicle crimes.

In the absence of national or regional coordination, these questions are answered on an ad hoc basis, if at all. National bodies, such as the Border Force, National Vehicle Crime Intelligence Service (NaVCIS) and Opal,[79] are not tasked with national coordination of investigations and operations, nor the strategic management of police resources. While the National Crime Agency (NCA) may engage in international recoveries, it is not involved in domestic investigations or operations. The onus is on individual forces to coordinate or establish joint investigative teams where the need arises.

Additional disincentives to cross-jurisdictional working stem from idiosyncrasies such as crime and outcome reporting rules. Home Office offence-recording rules stipulate that 'the lead body (i.e., with primacy of investigation) will be responsible for recording a crime' and its outcome.[80] In the above hypothetical example, should Suffolk Police – where the Port of Felixstowe is located – conduct investigations and recover the stolen vehicles, it is the vehicle's force area of origin which would be credited with the recovery. While this does not preclude forces from operating across jurisdictions, it can influence decision-makers who are tasked with securing positive outcomes with decreasing resources.

Despite the benefits of addressing cross-force incentives and coordinating action regionally or nationally, the main barrier remains the lack of resources to make novel or improved structures operational.[81] Amid record turnover of experienced staff,[82] police forces face a 'national detective shortage', shuttering specialised investigative units and overburdening criminal investigation departments.[83]

79. Opal is the UK's national intelligence unit focused on serious organised acquisitive crime. See NPCC, 'Opal: Tackling Serious Organised Acquisitive Crime', <https://www.npcc.police.uk/our-work/work-of-npcc-committees/Crime-Operations-coordination-committee/opal/>, accessed 20 March 2025.
80. UK Government, 'Home Office Crime Recording Rules for Frontline Officers and Staff', August 2024, p. 17, <https://www.gov.uk/government/publications/counting-rules-for-recorded-crime>, accessed 19 March 2025.
81. Validated at RUSI expert roundtable, London, 5 February 2025.
82. HM Government, 'Police Workforce, England and Wales: 31 March 2024', <https://www.gov.uk/government/statistics/police-workforce-england-and-wales-31-march-2024/police-workforce-england-and-wales-31-march-2024>, accessed 19 February 2025. HM Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS), 'The Police Response to Burglary, Robbery and Other Acquisitive Crime – Finding Time for Crime', 11 August 2022, <https://hmicfrs.justiceinspectorates.gov.uk/publications/police-response-to-burglary-robbery-and-other-acquisitive-crime/>, accessed 14 April 2025.
83. *Ibid*.

Elsewhere, major forces face funding shortfalls, limiting the scope of their activities.[84] Vehicle crime-specific units and specialists have been affected, with forces collapsing their vehicle theft investigative units. Forces such as the Metropolitan Police, which once possessed an almost triple-digit vehicle-crime investigative team, have seen their numbers dwindle to only a handful of officers.[85] Officer turnover has resulted in the loss of not only the human resources required to sustain complex investigations, but also of qualified stolen-vehicle examiners and officers with vehicle-specific knowledge – qualifications and skillsets that are not currently being sufficiently regenerated.

Furthermore, since the 1990s and early 2000s the UK's policing landscape has changed considerably. Although crime has fallen and remains far below 1990s levels, police forces have faced increasing workloads associated with the greater prioritisation of high-threat, -harm and -risk offences, such as sexual offences and violence against women and girls (VAWG).[86] Reprioritisation does not imply that sexual offences and VAWG are new or increasing offences, but rather reflects improvements in recording long under-reported offences.[87] Likewise, the decrease in vehicle thefts from 1993 – which lasted nearly two decades – saw resources previously deployed to vehicle crime teams reassigned to in-demand units. Once again, facing a significant increase in thefts, the dismantled or diminished teams have yet to regain adequate resourcing.

Ports face a similar prioritisation challenge. As high-priority crime types (such as drugs and firearms) are typically imported to the UK, port controls – already stretched thin – are dedicated to imports, rather than exports. With minimal export oversight, interdiction falls to NaVCIS's dedicated ports operation. However, with only a few officers and analysts, the organisation is inadequately resourced to provide any systematic oversight of UK exports.[88] Consequently, the fixation on import controls leaves UK exports vulnerable, allowing millions of pounds' worth of stolen vehicles to flow undetected across the UK's borders every year.

The effects of vehicle crime's policing, including the chronic lack of resourcing and relative de-prioritisation of vehicle crime, are far reaching. Intelligence gaps around the structures, relationships and operations of key figures within OCGs are among the chief consequences. Siloed and under-funded enforcement work mean intelligence is largely generated from the lower-level investigations.

84. Aurelia Foster, 'Met to Cut Workforce Despite Funding Increase', *BBC News*, 18 February 2025.
85. Participant's remarks at RUSI expert roundtable, London, 5 February 2025; author interview with law enforcement officials, London, 12 February 2025.
86. Participant's remarks at RUSI expert roundtable, London, 5 February 2025.
87. HMICFRS, 'Police Response to Violence Against Women and Girls: Final Inspection Report', September 2021, <https://hmicfrs.justiceinspectorates.gov.uk/publications/police-response-to-violence-against-women-and-girls/>, accessed 7 May 2025.
88. Participants' remarks at RUSI expert roundtable, London, 5 February 2025.

At the national level, intelligence collection and dissemination are currently entrusted to a single Opal analyst.[89] Without a comprehensive, collated understanding of the OCG and market landscape, it becomes difficult to identify areas of potential convergence with other crime types and other associated threats, risks and harms.[90] The impact of more effective OCG mapping and increased intelligence is limited by the absence of sufficient operational resource. For example, NaVCIS and port enforcement receive significant amounts of intelligence, but with minimal staffing and relative under-prioritisation of outgoing shipments, this information often exceeds their capacity to interdict and investigate.[91]

It is important to distinguish between 'quick' and 'long' law enforcement operations. Quick operations targeting vehicle recoveries and the arrest of low-level offenders represent the status quo of vehicle theft enforcement. This approach, however, may be self-defeating. Where a vehicle is seized, but no further investigations or arrests follow, law enforcement has indirectly created more demand. If those responsible remain free to reoffend without investigative pressure, the incentive may compensate for the lost goods.

Long, complex investigations seek to remove or disrupt individuals considered critical to criminal networks or OCGs in their entirety. Such techniques include the use of financial investigation, targeting the proceeds of crime – both as a means to secure money laundering and tax-offence convictions and to establish a robust deterrent. However, these investigations could require dedicated, full-time investigators, capable of seizing on available intelligence and developing cases. They can also last years and have less certain outcomes, incurring significant costs for both police forces and, eventually, the Crown Prosecution Service.[92] Police decision-makers are faced with a zero-sum game: prioritise smaller-scale operations to yield recovery-oriented results, or deploy precious resources for longer term, more costly investigations seeking a wider criminal market disruption.

89. Author interview with law enforcement expert, online, 10 October 2024.
90. Author interview with law enforcement official, London, 12 February 2025.
91. Author interview with law enforcement official, online, 17 February 2025.
92. Participants' remarks at RUSI expert roundtable, London, 5 February 2025; author interview with law enforcement official, online, 17 February 2025.

Conclusion and Recommendations

Contemporary vehicle theft in the UK represents a perfect storm of increasing domestic and international demand, compounded and exploited by innovative and organised criminals, all amid an under-resourced and disjointed response architecture. The ineffectiveness of the patchwork, siloed enforcement and industry actions threatens to allow vehicle theft, and its associated economic and social harms, to proliferate further.

To stem and reverse thefts over the long term, the response requires strategic planning and innovation, departing from the siloed status quo. Stakeholders must collaborate to promote a response predicated on adaptability and prevention, where long-term success is measured by sustained decreases in thefts, negative social and economic costs, and a reduced criminal market.

Recommendations

The recommendations below are rooted in feasibility amid a fiscally challenging environment, aiming for the development and maintenance of long-term, prevention-oriented structures designed to harness cross-sector comparative advantages.

Recommendation 1: Promote the implementation of proactive security measures among manufacturers and strive towards a preventive approach across industry.

The most proven defence against vehicle theft remains securing vehicles and reducing opportunities for crime. Therefore, increasing responsiveness across all industry to, and anticipation of, novel theft methods as and before they emerge is key to sustainably decreasing the number of thefts. To reduce individual manufacturer costs and minimise siloed information-sharing efforts, manufacturers should benefit from intra-sector best practice and the wealth of knowledge retained elsewhere in the private sector, law enforcement and technical or academic communities.

Joint resilience can be improved and accelerated through intra- and intersectoral working – via existing structures such as the National Vehicle Crime Reduction Partnership (NVCRP), which already has a mandate to work with civil society, manufacturers, the insurance industry and law enforcement, such as NaVCIS, Opal and the National Police Chiefs' Council – to facilitate data and information sharing and coordinate operational activities. Such a system, led by a cross-sector body such as the NVCRP, must be structured and consistent, allowing for continued advocacy, research and collaboration even in periods of relative de-prioritisation. A sustained, strengthened and active partnership can:

- Conduct continuous horizon scanning and risk assessments for current and future risks, drawing on intelligence, information and best practice developed across sectors.
- Enable law enforcement to routinely share local, regional and national theft trends and techniques with all manufacturers and concerned business entities systematically, swiftly and in a centralised manner, ensuring equal access to information.
- Enable research findings and technical exploits discovered by technical experts, researchers or manufacturers to be swiftly reported direct to manufacturers.
- Present a unified voice when communicating with associated industries, and with the UK government and foreign governments, to address current or future legislative vulnerabilities deemed a risk to vehicle security, such as addressing Right to Repair, or wider vehicle-theft market issues.

Success requires active commitment by manufacturers, each engaging with the partnership. Where vehicle security development is not sufficiently advanced or is reliant on the engagement of few manufacturers, government or third-party involvement may be required to protect victims, in the form of published security indices or technical regulations to ensure markets are sufficiently responsive to, and proactive about, theft risks.

Recommendation 2: Urgently address key intelligence and research gaps on criminal supply chains.

To better direct policymaker and cross-sector efforts, research gaps identified in this paper must be explored, such as:

- Ports as opportunities for criminality or enforcement, notably around UK freeports, and under-researched criminality in exports.
- The internationalisation of organised acquisitive crime and the role of global facilitators or OCGs in catering to criminal markets.
- Illicit financial flows (IFFs) linked to the trade, the use of vehicles as currency, and IFF areas including how proceeds of crime are laundered and distributed within the UK and abroad.

- The role of emerging and disruptive technology such as 3D printing, AI, remote access and new vehicle operating systems in promoting or undermining future vehicle security.

Recommendation 3: Policymakers, law enforcement and private sector partners should explore innovative funding mechanisms enabling sufficient resourcing for ring-fenced vehicle theft-specific law enforcement, promoting sustainability and policing resilience.

Without access to increased funding, accelerating positive impact and outcomes through law enforcement is unlikely. Some countries, for example Canada, have deployed resources to tackle increases in vehicle theft, providing funding for complex, counter-SOC investigations, among other initiatives.[93] However, given the UK fiscal context and ongoing police budgetary constraints, public funding commensurate to the threat is unlikely to be available. Where public funding is insufficient, innovative funding models are needed. Continuing and expanding on models such as NaVCIS, drawing on industry funding and recovery charges, is one option.[94] However, this relies on sustained financial commitment from industry partners, which may be carried disproportionately by some companies or sectors. Without long-term committed funding, it is uncertain whether such an industry-tied funding structure will allow the development of complex investigations, or if it will continue to be recovery-oriented.

In seeking sustainable finance, policymakers and law enforcement should consider funding models such as those funding Auto Theft Prevention Authorities (ATPAs) in the US. Many ATPAs are funded through a minor (£1–4) annual surcharge on each car insurance policy, the funds of which are directed to a ring-fenced ATPA-like body which can sustainably retain and deploy funds for coordinated specific activities, operations, prosecutions and prevention campaigns related to vehicle crime.

Recommendation 4: Law enforcement and policymakers must prioritise the creation of a national coordination body capable of responding to a complex, cross-jurisdictional and international threat.

The current localised and fragmented enforcement response is not capable of disrupting the vehicle theft market. Countering an increasingly agile criminal threat requires a sufficiently agile structure, situated nationally and capable of coordinating and operating across jurisdictions. Law enforcement must be able to implement an end-to-end approach, preventing theft, protecting victims, pursuing offenders throughout the supply chain and preparing for future trends

93. Équité Association, '2024 Auto Theft Trend Report', February 2025, <https://www.equiteassociation.com/newsroom/reports>, accessed 14 April 2025.
94. NaVCIS, 'Our Trusted Partners', <https://navcis.police.uk/partners/>, accessed 19 February 2025.

in theft. A national body is best placed to coordinate international recovery and investigation actions, allowing for streamlined communication and operational planning.

Likewise, a coordinating structure, focusing on the organised dimensions of vehicle theft, should seek to meaningfully alter the risk-to-reward calculus at all levels of the criminal supply chain – expanding beyond recoveries and arresting low-level offenders. This requires allocating resources and prioritising enforcement to address vulnerabilities, such as ports, ensuring that enforcement action is designed to increase criminal risk and decrease profit margins at key junctures of the criminal supply chain.

Where seizures and arrests indicate OCG involvement, parallel investigations must be routinely launched, and prosecutions supported. This includes expanding financial crime investigations to target those who facilitate and profit the most from criminality. The coordinating structure should invest in harnessing the wealth of intelligence provided by the private sector.

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