



## No. 215

# The Stolen Vehicle Parts Market

Frances Gant and Peter Grabosky

*In 2000, 139,000 motor vehicles were stolen in Australia. About 80 per cent of these were recovered soon after the theft. It is estimated that about three-quarters of motor vehicle thefts are opportunistic, stolen for joy-riding or transport, and one-quarter are stolen for profit. Many that are stolen for profit end up as spare parts.*

*Very little is known about the spare parts market and its dynamics. This study (which involved interviews with a small number of offenders as well as with law enforcement officers, motor traders and insurance representatives) is a path-breaking attempt to understand the elements of the spare parts market.*

*The market in which spare parts are traded is described briefly in an attempt to focus further on this under-researched area.*

**Adam Graycar**  
Director

It is estimated that Australia has the second-highest rate of vehicle theft victimisation in the world (van Kesteren, Mayhew & Nieuwbeerta 2000). About 75 per cent of motor vehicle thefts are attributable to opportunistic car thieves who generally steal vehicles for joy-riding or transportation. The remaining 25 per cent are the work of professional thieves, who steal vehicles for profit. In these cases, vehicles are used for resale with fraudulent identification (“rebirthing”) and/or for their parts. The difference between opportunistic and professional theft can be more fully understood as car theft that *temporarily* deprives the owner of his or her vehicle, as distinct from car theft that *permanently* deprives the owner of his or her vehicle.

Most investigators of car theft rely on the number of recovered and unrecovered vehicles to give us an indication of the respective prevalence of opportunistic and professional theft. It should be noted, however, that these measures generally underestimate the actual level of professional theft. This is primarily due to the data collection methods used to monitor car theft. Jurisdictions rarely maintain systematic records of the condition of vehicles once recovered. Most often, vehicles that are found stripped and burnt out are recorded as recovered—a typical measure of opportunistic theft. However, it is more likely that these vehicles have fallen prey to more organised, professional thieves.

Little is known about the illicit market in stolen vehicle parts, particularly how the parts are processed for profit. Knowledge of how the market for vehicle parts is structured, and the relationship between the players—the thieves, the buyers, the sellers and the end consumers of stolen parts—will enable the development of appropriate policies and strategies for prevention.

This paper provides an overview of the stolen parts market and an understanding of its dynamics, including the end uses of stolen parts, links between the legitimate industry and the illegal parts trade, and the flow of vehicle parts throughout the market. For the purpose of this paper, the term “vehicle parts” is used to refer to the core mechanical and body components of a vehicle, and also those optional or high performance parts that are likely to be stolen

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by professional thieves. These include:

- mechanical parts;
- panels;
- engines;
- body kits;
- interiors; and
- engine numbers, vehicle identification numbers (VINs) and chassis numbers.

Excluded from the analysis are vehicle accessories and other parts such as sound equipment, number plates, minor trim, personal effects and wheels.

### Methodology

A snowball sampling technique was adopted to locate subjects for this project. Such a method involves identifying initial research subjects who may be able to assist in locating other subjects. These subjects are then used to locate further subjects, and so on. Snowball sampling is particularly useful in studies that are exploratory in nature and when knowledgeable subjects are not known or are difficult to find (Hagan 2000, p. 145).

The National Motor Vehicle Theft Reduction Council was the initial point of contact for this project. The Council provided researchers with a list of people within the insurance industry, motor trades and police services considered to be knowledgeable in the area of motor vehicle theft, particularly professional theft. The researchers also used the services of private investigators in both Sydney and Melbourne to locate people on the “fringes” of car crime. From these primary sources, further contacts were made with other knowledgeable people in the legitimate and illegitimate industries.

Semi-structured interviews were conducted with 42 individuals in Melbourne and Sydney. A loose breakdown of the identified backgrounds of subjects shows that:

- 10 were from law enforcement agencies;
- 10 were from insurance companies;
- 18 worked in motor trade industries and associated government agencies including

recyclers, repairers, auction houses, and road and transport authorities; and

- four have either been convicted of car crimes or their business activity can be described as straddling the legitimate and illegitimate trade.

Following fieldwork in Sydney and Melbourne, a number of law enforcement officers and intelligence analysts were interviewed in Adelaide.

### End Uses of Stolen Parts

Stolen vehicle parts are used for predominantly the same reasons as one would use legitimate parts:

- to resell;
- to replace end of life, stolen or damaged parts;
- to rebuild a wrecked vehicle; and
- to upgrade a vehicle.

Unfortunately, it is difficult to estimate the percentage of stolen parts that are used for each of these purposes, given the versatility of vehicle parts and the different motivations of people involved in car crime.

#### Resale

Selling stolen parts maximises healthy returns for those involved. This, however, is not restricted to financial gain. People may also sell or barter stolen parts to obtain other goods such as drugs and prohibited firearms, though we are unable to estimate how prevalent this is.

#### Repair

Stolen vehicle parts are often used to replace worn, damaged or other stolen parts. This is particularly pertinent to the repair of older-model vehicles. As manufacturers cease to produce vehicle parts, parts become more difficult to obtain. When parts for older vehicles become costly compared to the value of the actual vehicle, it may be more cost-effective for some consumers to use stolen parts.

#### Rebuild

Skilled tradespeople may use stolen parts to rebuild wrecked vehicles. Rebuilding wrecks with stolen parts is said to perpetuate the cycle of theft for parts. As

parts are stolen to rebuild other vehicles, newly stripped vehicles are repaired with parts from other stolen vehicles and so on.

Stolen parts may also be combined with other parts to build a *hybrid car* for sale. Stolen cars are cut into pieces and the parts are mixed and matched to form a new vehicle. The hybrid vehicle can take the identity of one of the stolen vehicles or is given a new identity. Similarly, two halves of respective vehicles may be combined to form another car. This process is referred to as a “cut and shut” or a “sectionalised repair”.

#### Upgrade

Finally, stolen vehicle parts may be used to change the appearance or performance of vehicles. This was described as a common practice for the upgrade of Holden vehicles to Holden Special Vehicles (HSVs). In this process, the engine block and panels of a HSV are transferred onto a base model Holden to give it the appearance of a HSV.

### Vehicle Profiles

A number of factors were identified as influencing the demand for particular vehicles and their parts. These include:

- accessibility;
- performance;
- profit potential; and
- prestige and status.

Both newer and older vehicles are susceptible to theft for parts. Generally, the demand for stolen parts is greater when vehicle components are difficult to obtain because of discontinued manufacture, restricted supply, or when parts are more costly to replace (see Industry Commission 1995 for further discussion on the availability and cost of replacement parts).

A recent survey, *The Nuts and Bolts of Car Repairs*, conducted by AAMI Insurance (2000) analysed the cost of replacing “a basket of parts” for the 12 most common car models insured by the company. The survey shows that for some vehicles the cost of replacing these parts can be as much as 45 per cent of the current value of the vehicle.

The demand for vehicle parts, however, is not only driven by those who cannot or do not want to purchase parts legitimately. It is also perpetuated by offenders who steal parts for resale and/or to use in the upgrade of vehicles. Generally, high performance and prestige vehicles are popular among professional thieves. Subaru WRXs, Honda CRXs, Holden HSVs, BMWs and 4WDs were all identified as high-risk targets. Post-1992 models of these vehicles, if stolen and not recovered, are likely to have been on-sold with fraudulent identification (rebirthed). This differs to pre-1992 models that are more likely to be used for their parts, although this does not rule out the possibility of fraud. The attractiveness of these vehicles lies in their resale value as well as in the status and image afforded to the driver, and the speed which these vehicles can reach. For those involved in other crime, having a high-performance vehicle may assist in evading police detection.

### Intersection between the Legal Parts Industry and the Illegal Parts Trade

The majority of those involved in the illicit trade in stolen vehicle parts operate outside the legitimate licensed industry. These people either work from well-resourced backyard workshops or from rented premises that have the appearance of a legitimate business. From this perspective, there are loosely two spare parts industries operating—legitimate (including licensed traders) and illegitimate. It should be noted, however, that this distinction is clouded. There may be some legitimate licensed businesses that are generally willing to purchase and use “cheap” goods if offered, and also occasionally engage in more profitable illegal enterprises. Furthermore, there is nothing to prevent people with criminal histories, or those who are criminally minded, from obtaining a motor trades licence. It is therefore important to distinguish between those people who may “dabble” in the

occasional purchase of cheap goods for resale or repair, and those who are heavily involved in the illicit trade.

#### *Entry of Stolen Parts into Legitimate Markets*

Spare vehicle parts are usually purchased from one of three sources:

- the manufacturer of genuine parts;
- a generic parts retailer; or
- a second-hand retailer.

Parts may also be imported into Australia or reconditioned rather than replaced (for further information about the industry and replacement parts see Industry Commission 1995). Illegal spare parts may enter the legitimate market through competitive pricing. Compared to legitimate parts, those that are stolen are usually much cheaper. To this end, stolen parts enter the legitimate market when business operators are willing to purchase them. Interviewees within the motor industry reported that it is not uncommon for people to either phone or turn up at premises trying to sell questionable goods. Variation between motor traders in their estimates of the frequency with which stolen parts are offered appears to be influenced by the location of businesses.

It is quite easy for stolen parts to enter legitimate markets undetected, especially as stolen parts are not easily identifiable as such. Insufficient or non-existent labelling practices enable stolen parts to “blend in” with legitimate goods. This means that businesses can receive, stock and/or supply stolen parts as part of their usual business, unbeknown to the end consumer. The lack of identification of most parts makes it virtually impossible to prove unlawful possession or that the parts are stolen in the first place. This is a fundamental issue for investigators of vehicle crime.

It is also possible for those within the legitimate trade to purchase stolen goods unknowingly. This occurs when buyers do not know that the person selling the goods is sourcing stolen parts. People

within the motor trade confirm that there really is no guarantee of the legitimacy of second-hand parts.

### Offenders

Interviewees identified two general groups of offenders involved in the illicit vehicle parts trade—organised and opportunistic offenders. This distinction can also be understood as *organised* offenders who obtain the greater part of their income through illicit means, and *opportunistic* offenders who may only source parts when the need arises or sell parts when they happen to acquire goods. Opportunistic offenders also include people who may occasionally take advantage of loopholes in policy and procedures. It is acknowledged, however, that the majority of offenders in the spare parts trade are organised.

#### *Organised Offenders*

Markets in stolen vehicle parts are predominantly driven by the potential for generous profits. Research from the United States suggests that vehicles stripped for parts are often worth more to thieves than complete vehicles (Finn 2000). There was divergence of opinion, however, as to whether this necessarily meant that trading in vehicle parts is more profitable than trading in whole vehicles. Infrastructure, land and labour needed to process vehicles for parts, and the unlikelihood that every part of a vehicle could be sold, shaped the argument for those who saw more value in selling vehicles whole. On the other hand, many believed that certain vehicles would definitely be more valuable when sold in parts.

It is important to note, however, the low likelihood of an offender stealing a car simply to sell *all* the parts. Rather, he or she would be interested in a vehicle for *certain parts*. This was confirmed by a number of interviewees who reported that some thieves will steal vehicles, remove the desired parts and then dump the vehicle—often leaving other valuable parts in the wreck.

Low Risks

For the classic rational offender, car theft is not only characterised by high returns but by low risks. Research conducted by Carcach (forthcoming) demonstrates the low risk of detection and conviction for motor vehicle offenders. In 1998 over 131,000 vehicles were stolen in Australia. It is estimated that 16 per cent of these car thefts were cleared by arrest. Of those arrested, only 16 per cent of adult offenders were convicted, and 35 per cent of these received a custodial sentence. In other words, for every 40 car thefts, one offender was convicted. Similarly, for every 115 car thefts, one offender was jailed (Table 1).

**Movement of Illicit Vehicle Parts**

Figure 1 provides an overview of the vehicle crime market and the avenues of vehicle parts distribution from theft to end-user. There is no single identifiable pathway for the distribution of parts. Rather, there are many channels open to those involved in the illicit trade to dispose of parts either for personal use, to rebuild and/or repair a vehicle, or to obtain cash and other goods.

As illustrated in Figure 1, most car thefts for parts are committed by professional thieves. Opportunistic thieves may engage in minor component theft or occasionally “come across” goods, but their involvement is not close to the magnitude of thefts that are committed by professional offenders.

Cars may be stolen from almost anywhere. Shopping centre car parks, streets, train stations and recreational venues were all identified by interviewees as hot spots. For professional thieves, however, it is not so much the location as the vehicle that determines the spatial characteristics of theft. For example, if thieves know that prestige or high-performance vehicles are likely to be found in certain areas, it is these areas that will be primary targets.

The actual theft of vehicles is usually initiated by one of two

**Table 1: Estimates for the offence of motor vehicle theft**

	1998
Total offences recorded	131,600
Number of adult persons convicted	3,254
Number of adults to custody	1,140
Probability of an offence being cleared by arrest	0.16
Probability of conviction after arrest	0.16
Probability of custodial sentence after conviction	0.35
Ratio (thefts/conviction)	40.44
Ratio (thefts/custody)	115.43

Source: Carcach (forthcoming)

sources—thieves and receivers. Some professional thieves initiate the supply of vehicles by stealing a number of cars and leaving them at designated “drops” to be inspected by potential buyers. Those vehicles that are not wanted are abandoned. On the other hand, some receivers initiate the demand for vehicles by “ordering” particular cars. In these cases, receivers will contact thieves and arrange for a certain vehicle to be stolen.

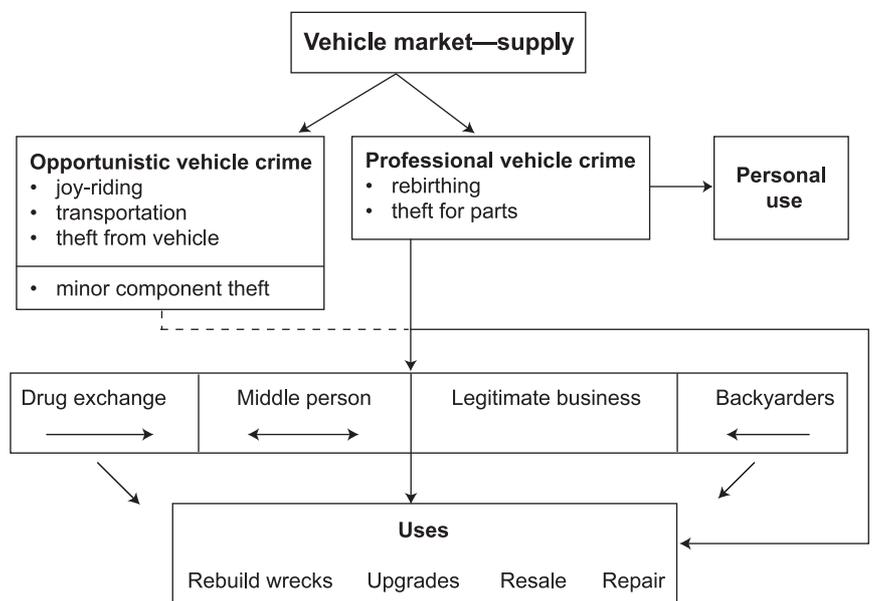
A number of interviewees noted that thieves may also engage people “on the side” to help locate target vehicles. These people are not necessarily involved in the organised process but help out for a “small fee”, generally a cash payment. For example, car park attendants may notify thieves of particular vehicles located at shopping centres, or security guards may pass on information about their schedule over the next few hours

(indicating how long a car is likely to be unattended).

Once stolen, thieves will usually drive vehicles to the place at which stripping occurs, or an intermediary place from where the vehicles are transported further, either by driving the vehicle or by towing it. Most vehicles are stripped in backyards or “business” premises. It is important to note that a vehicle and its parts may change hands a number of times. One offender relayed how a vehicle may be stripped in stages as it comes into contact with different people. For example, someone will take parts a, b and c and pass the vehicle onto someone else who will take parts x, y and z, and so on. This process highlights the selective nature of those involved in the illicit trade.

Vehicles are generally dumped in open areas such as parks or bushland, in streets, and at metal recycling plants. In most

**Figure 1: Vehicle market for stolen parts**



Source: Adapted from Freiberg 1997

cases they will be written off by insurance companies, who will pay out the policy-holder's claim and sell what is left of the vehicle at auction. Although most of these transactions are done for legitimate purposes, some vehicle shells are purchased by thieves and rebuilt with stolen parts.

#### *Selling Parts*

A common method used to sell stolen vehicle parts is word of mouth. Knowledge networks that develop among like-minded people enable parts to be moved with relative ease.

Like the hawker, those looking to off-load stolen parts will either sell door-to-door to businesses or over the phone. Many of those interviewed said that it was not uncommon for people to try to sell goods to businesses. However, as one thief explained, people will usually exhaust their own networks before trying to sell goods to businesses or unknown customers. For the seller, the difference between approaching these potential customers is the amount of profit to be made and the risk involved. Selling to unknowing customers usually returns greater profit but it may take longer to off-load the goods, while selling to businesses that are willing to purchase stolen goods may decrease profits but is generally easier. Other methods used by thieves to sell goods include print advertising (for example, through a trading/classifieds magazine), car dealer magazines and the Internet.

Data on the parts missing from recovered vehicles in South Australia show that sound equipment continues to be the most popular vehicle component stolen by offenders (NCARS 2000). The next most popular are wheels, number plates and vehicle trims. It should be noted, however, that vehicle crime in South Australia is reported to be very different to that of other States, primarily due to the older age of the South Australian vehicle fleet. Aside from sound equipment and wheels, interviewees in Melbourne and Sydney acknowledged body and mechanical parts, "hot-up kits" and vehicle trims as marketable

spare parts. These components are generally used to rebuild wrecks and upgrade vehicles.

#### **Impact of the Stolen Parts Trade on the Legitimate Trade**

The primary impact of a trade in stolen vehicle parts is on the economic viability of the legal spare parts market, and the unsuspecting buyer who is left out of pocket should the vehicle and/or parts be impounded for further investigation. Many of those we spoke to within the motor trade reported being constantly undermined by illegal operators.

First, the pool of available stock at auctions is reduced when thieves bid big dollars for wrecks, "shutting out" licensed dealers from the sale. Second, potential business is lost when those purchasing wrecks do not approach repairers and recyclers to do the work or to obtain parts. Third, retailers and repairers are "undercut" by illicit traders who sell parts below market value, and offer competitively priced repair work. Finally, the industry as a whole suffers when it is associated with illegal operators and disreputable business practices.

As a side issue, the illicit trade in stolen vehicles and parts also raises serious concerns for driver and community safety. This is particularly apparent when backyard traders (usually less skilled) repair and build vehicles for sale. In these cases, the repairs are more likely to be cheap in price, inferior in quality and often without important safety mechanisms such as air bags and anti-lock braking systems. This can lead to structurally and mechanically unsound vehicles being on the road, which are at greater risk of being involved in car accidents and injuring innocent others.

#### **Policing the Illicit Spare Parts Trade**

Specialist motor vehicle squads in each police jurisdiction have been disbanded across Australia. From a policing perspective, the

responsibility for investigating car theft and theft of vehicle parts resides with local area commands. This raises two predominant issues. One is the potential lack of police officers with specialist skills and knowledge of car theft and the illicit parts trade to effectively police the activity. The other is the apparent low priority afforded to policing car theft compared to other criminal activity. Aside from policing services, however, environment protection agencies, State departments of fair trading, local councils and the Australian Taxation Office all have a role to play in policing the illicit trade in stolen vehicle parts.

#### **Policy Implications**

Throughout the life of a motor vehicle, from its initial manufacture to its ultimate disposal for scrap, there are a number of points at which steps may be taken to reduce the risk of theft. Such measures usually entail certain costs, which must be borne by someone, whether the owner of the vehicle or by other legitimate businesses.

- Component labelling at the time of manufacture may complicate the activity of professional thieves but will add to the price and manufacture process of a new motor vehicle.
- A national statutory write-off system may prevent the resale of irreparable vehicles anywhere in Australia but would disadvantage insurance companies who would receive less money for the wrecked vehicle. On the other hand, as one insurance industry source advised, the higher prices achieved on vehicles statutorily written off are false, in that they are only driven by illicit activity such as rebirthing. These vehicles' true value is the worth of their parts. It is unsafe to rebuild statutorily written off vehicles, and these wrecks should only be available for parts. The benefits of a register of write-offs may well outweigh the costs. Another concern with a write-off system is that there would be environmental costs associated with not recycling vehicles.

- A national wrecks register (VIN cancellation system) would ensure that all repairable vehicles are inspected prior to re-registration and would also flag any suspected criminal involvement in vehicle repair, but may increase the cost of vehicle registration for legitimate consumers.
- New policies that would restrict vehicle auctions to licensed dealers may reduce the pool of wrecks available to professional thieves, but may displace criminal activity as well as disadvantage the honest individual. Furthermore, it would not prevent licensed dealers who engage in criminal activity from accessing wrecked vehicles.
- Finally, a system of requiring a paper audit trail for the sale of second-hand parts would place regulatory burdens on parts recyclers, and greater audit scrutiny of repairers would entail greater costs to insurers.

The introduction of strategies targeting theft for parts will lead to a reduction in the level of professional car theft and its associated costs. There is also potential market advantage for vehicle manufacturers that adopt component labelling and other enhanced security features. BMW has recently announced a new VIN datadot system that will be applied to all new vehicles from September 2001 in an effort to combat professional theft (NMVTRC 2001). The challenge for key stakeholders in reducing the theft of motor vehicles and their components is to minimise the costs imposed on legitimate proprietors and motor traders, and maximise the costs borne by criminals. This requires a fuller understanding of the dynamics of this and other illicit markets.

### Enhancing our Knowledge

This paper identifies some of the key characteristics of the market for stolen vehicle parts in Australia and begins to unpack the relationships between buyers and sellers, and the flow of parts from theft to end-user. The market can best be described as one involving large numbers of small buyers and sellers. There

are some issues, however, which remain unclear. There is a need for a better estimate of the number of vehicles stolen and stripped for parts each year. It would also be useful to know more about the intersection between professional thieves who rebirth vehicles and professional thieves who strip vehicles for parts. Finally, the task of policy-makers would be better informed by an economic model that illustrates how much this illicit trade costs the community.

This research was based largely on interviews with law enforcement officers, motor traders, insurance representatives and a small number of offenders. With time and resources permitting, our knowledge of the vehicle parts market could be enriched by the following:

- in-depth interviews with imprisoned or otherwise accessible professional motor vehicle thieves;
- an extensive survey of motor traders to gauge levels of stolen parts use within the legitimate industry;
- systematic collection of data on the condition of vehicles recovered by law enforcement agencies and the parts missing from these vehicles; and
- collection and analysis of data on the number of stripped vehicles processed by insurance auctions and the parts missing from these vehicles.

A greater investment of resources into researching this illicit market will lead to a greater understanding of the characteristics and dynamics of the stolen vehicle parts trade. Ultimately, with this information we can develop appropriate policies for prevention, and also better target law enforcement operations to those vulnerable areas which facilitate the market in stolen vehicle parts.

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