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Implications of Parallel Imports of Passenger Motor Vehicles

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Key Messages

- The main argument in support of permitting parallel imports is to arbitrage away international price discrimination (Richardson, 2002, p. 234). However, there is little evidence to suggest that Australian consumers are victims of any widespread international price discrimination in relation to passenger vehicles.
- A free rider is someone who enjoys the benefits of someone else's investment without having to pay compensation (Elzinga & Mills, 2008, p. 1842). Free-riding on someone else's trade mark will, at little cost, capture some of the profits associated with a strong trade mark because some consumers will assume (at least in the short run) that the free rider's and the original trade mark holder's brands are identical (Landes & Posner, 1987, p. 270).
 - Because free riding makes it more costly for consumers to distinguish between a higher quality good and a lower quality good, it would lower the incentive for a firm to incur the added cost that would be necessary to produce higher quality.
- Free riding occurs in the context of parallel imports because unauthorised distributors obtain goods at prices that do not properly reflect the legitimate costs imposed on authorised distributors at various points in the distribution chain, such as pre-sale marketing and post-sale services-costs that are paid in full by authorised dealers (Barfield & Groombridge, 1998, p. 905).
- Permitting parallel importing of motor vehicles promotes free riding coupled with intrabrand competition.
- The balance of legal and economic opinion does not put much weight on intrabrand competition and places far greater importance on interbrand competition to ensure that consumers receive competitive prices.
- There is no compelling public policy case to permit parallel imports as there is evidence of robust interbrand competition in the Australian passenger vehicle market.
- Historically, trade mark law has existed primarily to protect against consumer deception that occurs when one party attempts to pass off its products as those of another (Dogan & Lemley, 2005, p. 463). The overriding problem with the parallel import of second-hand vehicles is the direct link between the trade mark owner's product and the consumer has been broken because some extraneous third party has broken the nexus. As the trade mark owner can no longer guarantee the quality of a parallel imported vehicle, this leaves the consumer vulnerable to the risk of purchasing a 'lemon' or defective vehicle.
- Permitting the unrestricted parallel importation of second-hand motor vehicles, including virtually brand new cars, will not only subject motor vehicle manufacturers to free riding on their trade marks that in turn threatens the goodwill invested in their brands, but also poses a massive risk for consumers.

Executive Summary

- In its recent review on Australia's automotive industry, the Productivity Commission (2014, p. 32) recommended that the Australian Government should progressively relax the restrictions on the importation of second-hand passenger and light commercial vehicles.
- Durable goods are purchased with the expectations of using them and obtaining associated benefits over an extended period of time (MacKie-Mason & Metzler, 2009, p. 559). Motor vehicles are highly differentiated durable goods with variable lifetimes (Berkovec, 1985, p. 195).
- In many durable-goods industries, used products are traded in decentralised secondary markets that are not directly controlled by the manufacturers with motor vehicles being the most prominent example (Esteban & Shum, 2007, p. 331).
 - Transactions in secondary markets may occur because the quality of a motor vehicle deteriorates over time, and current owners sell their product in order to update to their preferred quality (Schiraldi, 2011, p. 266).
 - Alternatively, the level of required maintenance and/or the probability of failure may increase as the motor vehicle ages, making replacement of the current unit desirable (Schiraldi, 2011, p. 266).
- The existence of a secondary market introduces, in the form of used cars, a large number of imperfect substitutes to the new motor vehicles (Esteban & Shum, 2007, p. 331).
- There may be welfare gains for developing countries from the importation of second-hand vehicles because they are labour-intensive in their use, maintenance and repair relative to new vehicles due to relatively low labour costs in those countries.
 - However, the importation of second-hand vehicles into developed countries will not necessarily translate into welfare gains due to much higher labour costs.
- The overseas experience is mixed in relation to the impact on new motor vehicle sales in response to the opening up of a country's market to imports of second-hand motor vehicles, however, it is generally the case that it has a devastating effect on new motor vehicle sales the newer the imported second-hand vehicles.
- Perhaps the most relevant case study for the Australian situation is the experience of New Zealand which reduced its vehicle import tariffs from the mid-1980s and removed all tariffs on passenger and light commercial vehicles in 1998 (Productivity Commission, 2014, p. 158).
 - Second-hand imported vehicles rose from 2 per cent of new car registrations in 1984 to 69 per cent in 2003 and have been in excess of 50 per cent of new car registrations since that time (NZ Transport Agency, 2014).
- The major problem with the New Zealand light vehicle fleet is that the average age of passenger vehicles on the road is actually getting older.
 - The average age of passenger vehicles in New Zealand is just under 14 years that stands in marked contrast to Australia where the average age of passenger vehicles has stabilised at under 10 years.
- Academic research has confirmed there exists a strong relationship between vehicle age and accident injuries.

- If the average age of the Australian passenger vehicle fleet were to rise as a consequence of liberalising the importation of second-hand vehicles then this would imply a deterioration in the relative safety of vehicles on Australian roads.
- Another problem with an ageing motor vehicle fleet is that older vehicles generally have higher levels of noxious emissions.
 - As older vehicles tend to emit substantially higher levels of pollutants, liberalising trade may have a large impact on environmental quality in the importing country.
- A further problem with liberalising the importation of older second-hand vehicles is that it may threaten the continuous improvement in fuel economy and CO₂ emissions achieved over the past decade. This has two potentially detrimental effects:
 - First it may lead to an increase in CO₂ emissions that will undermine attempts to address anthropogenic climate change
 - Second, consumers may end up paying more for fuel if they purchase less fuel efficient second-hand vehicles if they fail to take adequate account of fuel economy in their purchasing decisions.
- Policies aimed at reducing greenhouse gas emissions may not achieve aggregate gains when fuel inefficient durable goods such as motor vehicles can be traded (Davis & Kahn, 2010, p. 61).
- A trade mark is a word, symbol, or other signifier used to distinguish a good or service produced by one firm from the goods or services of other firms (Landes & Posner, 1987, p. 268). Trade marks are used on goods or in connection with the marketing of goods (World Intellectual Property Organization, 2012, p. 12).
- Parallel imports are legitimately produced goods imported in from another country (W Lawyers, 2011, p. 1). The goods are manufactured with the authorisation or consent of the trade mark owners and subsequently imported in from another country by an unauthorised distributor.
- The parallel importing of trade marked goods is commonly referred to as grey marketing (Duhan & Sheffet, 1988, p. 76). Grey marketing involves the selling of trade marked products through channels of distribution that are not authorised by the trade mark holder.
- Products subject to grey marketing are of high status with an established brand name and image (Cross, Stephans, & Benjamin, 1990, p. 184). Therefore, additional promotional spending by grey marketers is not required; they can free ride on the promotion and service provided by the authorised distribution channels.
- Property rights refers to an owner's right to use a good or asset for consumption and/or income generation (referred to as use rights) (Besley and Ghatak, 2010, p. 4526).
- Intellectual property refers to creations of the mind: inventions; literary and artistic works; and symbols, names and images used in commerce (World Intellectual Property Organization, 2012a, p. 2). Trade marks are one particular form of intellectual property.
- Trade marks promote economic efficiency through reducing consumer search costs (Landes & Posner, 1988, p. 270).
 - Trade marks lower consumer search costs by providing consumers with a means for distinguishing between products that differ in quality but that, absent a brand name, would be difficult to distinguish at the point of purchase (Blair & Cotter, 1999, p. 13).

- The benefits of trade marks in reducing consumer search costs require that the producer of a trade marked good maintain a consistent quality over time and across consumers (Landes & Posner, 1988, p. 271). In this way, trade mark protection encourages expenditures on quality.
- In turn, a firm's incentive to invest resources in developing and maintaining a strong trade mark, such as through advertising, depends on its ability to maintain consistent product quality (Landes & Posner, 1987, p. 270).
 - Trade marks are valuable because they denote consistent quality, and a firm has an incentive to develop a trade mark only if it is able to maintain consistent quality.
- Once a reputation has been created the firm will obtain greater profits because repeat purchases and word-of-mouth references will generate higher sales and because consumers will be willing to pay higher prices for lower search costs and greater assurance of consistent quality (Landes & Posner, 1987, p. 270).
 - Thus firms with strong trade marks will command higher prices for their brands than other firms in the market, not because of any market power, but because the search costs associated with their brand are lower (Landes & Posner, 1988, p. 278).
- In addition to protecting the goodwill of trade mark owners, trade marks also serve a vital consumer protection role. While trade marks enable consumers to minimise search costs and obtain desired products with confidence that they will receive what they expect, they also enable sellers to capture investments made in securing goodwill with consumers (Grynberg, 2008, pp. 64-65).
- A free rider is someone who enjoys the benefits of someone else's investment without having to pay compensation (Elzinga & Mills, 2008, p. 1842).
- Free-riding on someone else's trade mark will, at little cost, capture some of the profits associated with a strong trade mark because some consumers will assume (at least in the short run) that the free rider's and the original trade mark holder's brands are identical (Landes & Posner, 1987, p. 270). This in turn will undermine the benefit created by the trade mark in the first instance of providing an incentive for a firm to improve the quality of their product (Landes & Posner, 1987, p. 280).
 - Because free riding makes it more costly for consumers to distinguish between a higher quality good and a lower quality good, it would lower the incentive for a firm to incur the added cost that would be necessary to produce higher quality.
- Free riding occurs in the context of parallel imports because unauthorised distributors obtain goods at prices that do not properly reflect the legitimate costs imposed on authorised distributors at various points in the distribution chain, such as pre-sale marketing and post-sale services – costs that are paid in full by authorised dealers (Barfield & Groombridge, 1998, p. 905).
- Permitting parallel importing of motor vehicles promotes free riding coupled with intrabrand competition.
 - The free rider's business policy uses discounted retail prices to attract shoppers whose demands are enhanced by the influence of the full-service retailer even though the free rider does not itself provide the retail service in question and so can undercut the full-service retailer's prices (Elzinga & Mills, 2010, p. 357). This is unsustainable as the full-service retailer cannot incur the extra expense of these services and still match the discounter's low price, and must cut back its marketing efforts.

- This reduction in retail service reduces demand for the manufacturer’s product and this produces detrimental consequences for consumers as well as for the manufacturer.
- Free riding can undermine the value-added services and activities that often lie at the heart of many firms’ sources of differentiation and competitive strategy in the marketplace (Antia, Bergen, & Dutta, 2004, p. 65).
 - In turn, the underprovision of services is the death knell of high-end brands, as customers that value service will abandon the brand in droves (Antia, Bergen, & Dutta, 2004, p. 65).
- The parallel importing of grey goods can damage the trade mark holder in several ways:
 - First, the actual quality of the grey good may be in question
 - Second, it can damage the domestic goodwill the trade mark owner and authorised dealer have developed (Liebeler, 1987, p. 755).
- Goodwill is developed through warranties, quality control procedures, service staff, inventory, available accessories, floor demonstrations, advertising and other consumer convenience offerings (Liebeler, 1987, p. 756). Damage to goodwill can be done in two ways:
 - First, the grey good importer can free ride on the domestic goodwill developed by the trade mark owner. These investments in goodwill are made in the expectation that the trade mark owner and retailer will receive a reward – more patronage by the consumers and part of this reward is stolen if consumers purchase grey market goods
 - Second, if the grey market importer does not provide the same services and conveniences that the trade mark owner provides there is a likelihood that the goodwill associated with the trade mark will be damaged.
 - This damage will hurt the trade mark owner because consumers will not value the trade mark as highly as they otherwise might.
- Markets will operate more efficiently when free riding is prevented (Liebeler, 1987, p. 757).
- Vertical restraints are any arrangement between firms operating at different levels of the manufacturing or distribution chain (the vertical part) that restricts the conditions under which such firms may purchase, sell, or resell (the restraint part) (Hahn, 2006, p. 1). One common type of vertical restraint is a geographical restriction such as an exclusive territory.
 - The exclusive territory for each retailer prevents intrabrand competition with other retailers (Church & Ware, 2000, p. 689).
- According to the European Commission (1997, p. 19), free riding can be solved by the imposition of exclusive territories by the producer.
- According to Judge Frank Easterbrook (1984, p. 141) of the US Court of Appeals for the Seventh Circuit, vertical restraints only raise competition concerns when they facilitate a cartel, such as an agreement among manufacturers or dealers to charge an elevated price. Judge Easterbrook (1984, p. 149) concludes that as long as there is competition among manufacturers to choose methods of distribution, the theoretical possibility of a reduction in welfare will not come to pass.
- Restrictions on parallel imports are the international equivalent of a ‘government supplied’ vertical restraint in the domestic market (Barfield & Groombridge, 1998, p. 920).
- The main argument in support of permitting parallel imports is to arbitrage away international price discrimination (Richardson, 2002, p. 234).

- However, price discrimination is not necessarily detrimental to welfare if it increases industry output. According to the Australian Competition and Consumer Commission (ACCC):

The ACCC considers that there can be significant economic efficiency and competition benefits resulting from price discrimination ... (Australian Competition and Consumer Commission, 2008, p. 552)

- Insisting on unencumbered parallel imports that arbitrage national price differences may well lead manufacturers to sharply curtail sales to certain countries (Malueg & Schwartzb, 1994, p. 192).
- According to Claude Barfield and Mark Groombridge (1998, p. 905) from the American Enterprise Institute:

The preponderance of economic evidence supports the view that controls on unauthorised imports in the exercise of intellectual property rights are, under most conditions, pro-competitive, in that such restraints not only reduce free-riding on pre-sales marketing and aftersales maintenance by unauthorised distributors, but also contribute to the growth of local copyright-based industries and related infrastructure.

- There is little evidence to suggest that Australian consumers are victims of any widespread international price discrimination in relation to passenger vehicles. The Federal Chamber of Automotive Industries (2014) has conducted a benchmarking project that compared the price and specification levels of various new motor vehicles available in the Australian market with equivalent models with a comparable right hand drive market in the United Kingdom and New Zealand and concluded:

Our vehicle price and specification comparison research shows that when comparing 'like-for-like' vehicles, in two representative markets (the UK and NZ) the vast majority of new cars are cheaper in Australia than overseas.

- The notion that trade marks confer some sort of monopoly or market power upon owners lies at the heart of permitting parallel imports of grey goods. However, this notion is completely false.
- A trade mark does not confer market power on the owner because they cannot prevent potential competitors from making the same or a similar product (Knoll, 1986, p. 152). As long as a competitor does not affix a confusingly similar trade mark to its product, it can manufacture and promote the same or a similar product.
- Firms with strong trade marks command higher prices for their brands than other firms in the market because the search costs associated with their brand are lower (Landes & Posner, 1988, p. 278).
- Another concern is that because restrictions on parallel imports eliminates intrabrand competition, then it should be scrutinised from a competition policy standpoint (Gallini & Hollis, 1999, p. 2). However, the balance of legal and economic opinion does not put much weight on intrabrand competition and places far greater importance on interbrand competition to ensure that consumers receive competitive prices. According to Professor Eleanor Fox (2001, p. 982) of New York University:

There is growing recognition in the world that rivalry between and among competing producers (“interbrand competition”) is the essence of competition. It is that interplay that tends to keep prices relatively close to costs, to provide choices for consumers, and to allocate resources to their best use in view of consumer demand. Intrabrand competition – a producer’s product competing against itself – cannot do this job.

- There is no compelling public policy case to permit parallel imports as there is evidence of robust interbrand competition in the Australian passenger vehicle market.
- Historically, trade mark law has existed primarily to protect against consumer deception that occurs when one party attempts to pass off its products as those of another (Dogan & Lemley, 2005, p. 463). The overriding problem with the parallel import of second-hand vehicles is the direct link between the trade mark owner’s product and the consumer has been broken because some extraneous third party has broken the nexus. As the trade mark owner can no longer guarantee the quality of a parallel imported vehicle, this leaves the consumer vulnerable to the risk of purchasing a ‘lemon’ or defective vehicle.
- Most consumers who purchase grey goods erroneously believe that they are buying products whose reliability, integrity and service, as symbolised by the trade mark, are maintained and guaranteed by the local trade mark owner (Gilbert, Ludwig, & Fortine, 1986, p. 111). A critical assumption is often that consumers receive the same goods and services by purchasing grey imports that they receive from authorised sellers (Staaf, 1987, p. 66). However, this is not necessarily the case.
 - If an imported grey motor vehicle is priced lower than a domestic alternative through the authorised channels but lacks the quality, specifications, warranty and support that the authorised product does then much of the benefit of lower prices is illusory.
 - The specification of motor vehicles sold in the domestic market may be entirely different to an imported grey motor vehicle originally destined for an overseas market.
 - Imported grey motor vehicles are not subject to the inspection, transit or quality controls of the local trade mark owner and their distributors (Gilbert, Ludwig, & Fortine, 1986, p. 110).
 - This raises the distinct possibility if not likelihood that imported grey motor vehicles may be of lower quality than those sourced through trade mark holder authorised channels.
- A consumer may be motivated to purchase an imported grey vehicle not just because of the perception that it is cheaper but also because they think they are obtaining genuine goods of comparable quality and specifications to those offered by authorised distributors. A claim to ‘genuineness’ of the vehicle in these circumstances will be confusing, if not misleading, where it is of inferior quality and/or has different specifications, or attracts inferior warranty and support in comparison to the authorised vehicle.
- Adverse selection is a problem of pre-contractual opportunism which gives people the opportunity to lie in the presence of private information prior to the initiation of a contract (Mohlo, 1997, p. 8).
 - The available evidence suggests that adverse selection is all-pervasive in relation to the sale of imported grey motor vehicles.

- A major concern with imported second-hand motor vehicles surrounds the provenance of the vehicle raising the possibility that consumers could be victims of fraud.
- Odometer fraud is the winding back of odometers in order to convey the impression a vehicle has travelled less distance or mileage than it has in reality. Odometer fraud has been a major problem in relation to imported second-hand vehicles from Japan.
- While imported grey motor vehicles may offer consumers the perception of cheaper prices delivered through arbitrage, any savings may turn out to be entirely illusory.
 - One major problem with imported grey vehicles is that they may be an entirely different specification from the imported models originally shipped from original equipment manufacturers. This means that parts and servicing could in turn prove problematic.
 - It has been reported the imported second-hand motor vehicles already sold in Australia often cost more to run than regular used cars because most body parts and many mechanical components need to be specially imported, which in turn drives up their insurance premiums (Dowling, 2014).
- The Productivity Commission recommended the progressive relaxation of restrictions on the wide-scale importation of second-hand passenger and light commercial vehicles based on the expectation that it would achieve net benefits for the community. However, the available evidence suggests that achieving such an outcome is far from assured.
 - Permitting the unrestricted parallel importation of second-hand motor vehicles, including virtually brand new cars, will not only subject motor vehicle manufacturers to free riding on their trade marks that in turn threatens the goodwill invested in their brands, but also poses a massive risk for consumers.
- The case for permitting the parallel importation of second-hand motor vehicles on competition grounds is extremely weak given there is little evidence of any widespread international price discrimination and the intensity of interbrand competition in the Australian motor vehicle market.

1 Introduction

In its review on Australia's automotive industry completed earlier this year, the Productivity Commission (2014, p. 32) recommended the Australian Government should progressively relax the restrictions on the importation of second-hand passenger and light commercial vehicles. This recommendation was predicated on the expectation that, in the long term, the progressive relaxation of restrictions on the wide-scale importation of second-hand passenger and light commercial vehicles would have net benefits for the community as a whole (Productivity Commission, 2014, p. 160).

The *Motor Vehicles Standards Act 1989* (MVSA) sets out national motor vehicle standards and regulates the importation and supply of new and second-hand road vehicles to the Australian market (Productivity Commission, 2014, p. 154). The importation of second-hand vehicles are restricted through the requirement to obtain a Vehicle Import Approval under the MVSA, without which no road vehicle may be imported into Australia.

Under the MVSA, applications for approval to place a used import plate (or to sell a used imported vehicle without such a plate) can only be made in respect of a single vehicle (Productivity Commission, 2014, p. 154). The Motor Vehicle Standards Regulations 1989 also prohibit automotive workshops from importing more than 100 used vehicles in each vehicle category in a 12-month period. Some second-hand vehicle imports can arrive virtually brand new from the country in which they were originally purchased.

Following on from the recommendation by the Productivity Commission, this report has been commissioned by the Federal Chamber of Automotive Industries (FCAI) to examine the implications arising from liberalising restrictions on second-hand imports of passenger vehicles entering Australia.¹

The views and opinions expressed in this report are entirely those of the authors.

2 Motor Vehicles as Durable Goods

Durable goods are purchased with the expectation of using them and obtaining associated benefits over an extended period of time (MacKie-Mason & Metzler, 2009, p. 559). Motor vehicles are highly differentiated durable goods with variable lifetimes (Berkovec, 1985, p. 195).

Consumer durable goods such as motor vehicles lose their value as they become older (Grubel, 1980, p. 781). According to Professor Herbert Grubel (1980, p. 782) of the Simon Fraser University in Canada, there are three causes as to why motor vehicles decline in value as they age. First, there is technical and stylistic obsolescence. Technical obsolescence arises from observed improvements in the power, comfort and reliability of cars and technological changes made to accommodate altered relative prices of fuel and wages of mechanics. Increased wages of mechanics have led to the use of higher quality manufacturing techniques, which while raising capital costs have lowered the need for labour in maintenance and repairs. Stylistic obsolescence is created by design changes which are partly functional, but mostly aesthetic. It has been contended that motor vehicles have a fashion component that falls in value the longer the vehicle has been on the market (Pashigian, Bowen, & Gould, 1995).

The second reason is that the expected cost of repairs increases with time (Grubel, 1980, p. 782). The expected cost of repairs is itself a function of the probability and cost of repairs, both of which

¹ The term passenger vehicle refers to both passenger motor vehicles and sports utility vehicles (SUVs).

are an increasing function of age simply because all car parts are subject to wear and tear and eventual functional breakdown.

The third cause is the increased risk of mechanical failure which has a disutility quite separate from the cost associated with the need to repair the causes of failure (Grubel, 1980, p. 782). This disutility arises from the discomfort, danger and loss of time associated with a breakdown of cars.

In many durable-goods industries, used products are traded in decentralised secondary markets that are not directly controlled by the manufacturers with motor vehicles being the most prominent example (Esteban & Shum, 2007, p. 331). Transactions in secondary markets may occur because the quality of a motor vehicle deteriorates over time, and current owners sell their product in order to update to their preferred quality (Schiraldi, 2011, p. 266). Alternatively, the level of required maintenance and/or the probability of failure may increase as the motor vehicle ages, making replacement of the current unit desirable (Schiraldi, 2011, p. 266).

The functions of the secondary markets for market vehicles is best described as “collect-repair-resell” (Pelletiere, 2003, p. 24).

The durability of motor vehicles and the existence of secondary markets for motor vehicles have important implications. The existence of a secondary market introduces, in the form of used cars, a large number of imperfect substitutes to the new motor vehicles (Esteban & Shum, 2007, p. 331). In addition, the presence of a secondary market also introduces an additional component – the resale value – to consumers’ valuations of new cars (Esteban & Shum, 2007, p. 332).

The owner of a motor vehicle has to decide as to whether to hold, sell or scrap the vehicle. Grubel (1980, p. 782) has suggested that in simple terms old machinery is generally scrapped when its operating costs exceed the total of new machinery including interest payments, depreciation and operating costs. Following on from this in the case of used cars, Grubel contends that used motor vehicles are scrapped when the discounted expected costs of repairs exceed the discounted costs of insurance, depreciation and interest.² Similarly, according to Berkovec (1985, p. 198), scrappage occurs when a vehicle has more value as scrap than as a working vehicle.

The 1998 Nobel Laureate in economics Amartya Sen (1962, p. 346) observed that given the rising cost of maintenance as machinery ages, machinery that is too expensive and unprofitable to maintain in the developed world will not be too expensive and thus profitable to maintain in the developing world given lower wage rates:

Since underdeveloped countries have cheap labour, and many of them ... even cheap *skilled* labour of certain types, the cost of maintenance may be relatively lower in these economies. This may explain why many underdeveloped economies may be ready to buy what the advanced economies find too expensive to maintain.

Following on from Sen, Grubel (1980, pp. 782-783) has identified four reasons as to why motor vehicles depreciate more slowly in developing countries. First and probably most significant is the lower cost of labour incurred in repairing motor vehicles in developing countries. Second, lower average incomes in developing countries leading to lower demand for luxury features. Third, the value of older cars is depressed less rapidly by the introduction of new models in the developing than in industrial countries. Fourth, the lower breakdown opportunity costs in developing countries due to lower average levels of human capital. Given that motor vehicles depreciate more slowly in

² The use of an appropriate discount rate brings future expected costs back to present day values.

developing countries led Grubel to conclude there would be substantial welfare gains for developing countries through liberalising the importation of used motor vehicles.

There may be welfare gains for developing countries from the importation of second-hand vehicles because they are labour-intensive in their use, maintenance and repair relative to new vehicles due to relatively low labour costs in those countries. However, the importation of second-hand vehicles into developed countries will not necessarily translate into welfare gains due to much higher labour costs.

2.1 Japanese Second-Hand Vehicle Exports

A major source of second-hand passenger vehicles across the world is Japan. The mass export of Japanese second-hand vehicles probably commenced during the 1970s (Clerides, 2008, p. 324). This export market is an aberration created by Japanese road-worthiness rules so tight that many cars are put off the road at three years, most at five years, and the rest at seven years (Mellor, 1999).

New cars in Japan are sold with a 'shaken', a fitness warranty that is valid for three years (Clerides, 2008, p. 324). For the shaken to be renewed at the end of this period the vehicle has to go through a rigorous and costly inspection process. In addition to financial cost, there are additional non-pecuniary costs in terms of time and further renewals of the shaken are required at two-year intervals. In turn, most vehicle owners in Japan decide in favour of selling after five or seven years, the time when the second or the third shaken is due when the remaining value of an older vehicle is almost zero (Janischweski, Henzler, & Kahlenborn, 2003, p. 49). The high renewal cost leads many Japanese consumers to replace their vehicles after the shaken expires, thus creating a large supply of second-hand cars (Clerides, 2008, p. 234).

3 Overseas Experience with Second-Hand Vehicle Imports

The overseas experience is mixed in relation to the impact on new motor vehicle sales in response to the opening up of a country's market to imports of second-hand motor vehicles, however, it is generally the case that it has a devastating effect on new motor vehicle sales the newer the imported second-hand vehicles.

In accordance with its obligations under the North American Free Trade Agreement (NAFTA), in August 2005 Mexico issued a decree allowing vehicles 10-15 years old to be imported from the United States and Canada (Davis & Kahn, 2010, p. 59). While a vigorous trade flow emerged that saw over 2.5 million second-hand vehicles exported from the United States to Mexico between 2005 and 2008, there is no evidence the increased availability of second-hand vehicles decreased sales of new vehicles in Mexico. However, it should be noted the liberalisation occurred in relation to vehicles that were 10-15 years old that were arguably not particularly close substitutes for new motor vehicles and that vehicle retirement rates in Mexico are very low, suggesting the main impact of the liberalisation was to increase the level of vehicle ownership.

In 1993 Cyprus relaxed restrictions on the importation of second-hand passenger vehicles by raising the maximum allowable age of an imported vehicle from two years to five years facilitating the mass importation of second-hand passenger vehicles from Japan (Clerides, 2008, p. 323). Registrations of second-hand passenger vehicle imports shot up from 7.2 per cent of all first-time vehicle registrations in 1992 to a high of 72.4 per cent in 1998 before abating. The influx of Japanese second-hand passenger vehicles was accompanied by a sharp decline in the sales of new Japanese passenger vehicles but had very little impact on the sale of vehicles from other (mostly European) countries. While Sofronis Clerides (2008, p. 323) from the University of Cyprus has estimated the welfare gains from the influx of second-hand cars averaged close to US\$2,000 per purchaser per year

during the period 1997–2000, most of the welfare gains were due to the introduction of new products rather than to price decreases for existing products. Arguably such welfare gains may not be available in the Australian context where there are more brands available than in the United Kingdom or the United States.³

As part of Poland's accession to the European Union (EU) in May 2004, it fully liberalised the importation of second-hand motor vehicles (Chu & Delgado, 2009, p. 353). Following the liberalisation there was a flood of second-hand vehicle imports into Poland from Western Europe, particularly Germany, that became a source of major substitution for new vehicle sales. Prior to Poland's EU accession in 2004, the 1994-2003 average ratio of used vehicle imports to new vehicle sales was 0.3, or, in other words, 300 used vehicle imports for every thousand new vehicles sold. In 2004 following liberalisation the ratio reached 2.3, climbing to 3.1 in 2005 before stabilising at around 2.8 in 2006 and 2007. In 2004 new car sales fell 6.5 per cent on the previous year, and fell further by 23 per cent in 2005.

Perhaps the most relevant case study for the Australian situation is the experience of New Zealand. New Zealand reduced its vehicle import tariffs from the mid-1980s and removed all tariffs on passenger and light commercial vehicles (excluding motor homes and ambulances) in 1998 (Productivity Commission, 2014, p. 158). As a consequence of the change, vehicle imports grew strongly, particularly second-hand imported vehicles. Reduced tariffs on imported vehicles coupled with the growing flood of second-hand Japanese imported vehicles led to the contraction and eventual demise of the local assembly industry by the end of the 1990s (Pawson, 2012a).

According to Professor Eric Pawson (2012) of the University of Canterbury, the growing importation of second-hand Japanese cars gave New Zealanders access to well-priced late model cars. Based on a survey in 2011, economic consultant Gene Tunny (2011, p. 19) found that a six-year-old Toyota Corolla with around 100,000 km on the odometer sold for around \$A10,800 in New Zealand compared with \$13,100 in Australia. However, the Productivity Commission (2014, p. 158) has highlighted the limited sample size, and that data was taken from online car advertisements, and so might differ from actual sale prices.

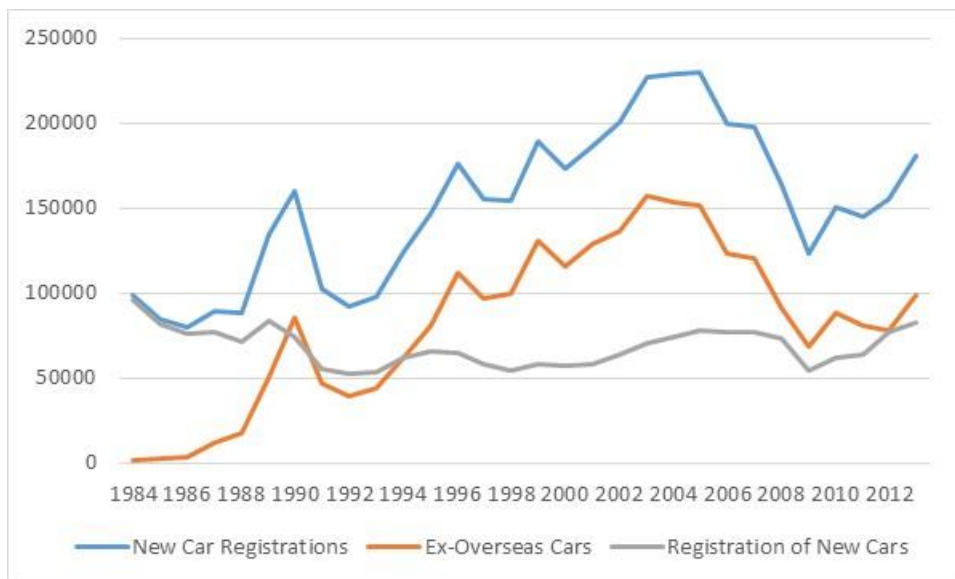
Australian Automotive Intelligence (2014, p. 66) approximately replicated the Tunny survey in May 2014, including eight cars manufactured from 2005 to 2011 using Glass's Guide data for Australia and found the prices in Australia were lower for all eight cars than in New Zealand. Following further analysis, Australian Automotive Intelligence (2014, p. 66) attributed any price differences between Australia and New Zealand to fluctuations in the exchange rate and while acknowledging the limitations of its own analysis concluded:

... it raises considerable doubt on the value of the Tunny analysis and surprises that the [Productivity Commission] cited the work.

In New Zealand second-hand imported vehicles rose from 2 per cent of new car registrations in 1984 to 69 per cent in 2003 and have been in excess of 50 per cent of new car registrations since that time (NZ Transport Agency, 2014).

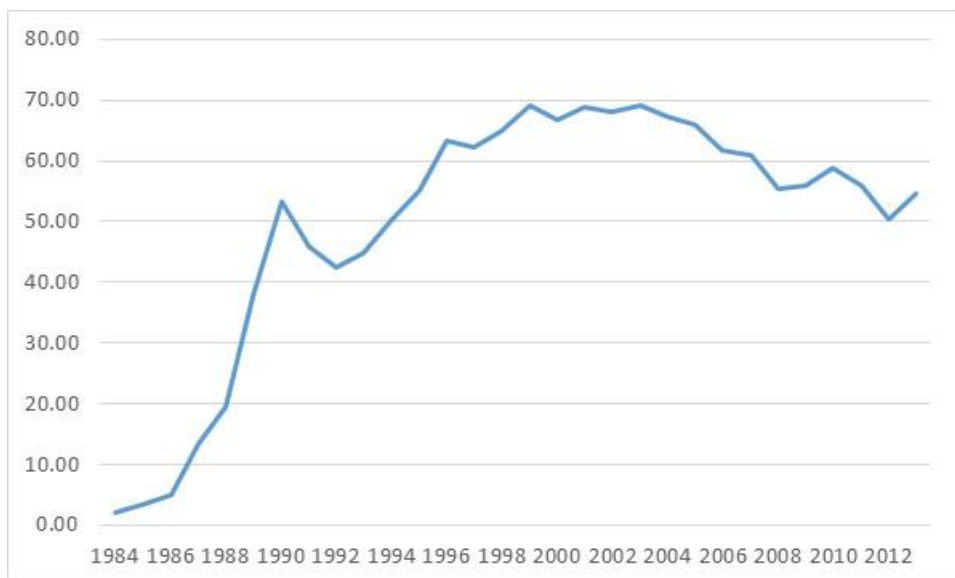
³ There are some 67 brands available in Australia as compared to 53 brands in the United Kingdom and 51 brands in the United States (Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, 2013).

Figure 1 New Zealand New Car Registrations, 1984-2013



Source: NZ Transport Agency (2014).

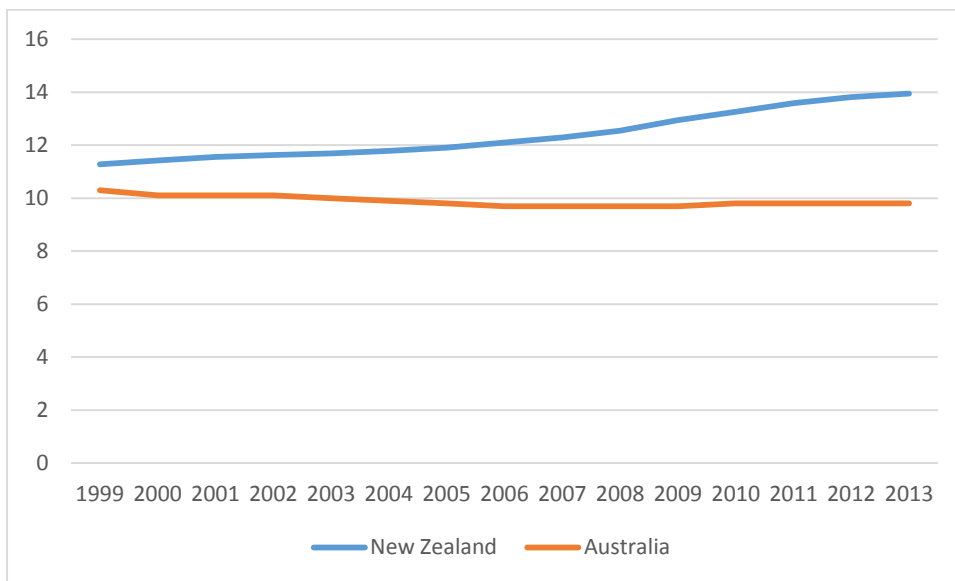
Figure 2 Proportion of New Zealand New Car Registrations previously ex-overseas cars, 1984-2013



Source: NZ Transport Agency (2014).

The major problem with the New Zealand light vehicle fleet is that the average age of passenger vehicles on the road is actually getting older. The average age of passenger vehicles in New Zealand is just under 14 years that stands in marked contrast to Australia where the average age of passenger vehicles has stabilised at under 10 years.

Figure 3 Average Age of Light Vehicles in New Zealand and Australia



Sources: NZ Transport Agency (2014); Australian Bureau of Statistics (2014).

Notes: Figures for New Zealand taken from the end of the calendar year while figures for Australia taken from the closest point to the end of the calendar year.

Increasing the average age of the motor vehicle fleet has a number of negative spillover effects, including the following:

- a deterioration in the active and passive safety attributes of motor vehicles
- higher levels of noxious emissions
- higher greenhouse gas emissions and a deterioration in fuel economy.

According to the Policy Handbook for Regulation of Imported Second-hand Vehicles:

The phenomenon of the growing flow of second-hand vehicles is relevant because [international second-hand vehicles] are a growing share of the fleet of many countries, and contribute to high fuel consumption, low air quality and road-safety issues faced by these countries. (Macias, Aguilar, Schmid, & Francke, 2013, p. 56)

3.1 Vehicle Safety

Academic research has confirmed there exists a strong relationship between vehicle age and accident injuries. According to a joint study by the Institute for International Health at the University of Sydney and the Division of Community Health at the University of Auckland based on data from Auckland, there is an increased risk of car crash injury for occupants of older vehicles (Blows, et al., 2003). This has been attributed to several mechanisms. Older cars might have a greater primary risk of being involved in a crash as there is evidence that older cars are more likely than newer cars to develop safety defects such as tyre and brake failure, which could cause a crash. As well as causing a crash, safety defects may increase the severity of the crash when it occurs. Older cars are also much less likely than newer cars to have safety features that are designed to protect occupants in the event of a crash.

Crashworthiness ratings rate the relative safety of vehicles in protecting their own occupants by examining injury outcomes to drivers in real world crashes reported to police (Newstead, Watson, & Cameron, 2013, p. 2). Based on studies of Australian and New Zealand data, crashworthiness ratings

undergo continuous improvement with the year of manufacture of the vehicle. However, if the average age of the Australian passenger vehicle fleet were to rise as a consequence of liberalising the importation of second-hand vehicles then this would imply a deterioration in the relative safety of vehicles on Australian roads. In this regard, the Australasian New Car Assessment Program (ANCAP) (2014) has warned:

... the potential of a flood of import of older used non approved vehicles from a range of countries will significantly reduce the safety of the Australian fleet.

Previous research on vehicle safety has focused on passive safety features which refers to components of the vehicle (primarily airbags, seatbelts and the physical structure of the vehicle) that help to protect occupants during a crash. However, active safety features, technology assisting in the prevention of a crash such as autonomous emergency braking, fatigue detection, lane keeping with active steering, is now being rolled out in the latest new vehicles.

3.2 Noxious Emissions

The motor vehicle fleet is a significant emitter of air pollutants in urban Australia through the build-up of particulate matter (PM) – especially fine and ultrafine particles – nitrogen oxides, along with carbon monoxide, hydrocarbons and ground level ozone (Department of Infrastructure and Transport, 2010).

Hydrocarbon emissions result when fuel molecules in the engine do not burn or burn only partially (U.S. Environmental Protection Agency, 2007). Under the high pressure and temperature conditions in an engine, nitrogen and oxygen atoms in the air react to form various nitrogen oxides (U.S. Environmental Protection Agency, 2007). Hydrocarbons react in the presence of nitrogen oxides and sunlight to form ground-level ozone, a major component of smog (U.S. Environmental Protection Agency, 2007). Carbon monoxide is a product of incomplete combustion and occurs when carbon in the fuel is partially oxidised rather than fully oxidised to carbon dioxide (U.S. Environmental Protection Agency, 2007). These noxious vehicle emissions can lead to significant health impacts on people, particularly in urban areas (Department of Infrastructure and Transport, 2010, p. 23).

Studies conducted in cities in the US, Europe, Australia and New Zealand have repeatedly found associations between short-term increases in ambient levels of PM and daily mortality, and cardiovascular and respiratory morbidity (Department of Infrastructure and Transport, 2010, p. 82). Studies of human populations exposed to high concentrations of particles and laboratory studies of animals and humans show that PMs represent the biggest concern for human health (Macias, Aguilar, Schmid, & Francke, 2013, p. 52). The smallest particles pose the greatest health risk, because they can be aspirated deep into the lungs with each breath and can evade the respiratory system's natural cleansing abilities.

Ambient levels of ozone are linked with increases in mortality and morbidity, including hospital admissions and emergency department attendances, exacerbation of asthma, decreases in lung function and increases in respiratory symptoms (Department of Infrastructure and Transport, 2010, p. 84). Ozone causes health problems because it damages lung tissue, reduces lung function, and predisposes the lungs to sensitivity to other irritants (Macias, Aguilar, Schmid, & Francke, 2013, p. 50). This decrease in lung function is generally accompanied by symptoms including chest pain, coughing, sneezing, and pulmonary congestion. Scientific evidence indicates that ambient levels of ozone not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well.

Carbon monoxide reduces the flow of oxygen in the bloodstream and is particularly dangerous to persons with heart disease (U.S. Environmental Protection Agency, 2007). When carbon monoxide enters the bloodstream, it reduces the blood's ability to carry oxygen to the body's organs and tissues. Overexposure may be fatal (Macias, Aguilar, Schmid, & Francke, 2013, p. 51). Exposure to elevated carbon monoxide levels can cause impairment of visual perception, manual dexterity, learning ability, and performance of complex tasks.

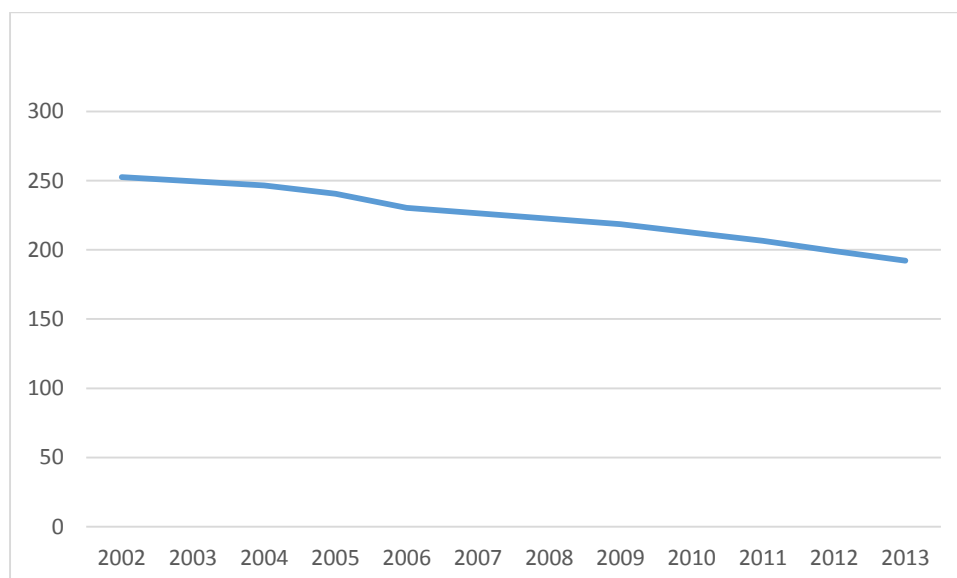
The problem with an ageing motor vehicle fleet is that older vehicles generally have higher levels of noxious emissions. This is due to several factors, including the increasing stringency of emission standards over time and the deterioration (degradation) in the performance of emission control technology (e.g., catalytic converters) with increasing age and accumulated mileage (Davis T. , 2013). As older vehicles tend to emit substantially higher levels of pollutants, liberalising trade may have a large impact on environmental quality in both importing and exporting countries (Davis & Kahn, 2010, p. 59).

3.3 Greenhouse Gas Emissions and Fuel Economy

Carbon dioxide (CO₂) emissions are related to fuel-economy. An improvement in fuel-economy means that light motor vehicles will travel further per amount of fuel consumed. CO₂ emissions are directly proportional to fuel economy – each 1% increase (decrease) in fuel consumption results in a corresponding 1% increase (decrease) in carbon dioxide emissions (US Environmental Protection Agency, Office of Transportation and Air Quality, 2000, p. 2).

Through the application of new technology the fuel economy of motor vehicles has undergone continuous improvement. New passenger and light commercial vehicles sold in Australia have recorded, on average, a 2.4 per cent year-on-year reduction in CO₂ emissions per kilometre over the past decade (National Transport Commission, 2014).

Figure 4 National Average CO₂ Emissions for New Passenger and Light Commercial Vehicles, 2002 to 2013 (CO₂ grams per kilometre)



Source: National Transport Commission (2014).

The problem with liberalising the importation of older second-hand vehicles is that it may threaten the continuous improvement in fuel economy and CO₂ emissions achieved over the past decade. This has two potentially detrimental effects. First it may lead to an increase in CO₂ emissions that will

undermine attempts to address anthropogenic climate change.⁴ Second, consumers may end up paying more for fuel if they purchase less fuel efficient second-hand vehicles if they fail to take adequate account of fuel economy in their purchasing decisions.⁵ Policies aimed at reducing greenhouse gas emissions may not achieve aggregate gains when fuel inefficient durable goods such as motor vehicles can be traded (Davis & Kahn, 2010, p. 61).

4 Trade Marks, Parallel Imports and Grey Goods

A trade mark is a word, symbol, or other signifier used to distinguish a good or service produced by one firm from the goods or services of other firms (Landes & Posner, 1987, p. 268). Trade marks are used on goods or in connection with the marketing of goods (World Intellectual Property Organization, 2012, p. 12).

Parallel imports are legitimately produced goods imported in from another country (W Lawyers, 2011, p. 1). The goods are manufactured with the authorisation or consent of the trade mark owners and subsequently imported in from another country by an unauthorised distributor. The goods may be described as being imported in 'parallel' to the authorised distribution network, hence the reference to parallel imports (Rothnie, 1993, p. 1).

The parallel importing of trade marked goods is commonly referred to as grey marketing (Duhan & Sheffet, 1988, p. 76). Grey marketing involves the selling of trade marked products through channels of distribution that are not authorised by the trade mark holder. Grey goods are in contrast with the black market that deals in stolen or counterfeit goods.

There have been two competing principles of universality and territoriality when determining whether a domestically registered trade mark has been infringed by the parallel importation of a grey good. The theory behind the universality principle is that by releasing the product covered by the trade mark onto the market anywhere in the world, the owner of the right has obtained the benefit. It is then inferred that sales abroad constitute implied consent from the owner for the trade marked goods to be imported. Due to recognition of the shortcomings of relying on such implied consent, the principle of international exhaustion was developed to supplement the principle of universality.

The theory behind the principle of territoriality is concerned with whether the domestic right holder of the trade mark has authorised the sale of the specific goods in question within the domestic territory. Under this principle no inferences are drawn from the fact that the domestic owner may have authorised the sale of the goods elsewhere. The local market is separate from overseas markets and the trade mark owner is entitled to decide where, how and in what quantity the mark will be exploited.

Three conditions are required for the development of grey markets (Duhan & Sheffet, 1988, p. 76). First, the product in question must be available in other markets (eg overseas) otherwise grey marketers would have no source of supply. Second, trade barriers must be low enough to enable parallel importers to shift the product from one market into another market. Third, the price differential between various markets must be of sufficient magnitude to provide the incentive to earn a profit for grey marketers.

⁴ To this end it is noted the Australian Government (2014) is committed to reducing greenhouse gas emissions to five per cent below 2000 levels by 2020.

⁵ The term *behavioural failure* has used to describe the situation where individuals do not make cost effective decisions in relation to energy efficiency.

Products subject to grey marketing are of high status with an established brand name and image (Cross, Stephans, & Benjamin, 1990, p. 184). Therefore, additional promotional spending by grey marketers is not required; they can free ride on the promotion and service provided by the authorised distribution channels.

4.1 Property Rights and Trade Marks

Professor Harold Demsetz (1966, p. 62) of the University of California at Los Angeles has described some of the characteristics of private property in the following terms:

Crucially involved is the notion that individuals have control over the use to which scarce resources (including ideas) can be put, and that this right of control is saleable or transferable. A private property right system requires the prior consent of “owners” before their property can be affected by others.

Property rights refers to an owner’s right to use a good or asset for consumption and/or income generation (referred to as use rights) (Besley and Ghatak, 2010, p. 4526). It can also include the right to transfer property to another party, in the form of a sale, gift, or bequest (referred to as transfer rights). A property right also usually conveys the right to contract with other parties by renting, pledging, or mortgaging a good or asset, or by allowing other parties to use it. A property right also includes the right to exclude others and legal protection against trespass.

Property rights along with markets are critical economic institutions in society. Daron Acemoglu and Simon Johnson of the Massachusetts Institute of Technology and James Robinson of Harvard University have outlined the importance of economic institutions and property rights in the following terms:

Economic institutions are important because they influence the structure of economic incentives in society. Without property rights, individuals will not have the incentive to invest in physical or human capital or adopt more efficient technologies (Acemoglu, Johnson, & Robinson, 2005).

There are several ways in which property rights promote economic progress. Property rights encourage wise stewardship (Gwartney, Stroup, & Walker, 1993). If property owners fail to maintain their property or if they allow it to be abused or damaged, they will bear the consequences in the form of a decline in its value. Property ownership also encourages people to develop their property and use it productively. In addition, property ownership promotes the wise development and conservation of resources for the future.

One of the key roles of property rights is to facilitate exchange and allow producers and consumers to exploit gains from trade (Besley & Ghatak, 2010, p. 4534). Without effective property rights, potentially gainful trades will be lost. In a market neither buyers nor sellers are forced into an exchange, hence an exchange will only occur if it is mutually advantageous for both parties. The formal property system fixes the economic potential of assets. For example, formal property can be used as a collateral for a loan, as equity exchanges for investment, or as an address for collecting debts, rates and taxes (de Soto, 2000, p. 58). Fixing the economic potential of property also makes the asset fungible – it can be easily combined, divided, mobilised and used in trade like any other commodity, capable of being exchanged, which stimulates business deals (de Soto, 2000, p. 55; Wensing & Taylor, 2012; Deininger, 2004).

Effective property rights also improve the ability of borrowers to pledge their assets as collateral, thereby enabling them to relax any credit constraint they may be facing (Besley & Ghatak, 2010, p. 4537).

Lack of effective property rights has potentially four adverse effects on economic activity (Besley and Ghatak, 2010, p. 4528). The first is expropriation risk – insecure property rights imply that individuals and organisations may fail to realise the fruits of their investment and efforts. Second, insecure property rights lead to costs that individuals and organisations have to incur to defend their property which represents a waste of resources. The third is a failure to facilitate gains from trade – a productive economy requires that assets are used by those who can do so most productively which secure property help to facilitate. The fourth is the use of property in supporting other transactions.

Intellectual property refers to creations of the mind: inventions; literary and artistic works; and symbols, names and images used in commerce (World Intellectual Property Organization, 2012a, p. 2). Intellectual property rights are like any other property right in that they allow creators, or owners, to benefit from their own work or investment in a creation. Trade marks are one particular form of intellectual property. The protection of trade marks ensures that the owners of marks have the exclusive right to use them to identify goods or services, or to authorise others to use them in return for payment (World Intellectual Property Organization, 2012a, p. 9). Without the right of exclusion, a trade mark will have little or no market value unless the owner can exclude others from its use (Staaf, 1987, p. 44).

4.2 Trade Marks Promote Economic Efficiency and Consumer Protection

Professor William Landes of the University of Chicago and legal scholar Judge Richard Posner of the US Court of Appeals for the Seventh Circuit (1987, pp. 265-266) have contended that trade mark law can best be explained as trying to promote economic efficiency. Similarly, according to US lawyer Lars Liebler (1987, p. 755), trade marks help to promote economic efficiency by giving the producer an incentive to produce quality goods, knowing that consumers will be able to identify and rely upon them.

Trade marks promote economic efficiency through reducing consumer search costs (Landes & Posner, 1988, p. 270). Trade marks lower consumer search costs by providing consumers with a means for distinguishing between products that differ in quality but that, absent a brand name, would be difficult to distinguish at the point of purchase (Blair & Cotter, 1999, p. 13). Trade marks accomplish this goal by conferring upon the trade mark owner the right to exclude others from using the same or a similar mark on the same or related products or services, in cases in which such use would be likely to cause confusion as to source, sponsorship, or affiliation (Blair & Cotter, 1999, p. 13).

The benefits of trade marks in reducing consumer search costs require that the producer of a trade marked good maintain a consistent quality over time and across consumers (Landes & Posner, 1988, p. 271). In this way, trade mark protection encourages expenditures on quality. Rather than investigating the attributes of all goods, the consumer may find it less costly to search by identifying the relevant trade mark and purchasing the corresponding brand. For this strategy to be efficient, however, not only must it be cheaper for the consumer to search for the right trade mark than for the desired attributes of the good, but past experience must be a good predictor of the likely outcome of current consumption choices. Thus, the brand must exhibit consistent quality through time. According to Landes and Posner (1987, p. 269):

... a trade mark conveys information that allows the consumer to say to himself, "I need not investigate the attributes of the brand I am about to purchase because the trade mark is a shorthand way of telling me that the attributes are the same as that of the brand I enjoyed earlier."

In turn, a firm's incentive to invest resources in developing and maintaining a strong trade mark, such as through advertising, depends on its ability to maintain consistent product quality (Landes & Posner, 1987, p. 270). Trade marks are valuable because they denote consistent quality, and a firm has an incentive to develop a trade mark only if it is able to maintain consistent quality. If a brand's quality is inconsistent, then consumers will learn that the trade mark does not enable them to relate their past to future consumption experiences and the branded product will then be like a good without a trade mark; the trade mark will not lower search costs, so consumers will be unwilling to pay more for the branded than for the unbranded good (Landes & Posner, 1988, pp. 271-272). As a result, the firm will not earn a sufficient return on its expenditures promoting the trade mark to justify the expenditures. Similarly, a firm with a valuable trade mark would be reluctant to lower the quality of its brand because it would suffer a capital loss on its investment in the trade mark.

Once a reputation has been created the firm will obtain greater profits because repeat purchases and word-of-mouth references will generate higher sales and because consumers will be willing to pay higher prices for lower search costs and greater assurance of consistent quality (Landes & Posner, 1987, p. 270). Thus firms with strong trade marks will command higher prices for their brands than other firms in the market, not because of any market power, but because the search costs associated with their brand are lower (Landes & Posner, 1988, p. 278). A firm possesses market power when it can behave persistently in a manner different from the behaviour that a competitive market would enforce on a firm facing otherwise similar cost and demand conditions. (Kaysen & Turner, 1959, p. 75).

The expenditures that are invested in trade marks also signal information to consumers on what firms have at stake if the quality is defective (Staaf, 1987, p. 46). This investment can be interpreted as a *performance bond* that is forfeited if future and repeat sales are not realised (Staaf, 1987, p. 46).

Judge Frank Easterbrook of the US Court of Appeals for the Seventh Circuit has succinctly summarised the benefits of trade marks in the following terms:

Trade marks help consumers to select goods. By identifying the source of the goods, they convey valuable information to consumers at lower costs. Easily identified trade marks reduce the costs consumers incur in searching for what they desire, and the lower the costs of search the more competitive the market. A trade mark also may induce the supplier of goods to make higher quality products and to adhere to a consistent level of quality.⁶

According to Judge Easterbrook, a trade mark is a valuable asset, part of the 'goodwill' of a business.⁷ Firms create goodwill in their trade mark through investing in the following activities: extensive brand advertising; launching campaigns; promotional activities including sales force training; external promotions such as trade show exhibits and sponsorship of sporting or other events; research and development operations; market research; test marketing; sales forces; provision of replacement parts and accessories; warranty service departments and service centres (Gilbert, Ludwig, & Fortine, 1986, pp. 111-112).

⁶ Scandia Down Corp. v. Euroquilt, Inc., 772 F.2d 1423 (7th Cir. 1985) at 1429.

⁷ *ibid.*

In addition to protecting the goodwill of trade mark owners, trade marks also serve a vital consumer protection role. The evolution of trade mark law has been concerned with protecting both sellers from loss due to deceptive practices as well as the public from being deceived (Bone, 2006, p. 560). While trade marks enable consumers to minimise search costs and obtain desired products with confidence that they will receive what they expect, they also enable sellers to capture investments made in securing goodwill with consumers (Grynberg, 2008, pp. 64-65). In the Australian context, this was outlined in the Second Reading Speech that accompanied the introduction of the *Trade Marks Bill 1995*:

By granting the owner of a registered trade mark the exclusive right to use, or authorise others to use, their trade mark, Australia's trade marks law serves two complementary objectives—first, identification and protection of a business's products and, second, protection of the consumer.

In relation to the first objective, the value of a trade mark to its owner can be enormous in terms of the reputation and goodwill associated with the trade mark. ...

In terms of the second objective, trade marks also provide certainty to consumers by indicating the trade source of goods or services. Through use, consumers can also come to associate a trade mark with the quality of a particular good or service. ...

Because consumers make purchasing decisions based on the trade marks associated with goods or services, trade marks legislation, as well as trade practices and related legislation, provide appropriate checks and balances to ensure that use of trade marks do not deceive or confuse consumers. Quite obviously, trade marks are a vital link between the owner of the trade mark, the owner's products, and consumers. (House of Representatives, 1995, pp. MC 1909-1910)

4.3 Free riding on Trade Marks

Absent of legal protection, the cost of duplicating someone else's trade mark is small – the cost of duplicating a label or design where the required inputs are widely available (Landes & Posner, 1987, p. 270). The stronger the brand the greater the incentive to incur this cost.

A free rider is someone who enjoys the benefits of someone else's investment without having to pay compensation (Elzinga & Mills, 2008, p. 1842).

Free riding on someone else's trade mark will, at little cost, capture some of the profits associated with a strong trade mark because some consumers will assume (at least in the short run) that the free rider's and the original trade mark holder's brands are identical (Landes & Posner, 1987, p. 270). This in turn will undermine the benefit created by the trade mark in the first instance of providing an incentive for a firm to improve the quality of their product (Landes & Posner, 1987, p. 280). Because free riding makes it more costly for consumers to distinguish between a higher quality good and a lower quality good, it would lower the incentive for a firm to incur the added cost that would be necessary to produce higher quality. In the absence of legal protections, Landes and Posner (1987, p. 270) have warned of the devastating impact associated with free riding on trade marks:

... free riding will eventually destroy the information capital embodied in a trade mark, and the prospect of free riding may therefore eliminate the incentive to develop a valuable trade mark in the first place.

Aside from counterfeiting and piracy, free riding also occurs in the context of parallel imports. In this case, free riding occurs because unauthorised distributors obtain goods at prices that do not

properly reflect the legitimate costs imposed on authorised distributors at various points in the distribution chain, such as pre-sale marketing and post-sale services-costs that are paid in full by authorised dealers (Barfield & Groombridge, 1998, p. 905).

4.4 Parallel Importing is Free Riding

Permitting parallel importing of motor vehicles promotes free riding coupled with intrabrand competition. In the case of intrabrand competition, the free rider's business policy uses discounted retail prices to attract shoppers whose demands are enhanced by the influence of the full-service retailer even though the free rider does not itself provide the retail service in question and so can undercut the full-service retailer's prices (Elzinga & Mills, 2010, p. 357). This is unsustainable as the full-service retailer cannot incur the extra expense of these services and still match the discounter's low price, and must cut back its marketing efforts. This reduction in retail service reduces demand for the manufacturer's product and this produces detrimental consequences for consumers as well as for the manufacturer.

The ability of low-price retailers to free ride on the efforts of the high-service retailer may lower the high-service retailer's incentives to offer such services, and may result in lower service and output (United States Government, 2013, p. 5).

Free riding can undermine the value-added services and activities that often lie at the heart of many firms' sources of differentiation and competitive strategy in the marketplace (Antia, Bergen, & Dutta, 2004, p. 65). In turn, the underprovision of services is the death knell of high-end brands, as customers that value service will abandon the brand in droves (Antia, Bergen, & Dutta, 2004, p. 65).

There are two ways in which an importer can profit through the importation of grey goods (Liebeler, 1987, p. 754). First, the importer, without making any investment in the reputation of the goods, can free ride on the existing domestic reputation of the goods. Second, the importer can free ride on the service offerings that the authorised importer (the trade mark holder) makes to its customers.

The parallel importing of grey goods can damage the trade mark holder in several ways. First, the actual quality of the grey good may be in question which is dealt with later in this report. Second, it can damage the domestic goodwill the trade mark owner and authorised dealer have developed (Liebeler, 1987, p. 755).

Goodwill is developed through warranties, quality control procedures, service staff, inventory, available accessories, floor demonstrations, advertising and other consumer convenience offerings (Liebeler, 1987, p. 756). Damage to goodwill can be done in two ways. First, the grey good importer can free ride on the domestic goodwill developed by the trade mark owner. These investments in goodwill are made in the expectation that the trade mark owner and retailer will receive a reward – more patronage by the consumers and part of this reward is stolen if consumers purchase grey market goods. Second, if the grey market importer does not provide the same services and conveniences that the trade mark owner provides there is a likelihood that the goodwill associated with the trade mark will be damaged. This damage will hurt the trade mark owner because consumers will not value the trade mark as highly as they otherwise might.

Markets will operate more efficiently when free riding is prevented (Liebeler, 1987, p. 757).

4.5 Vertical Restraints to Prevent Free Riding

Vertical restraints are any arrangement between firms operating at different levels of the manufacturing or distribution chain (the vertical part) that restricts the conditions under which such firms may purchase, sell, or resell (the restraint part) (Hahn, 2006, p. 1). One common type of

vertical restraint is a geographical restriction such as an exclusive territory. The exclusive territory for each retailer prevents intrabrand competition with other retailers (Church & Ware, 2000, p. 689).

According to the European Commission (1997, p. 19), free riding can be solved by the imposition of exclusive territories by the producer. Similarly, the US Government (2013, p. 5) has observed the inefficiencies created by free riding retailers can potentially be addressed by vertical restraints such as exclusive territories.

The purpose and the effect of vertical restraints is to reduce intrabrand competition and raise dealers' margins (Hay, 1987, p. 27). As such, one might naively conclude that such restraints will necessarily raise retail prices and must therefore be anticompetitive in that it leaves consumers of the product worse off (Hay, 1987, pp. 27-28). For instance, those who want more services may end up increasing the price and inflicting needless losses on those who don't (Easterbrook, 1984, p. 149). Those who do not need or like the services added by the restricted dealing are made worse off, and their losses may exceed the gains of the consumers who appreciate what restricted dealing does.

According to Judge Easterbrook (1984, p. 141), vertical restraints only raise competition concerns when they facilitate a cartel, such as an agreement among manufacturers or dealers to charge an elevated price.⁸ This will only occur where there are (1) few dealers; (2) few manufacturers; (3) homogeneous product; and (4) easy policing of a cartel agreement (Easterbrook, 1984, p. 142). Judge Easterbrook (1984, p. 149) concludes that as long as there is competition among manufacturers to choose methods of distribution, the theoretical possibility of a reduction in welfare will not come to pass.

Similarly, according to Professor George Hay (1987, p. 34) of Cornell University:

... there is some ground for agreement on the proposition that unilaterally imposed vertical restraints are unlikely to have any significant anticompetitive impact unless the manufacturer imposing the restraint enjoys some degree of insulation from interbrand competition.

Restrictions on parallel imports are the international equivalent of a 'government supplied' vertical restraint in the domestic market (Barfield & Groombridge, 1998, p. 920).

5 Veracity of Arguments in Favour of Parallel Imports

5.1 International Price Discrimination

The main argument in support of permitting parallel imports is to arbitrage away international price discrimination (Richardson, 2002, p. 234). Price discrimination occurs when like goods or services are provided to different persons at different prices, the difference in price being unrelated to the cost of providing the goods or services. (Dawson, Segal, & Rendall, 2003, p. 89).

For a firm to engage in price discrimination several conditions must be satisfied. First, it has generally been assumed that a firm must be able to exercise a degree of market power otherwise the price of all goods would be driven down towards marginal cost by competition. Second, there must be at least two identifiable classes of consumers who are able to be separated and whose

⁸ A cartel is where there is a formal agreement amongst competing firms to collude to fix prices or cutback on production. The objective of a cartel is organise firms so they behave in manner similar to the outcome achieved by a monopoly. Within market economies, there are generally competition laws (also known as antitrust laws) prohibiting cartel arrangements.

responsiveness to changes in price differ. Third, a firm must be able to prevent resale or arbitrage of the product.⁹

However, the presumption that price discrimination can only be practiced by firms with market power has been challenged by distinguished American economist Professor William Baumol (2005, p. 2) of New York University who contends:

... that this isn't necessarily so and that, on the contrary, in a wide variety of instances closely to those that can attract regulatory attention, it is the very presence of effective competition that *forces* discriminatory prices upon the firm.

Baumol (2005, p. 17) argues that where market entry is easy that price discrimination cannot be taken as a manifestation of market power and that instead it can arise as a consequence of competitive market conduct.

Professor Hal Varian (1996) of the University of California at Berkeley has observed that price discrimination is ubiquitous in industries that exhibit large fixed costs. Where fixed costs are high, pricing at short-run marginal cost would prevent firms from recovering their fixed costs that would have a detrimental impact on future investment decisions as well as product provision. Under these circumstances, price discrimination that enables firms to recover their fixed costs can be beneficial. According to Professor Damien Geradin and Nicolas Petit of the University of Liege (2006, pp. 484-485):

A key insight of economics is that price discrimination is most likely to expand output where the seller has declining average total costs. Expanding output through price discrimination is an essential strategy for firms facing problems of fixed cost recovery. Price discrimination allows firms facing large fixed costs (in practice all firms that make substantial investments) to expand their output and thus spread fixed costs over a large number of units. When marginal costs are low ... any positive price allows the firm to contribute to its fixed costs. Prohibiting price discrimination would thus prevent efficient recovery of fixed costs and would, in the long run, have a negative impact on investments.

The development of a new vehicle model is a significant investment with large fixed costs as the Productivity Commission (2014, p. 50) has recognised:

There are large fixed costs involved in manufacturing vehicles, starting with the design of new platforms and models, and new powertrains, as well as in general market research and advertising. These costs are usually incurred by motor vehicle producers at a global level, particularly with the move toward global platforms ... There are also large fixed costs associated with establishing infrastructure and equipment at the plant level (and retooling for upgrades and new car models).

If the price of a product is different in two different markets, then an arbitrageur will purchase the asset in the cheaper market and sell it where prices are higher in order to earn a profit.

Arbitrage allows importers to break down the barriers that separate the two markets (Knoll, 1986, p. 151). Parallel imports are thus advocated worldwide for undermining international price discrimination (Malueg & Schwartzb, 1994, p. 167).

⁹ Further information on price discrimination is contained in the Appendix.

According to parallel import proponents, preventing parallel imports allows distributors to charge the highest possible prices in each of their foreign markets without fear of competition between markets (Ruff, 1992, pp. 120-121). Thus the trade mark monopoly affords local trade mark holders the opportunity to overcharge consumers (Ruff, 1992, p. 129).

There are three compelling arguments against permitting the parallel importation of second-hand motor vehicles, including virtually brand new cars, into Australia:

1. Price discrimination is not necessarily detrimental to welfare
2. There is little evidence to suggest that Australian consumers are victims of any widespread international price discrimination
3. Trade marks do not confer monopoly or market power

Each of these arguments is now considered below in turn.

5.1.1 Is price discrimination detrimental to welfare?

The objective of any monopolist or participant in a tacitly collusive agreement is to reduce output and raise the product price in order to increase profits. For this reason US legal scholar Robert Bork (1978, p. 395) has opined the welfare implications arising from price discrimination ultimately depend on its effect on industry output:

If discrimination increases output, it tends to move resource allocation and value of marginal product toward that which would obtain in a competitive industry. A decrease in output has the opposite effect. The impact of discrimination on output, therefore, may be taken as a proxy for its effect on consumer welfare.

Similarly, Professor Hal Varian (1996) of the University of California at Berkeley has commented in regard to the welfare effects of price discrimination that:

... if price differentiation allows more consumers to be served it will generally increase welfare... Market segmentation that allows markets to be served that would otherwise be neglected is also a case where overall welfare can be expected to be enhanced.

On the other hand, price differentiation that merely shuffles prices paid by pre-existing customer groups and that does not result in an increase in the number of customers served, or the amount that they consume, will tend to reduce overall welfare.

...

The key concern in examining the welfare consequences of differential pricing is whether or not such pricing increases or decreases total output.

According to Professor Stephen King of Monash University (2011):

Price discrimination may not be a bad thing. To the degree that it puts a wedge between consumers' marginal valuations for the same product (in other words, different consumers face different prices) price discrimination leads to a loss in economic surplus. But price discrimination also changes the quantity of product sold. To the degree that total sales rise with price discrimination, there may be an overall economic benefit.

In its 2008 grocery inquiry, the Australian Competition and Consumer Commission (ACCC) made the following observations in regard to price discrimination:

The ACCC considers that there can be significant economic efficiency and competition benefits resulting from price discrimination ... (Australian Competition and Consumer Commission, 2008, p. 552)

The ACCC recognises that there can be genuine economic efficiency reasons for price discrimination. (Australian Competition and Consumer Commission, 2008, p. 553)

According to Professor William Baumol (2005, p. 31):

... it should be noted that the market's imposition of discriminatory pricing in a wide range of circumstances is not necessarily to be deplored. It has long been known ... that discriminatory prices can enhance output and increase economic welfare.

Insisting on unencumbered parallel imports that arbitrage national price differences may well lead manufacturers to sharply curtail sales to certain countries (Malueg & Schwartzb, 1994, p. 192). This has led Professor David Malueg of the University of California at Riverside and Professor Marius Schwartz of Georgetown University and currently Chief Economist of US Federal Communications Commission (1994, p. 192) to suggest that some price discrimination should be permitted and to conclude that the European Union's unwavering support for parallel imports is questionable.

According to Claude Barfield and Mark Groombridge (1998, p. 905) from the American Enterprise Institute:

The preponderance of economic evidence supports the view that controls on unauthorised imports in the exercise of intellectual property rights are, under most conditions, pro-competitive, in that such restraints not only reduce free-riding on pre-sales marketing and aftersales maintenance by unauthorised distributors, but also contribute to the growth of local copyright-based industries and related infrastructure.

5.1.2 Is international price discrimination being practiced in Australia?

Although the economic literature suggests that price discrimination is not necessarily welfare reducing, there is little evidence to suggest that Australian consumers are victims of any widespread international price discrimination in the Australian passenger vehicle market in any event.

The FCAI (2014) has conducted a benchmarking project that compared the price and specification levels of various new motor vehicles available in the Australian market with equivalent models with a comparable right hand drive market in the United Kingdom and New Zealand. The vehicles chosen for the benchmarking project represented a cross section of mainstream and premium brands that were available in both markets. The vehicles included for this analysis included: Ford Focus Trend hatch, Mazda 3 Neo, Toyota Corolla Ascent Sport hatch, BMW 328i, and Mercedes-Benz C200 sedan. According to the FCAI (2014):

Our vehicle price and specification comparison research shows that when comparing 'like-for-like' vehicles, in two representative markets (the UK and NZ) the vast majority of new cars are cheaper in Australia than overseas.

5.1.3 Do trade marks confer market power?

The notion that trade marks confer some sort of monopoly or market power upon owners lies at the heart of permitting parallel imports of grey goods. However, this notion is completely false.

In the first instance, a trade mark does not confer market power on the owner because they cannot prevent potential competitors from making the same or a similar product (Knoll, 1986, p. 152). As long as a competitor does not affix a confusingly similar trade mark to its product, it can manufacture and promote the same or a similar product. Trade mark law both draws from and reinforces the notion that competitive markets will ensure efficient resource allocation and bring consumers the highest quality products at the lowest prices (Dogan & Lemley, 2005, p. 467). In this regard, the primacy of competition in trade mark law stands in stark contrast with other areas of intellectual property law, which insulate creators from competition in order to encourage future acts of creation (Dogan & Lemley, 2005, p. 467).

Furthermore, as already discussed, firms with strong trade marks command higher prices for their brands than other firms in the market, not because of any market power, but because the search costs associated with their brand are lower (Landes & Posner, 1988, p. 278). For the definitive word on the capacity of trade marks to confer market power on firms, the prominent *Antitrust Law* has declared:

There is even less basis for inferring power from a trade mark than from other intellectual property rights. A trade mark is nothing more than a business name, slogan, or symbol, or even sound ... As a result, establishment of a trade mark does not require even the minimal creativity necessary to acquire a copyright. Thus, the vast majority of cases hold that no inference of market power can be drawn from a trade mark, even if the mark is prestigious. (Areeda, Hovenkamp, & Solow, 2002, p. 145)¹⁰

5.2 Intra-brand Competition

Another concern is that because restrictions on parallel imports eliminates intra-brand competition, then it should be scrutinised from a competition policy standpoint (Gallini & Hollis, 1999, p. 2). However, the balance of legal and economic opinion does not put much weight on intra-brand competition and places far greater importance on inter-brand competition to ensure that consumers receive competitive prices.

According to 23 distinguished economists in a brief before the US Supreme Court:

In many if not most cases, interbrand competition precludes a manufacturer from setting resale prices above a competitive level. (Baumol, et al., 2006)

Similarly, according to UK economic consultant Derek Ridyard (2002, p. 5):

Where interbrand competition is healthy, concerns about the effects on consumers of reduced intra-brand competition can generally be dismissed.

According to Judge Frank Easterbrook (1984, pp. 155-156):

No one can sensibly weigh inter- and intra-brand competition against one another; they are not commensurable. The reduction in "intra-brand competition" is the *source* of the competitive benefit that helps one product compete against another. Intra-brand competition as such is worthless; one might as well complain when a corporation does not have internal competition to make the product most cheaply. Vertical integration eliminates this form of "competition," but in so doing it may enable the manufacturer to reduce its delivered price. No manufacturer wants to have less competition among its dealers for the

¹⁰ *Antitrust Law* is frequently cited by US Court judgements.

sake of less competition. The reduction in dealers' rivalry in the price dimension is just the tool the manufacturer uses to induce greater competition in the service dimension.

Similarly, according to Professor Eleanor Fox (2001, p. 982) of New York University:

There is growing recognition in the world that rivalry between and among competing producers ("interbrand competition") is the essence of competition. It is that interplay that tends to keep prices relatively close to costs, to provide choices for consumers, and to allocate resources to their best use in view of consumer demand. Intra-brand competition – a producer's product competing against itself – cannot do this job.

The available evidence surrounding the intensity of interbrand competition within the motor vehicle industry should preclude any concerns regarding a reduction in intra-brand competition.

In relation to the global automotive industry the Productivity Commission (2014, pp. 48-49) has concluded that:

Competition within the global automotive industry is intense...

As a result of this competition, especially amongst the lower-priced, high-volume vehicle models, there is limited ability for producers to raise their prices ...

The limited scope for producers to raise their selling prices within particular vehicle market segments has resulted in cost pressures throughout the automotive supply chain.

Specifically in relation to Australia, the Productivity Commission (2014, pp. 63-64) has concluded:

The Australian market for new motor vehicles is small in global terms. At the same time, due to a high level of import penetration (with few barriers to those imports), the Australian automotive market is highly fragmented, and appears to have become more so over the past decade...

Australian consumers benefit from this highly competitive new vehicle market. They have greater choice, and competition encourages lower prices, improved vehicle quality and more extras for a new vehicle in a particular market segment.

According to the Productivity Commission (2014, p. 67):

The highly competitive Australian automotive market limits the scope for all sellers of cars in Australia to increase the selling price of their vehicles.

There is no compelling public policy case to permit parallel imports as there is evidence of robust interbrand competition in the Australian passenger vehicle market.

6 Consumer Protection

Historically, trade mark law has existed primarily to protect against consumer deception that occurs when one party attempts to pass off its products as those of another (Dogan & Lemley, 2005, p. 463). The overriding problem with the parallel import of second-hand vehicles is the direct link between the trade mark owner's product and the consumer has been broken because some extraneous third party has broken the nexus. As the trade mark owner can no longer guarantee the quality of a parallel imported vehicle, this leaves the consumer vulnerable to the risk of purchasing a defective vehicle.

Information about whether a product has a serious defect may be 'privately observed' by those who access to it and 'unobservable' by those who don't (Mohlo, 1997, p. 1). Such information is referred to as private information. On the other hand, if information is available to everyone then it is referred to as 'public information' or 'publicly observable'. The presence of private information creates an 'information asymmetry' whereby some people are better informed than others.

In the event that informational asymmetries exist between buyers and sellers in a market, the 2001 Nobel Laureate for economics George Akerlof (1970) demonstrated that this would give rise to the problem of adverse selection. Akerlof used the example of the market for used cars where buyers could buy either good cars or defective cars that were described as 'lemons'. In the presence of asymmetric information, Akerlof showed that the used car market would either contract into a market for 'lemons' or collapse altogether. In order to address the problem of asymmetric information and adverse selection, Akerlof (1970, p. 488) suggested that government intervention may be warranted in some instances:

There are many markets in which buyers use some market statistic to judge the quality of prospective purchases. In this case there is incentive for sellers to market poor quality merchandise, since the returns for good quality accrue mainly to the entire group whose statistic is affected rather than to the individual sellers. As a result there tends to be a reduction in the average quality of goods and also in the size of the market. It should also be perceived that in these markets social and private returns differ, and therefore, in some cases, government intervention may increase the welfare of all parties.

Adverse selection is a problem of pre-contractual opportunism which gives people the opportunity to lie in the presence of private information prior to the initiation of a contract (Mohlo, 1997, p. 8).

Most consumers who purchase grey goods erroneously believe they are buying products whose reliability, integrity and service, as symbolised by the trade mark, are maintained and guaranteed by the local trade mark owner (Gilbert, Ludwig, & Fortine, 1986, p. 111). A critical assumption is often that consumers receive the same goods and services by purchasing grey imports that they receive from authorised sellers (Staaf, 1987, p. 66). However, this is not necessarily the case. If an imported second-hand vehicle is priced lower than a domestic alternative through the authorised channels but lacks the quality, specifications, warranty and support that the authorised product does then much of the benefit of lower prices is illusory.

In the first place, the specification of motor vehicles sold in the domestic market may be entirely different to an imported grey motor vehicle originally destined for an overseas market. In this regard, a brand may position itself in different market segments across countries, and hence the same vehicle model may end with completely different specifications between countries.

Secondly, imported grey motor vehicles are not subject to the inspection, transit or quality controls of the local trade mark owner and their distributors (Gilbert, Ludwig, & Fortine, 1986, p. 110). On the other hand, new motor vehicles imported into Australia through the local trade mark owner and their distributors undergo a rigorous pre-delivery inspection shortly after they land including fitting compliance plates, insertion of log books into the vehicle, removing protective wrapping from vehicles, surveying any vehicle damage, ensuring vehicles are built to specifications, mechanical testing, fitting accessories, cleaning and washing vehicles, and performing any rectification services to repair any damage.

This raises the distinct possibility if not likelihood that imported grey motor vehicles may be of lower quality than those sourced through trade mark holder authorised channels. Indeed, common

deficiencies observed in relation to grey goods include foreign-language instruction manuals, ineligibility for factory-authorized warranty service, inadequate warranties and service by grey import distributors and unavailability of replacement parts and inventory (Gilbert, Ludwig, & Fortine, 1986, p. 111).

A consumer may be motivated to purchase an imported grey vehicle import, not just because of perception it is cheaper but also because they think they are obtaining genuine goods of comparable quality and specifications to those offered by authorized distributors. A claim to 'genuineness' of the vehicle in these circumstances will be confusing, if not misleading, where it is of inferior quality and/or has different specifications, or attracts inferior warranty and support in comparison to the authorized vehicle.

This will result in consumer demand being misdirected towards the grey import. The differences between the expectation and performance of the grey import may result in a diminution in consumer welfare. When a consumer purchases an inferior-quality item, their estimate of the brand's quality declines which in turn reduces the goodwill the trade mark owner enjoys and, as a result, the premium the brand can command in the future (Knoll, 1986, p. 168). Thus, inferior quality goods not only redirect the premium away from the trade mark owner, but also injure the trade mark owner's goodwill, reducing the expected future stream of returns that flow from the trade mark. In turn, they will diminish the incentives to make the kinds of investment required to create goodwill in the first place (Gilbert, Ludwig, & Fortine, 1986, p. 113).

The available evidence suggests that adverse selection is all-pervasive in relation to the sale of imported grey motor vehicles as outlined below.

6.1 Grey Motor Vehicles and Consumer Fraud

A major concern with imported second-hand motor vehicles surrounds the provenance of the vehicle raising the possibility that consumers could be victims of fraud.

According to the *Financial Times* back in 2000, stolen Japanese cars were turning up in locations as distant from one another as London, Vladivostok and Auckland (Griffiths, Jaggi, & Nakamae, 2000).

In 2001 the BBC Watchdog program uncovered a major international car smuggling operation that involved the theft of cars in Japan which were then on-sold as legitimate vehicles in the United Kingdom (BBC News, 2001). The investigation revealed that up to 85,000 cars stolen in Japan were believed to be on UK roads. According to Quentin Willson (2001), the BBC Watchdog investigator:

While I investigated this fraud for BBC Watchdog, I was amazed at the sheer size and enormity of it. Stolen cars are becoming a form of currency for organised crime.

UK Customs and Excise estimated back in 2001 that there could have been as many as 165,000 stolen imported second-hand vehicles on UK roads purchased by unsuspecting consumers (Nettleton, 2001).

In early 2002 it was reported that stolen cars smuggled out of Japan were showing up everywhere from London to Lagos in Nigeria (Associated Press, 2002).

Back in 2008 in New Zealand Senior Constable Mark Gibson of the New Zealand Police commented:

We know of a number of stolen vehicles being driven legally in New Zealand.

We don't know the full extent of it here in New Zealand – the exact number of stolen cars that come here we have no idea about. New Zealand is seen as a dumping ground. Organised crime was at the root of the problem ...

The source of the cars was the Japanese equivalent of the American mafia, the Yakuza – one of the largest crime organisations in the world...

They distribute these stolen vehicles right throughout the world – New Zealand is one of the recipients. (Morgan, 2008)

Land Transport New Zealand spokesman Andy Knackstedt said it was aware vehicles stolen in Japan found their way onto New Zealand roads (Morgan, 2008). According to Mr Knackstedt, part of the problem in tracing stolen vehicles or curbing the trade in them was the reluctance of the Japanese Government to acknowledge it was an issue.

In 2011, Yutaka Shiota, the executive director at the Japan Used Motor Vehicle Exporters Association (JUMVEA) commented there had been a sharp increase in illicit activities, including the export of stolen cars and illegally rebuilt or remodelled vehicles and that this could hurt Japanese cars' image and reputation (Kambayaski, 2011).

According to international motor vehicle review website The Dog and Lemon Guide (2014):

If you are ordering direct from some foreign country, you have to accept the possibility that any cheap, privately-sold luxury car may be stolen and you could lose it without notice if the police catch up with you.

6.2 Grey Motor Vehicles and Odometer Fraud

Odometer fraud is the winding back of odometers in order to convey the impression a vehicle has travelled less distance or mileage than it has in reality. One of the determinants of the value of a used motor vehicle is the distance it has travelled, with vehicles that have travelled relatively less distance worth more than vehicles that have travelled further. Because the distance travelled is a determinant of its value, winding back of odometers constitutes a fraud on unsuspecting purchasers of second-hand vehicles.

The New Zealand Serious Fraud Office estimated in the late 1990s that 250,000 New Zealanders had been affected by odometer fraud, suffering losses of the order NZ\$768 million from imported second-hand vehicles from Japan (New Zealand Parliament, 1998).

According to the New Zealand House of Representatives Commerce Committee (2002, p. 3):

There seems little doubt that substantial proportions of used Japanese imported vehicles have their odometer tampered with. Estimates vary as to the extent of this tampering: the Ministry of Consumer Affairs (the ministry) notes one assessment arguing 70 percent of all such imported vehicles having false mileage, while Mr Duynhoven noted an assessment by the Land Transport Safety Authority (LTSA) to the Transport and Environment Committee during the 45th Parliament of 60 percent of vehicles having false mileage readings. Mr Duynhoven noted that even a ten percent rate would indicate a current minimum fraud of approximately \$40 million per year. However, the ministry notes that 'groups representing either the motor vehicle industry or consumers commonly estimate the level of tampering to be within a range of ten to 30 percent of all used vehicles being imported'.

The Dog and Lemon Guide (2014) has estimated that imported second-hand motor vehicles subject to odometer fraud in most cases cars have had about 30,000 – 120,000kms knocked off the actual mileage. According to The Dog and Lemon Guide (2014), the greatest danger in relation to odometer fraud occurs in relation diesel vehicles:

The real horror stories are with diesel vehicles, which are likely to have been used commercially, and so may have up to 1,000,000 kms on the clock yet still have shiny paint and clean carpets, thanks to those obsessive Japanese. Diesels can be hellishly expensive to fix, and they will need fixing, we promise.

6.3 Vehicle Specification, Servicing, Parts and Insurance

While imported grey motor vehicles may offer consumers the perception of cheaper motor vehicles delivered through arbitrage, any savings may turn out to be entirely illusory. One major problem with imported grey vehicles is that they may be an entirely different specification from the imported models originally shipped from original manufacturer. This means that parts and servicing could in turn prove problematic as The Dog and Lemon Guide (2014) outlines:

Just because the badge on the boot says Corolla, it doesn't mean that the import you are buying is the same as the one your neighbour owns. Although they may be similar, there may also be a large number of parts that are not immediately available for imported models when it comes time to fix them. Please note that most car companies, such as Toyota, can supply parts for most import models, but they are unlikely to have them in stock, that is, the parts may have to come from Japan...

Because Japan suffers from terrible pollution problems, Japan has super-tough exhaust emission laws. That's why Japanese imports have a staggering number of tubes and pipes running in and out of the engine – it's mostly anti-smog gear, and it stops working properly when it gets old, often making the car much harder to tune.

According to The Dog and Lemon Guide (2014), imported grey Japanese vehicles have many expensive-to-fix accessories the trouble being that they all stop working after a while. The Dog and Lemon Guide has suggested as a general rule for imported grey Japanese vehicle that models with turbochargers or diesel engines should be avoided altogether.

If consumers were sophisticated then they may be able to assess the life-cycle cost of purchasing an imported grey vehicle as compared to other vehicles available. While life-cycle pricing may appear to be intuitively rational from an economic perspective, empirical evidence strongly suggests that people don't actually engage in it. Herbert Simon, the 1978 Nobel Laureate for economics, coined the term bounded rationality to reflect the limited cognitive abilities that constrain humans in their decision making processes. According to Simon (2000, p. 25):

Bounded rationality is simply the idea that the choices people make are determined not only by some consistent overall goal and the properties of the external world, but also by the knowledge that decision makers do and don't have of the world, their ability or inability to evoke knowledge when it is relevant, to work out the consequences of their actions, to conjure up possible courses of action, to cope with uncertainty ..., and to adjudicate among their many competing wants. Rationality is bounded because these abilities are severely limited. Consequently, rational behaviour in the real world is as much determined by the "inner environment" of people's minds, both their memory contents and their processes, as by the "outer environment" of the world on which they act, and which acts on them.

In response to bounded rationality, individuals engage in satisficing whereby they make decisions based on limited information, analysis and options.¹¹

It has been reported the imported grey vehicles already sold in Australia often cost more to run than regular used cars because most body parts and many mechanical components need to be specially imported, which in turn drives up their insurance premiums (Dowling, 2014). According to Cars Guide website regarding the importation of grey motor vehicles into Australia:

One of the biggest turnoffs for people looking to buy a grey import is the cost of insurance. There have been a lot of insurers who simply cannot insure them due to their underwriters refusing them. (Levido, 2010)

Because Japanese imported grey vehicles are different from local models and there are few English workshop manuals available for them, there are often difficulties fixing them (The Dog and Lemon Guide, 2014). Vehicle owners in Japan often stop servicing their vehicles once the vehicles leave the guarantee period (The Dog and Lemon Guide, 2014). Thus a Japanese grey imported vehicle may not have been serviced for many years. While some models come with a comprehensive service history, this will be difficult to check, because it will be in Japanese.

Another problem with an imported grey vehicle is that consumers may be left stranded altogether in relation to finding someone capable of servicing their vehicle. Back in 2005, Martyn Dawson, the general manager of Mercedes-Benz passenger cars in New Zealand, commented that the owners of the few DaimlerChrysler Smart micro car grey imports in New Zealand had “been left high and dry from a service point of view” (Sloane, 2005). According to Dawson:

We have received calls from smart owners who naturally feel uncomfortable about warranties and the like. One woman, for example, needed to have a tyre replaced. She said the people she'd bought the smart from weren't helpful and she had no idea where to go because the tyre size for smart is unique. (Sloane, 2005)

7 Conclusion

The Productivity Commission recommended the progressive relaxation of restrictions on the wide-scale importation of second-hand passenger and light commercial vehicles based on the expectation that it would achieve net benefits for the community. However, the available evidence suggests that achieving such an outcome is far from assured.

Permitting the unrestricted parallel importation of second-hand motor vehicles, including virtually brand new cars, will not only subject motor vehicle manufacturers to free riding on their trade marks that in turn threatens the goodwill invested in their brands, but also poses a massive risk for consumers. The case for permitting the parallel importation of grey motor vehicles on competition grounds is extremely weak given there is little evidence of any widespread international price discrimination and the intensity of interbrand competition in the Australian motor vehicle market.

¹¹ Satisficing is a combination of two words: “satisfy” and “suffice”.

Bibliography

- Acemoglu, D., Johnson, S., & Robinson, J. (2005). Handbook of Economic Growth, Vo. 1. In P. A. Durlauf, *Institutions as a Fundamental Cause of Long-Run Growth* (pp. 385-472). Amsterdam: Elsevier.
- Akerlof, G. A. (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics*, 84, 488-500.
- Antia, K. D., Bergen, M., & Dutta, S. (2004). Competing With Gray Markets. *MIT Sloan Management Review*, 46(1), 63-69.
- Areeda, P. E., Hovenkamp, H., & Solow, J. L. (2002). *Antitrust Law, Vol. IIA Second Edition*. New York: Aspen Law & Business.
- Associated Press. (2002, January 5). Japan Battles an Alliance of Gangs That Trades in Stolen Cars. *The New York Times*, p. 5.
- Australasian New Car Assessment Program. (2014). *Response to Information Request 3.2: Productivity Commission Position Paper January 2014 - Australia's Automotive Manufacturing Industry*. Canberra.
- Australian Automotive Intelligence. (2014). *Australian Automotive Intelligence Report, June 2014*. Melbourne: Australian Automotive Intelligence.
- Australian Bureau of Statistics. (2014). *Motor Vehicle Census 31 January 2014 - ABS cat no. 9309.0*. Canberra.
- Australian Competition and Consumer Commission. (2007). *Application for authorisation lodged by the Federal Chamber of Automotive Industries on behalf of its members in respect of new and existing facilities for the importation and exportation of motor vehicles into and out of Australia*. Canberra.
- Australian Competition and Consumer Commission. (2008). *Report of the ACCC inquiry into the competitiveness of retail prices for standard groceries*. Canberra.
- Australian Government. (2014). *Emissions Reduction Fund White Paper*. Canberra.
- Barfield, C. E., & Groombridge, M. A. (1998). The Economic Case for Copyright Owner Control over Parallel Imports. *The Journal of World Intellectual Property*, 1, 903-939.
- Baumol, W. J. (2005). *Regulation Misled by Misread Theory: Perfect Competition and Competition-Imposed Price Discrimination*. Washington DC: AEI-Brookings Joint Center for Regulatory Studies.
- Baumol, W. J., Bresnahan, T. F., Crandall, R. W., Evans, D. S., Fisher, F. M., Froeb, L. M., . . . Scherer, F. M. (2006). *Leegin Creative Leather Products, Inc., Petitioner, v. PSKS, Inc., Supreme Court of the United States, Brief of Amici Curiae Economists in Support of Petitioner, 3 November*.
- BBC News. (2001, July 24). *Car smuggling ring uncovered*. Retrieved from BBC: http://news.bbc.co.uk/2/hi/uk_news/1454384.stm
- Beales, H., Craswell, R., & Salop, S. C. (1981). The Efficient Regulation of Consumer Information. *Journal of Law and Economics*, 24, 491-539.

- Berkovec, J. (1985). New Car Sales and Used Car Stocks: A Model of the Automobile Market. *The RAND Journal of Economics*, 16, 195-214.
- Besley, T., & Ghatak, M. (2010). Property Rights and Economic Development. In D. R. Rosenzweig, *Handbook of Development Economics*, Vol. 5. North-Holland: Elsevier.
- Blair, R. D., & Cotter, T. F. (1999). An Economic Analysis of Seller and User Liability in Intellectual Property Law. *University of Cincinnati Law Review*, 68, 1-45.
- Blows, S., Ivers, R. Q., Woodward, M., Connor, J., Ameratunga, S., & Norton, R. (2003). Vehicle year and the risk of car crash injury. *Injury Prevention*, 9, 353-356.
- Bone, R. G. (2006). Hunting Goodwill: A History of the Concept of Goodwill in Trademark. *Boston University Law Review*, 86, 547-622.
- Bork, R. H. (1978). *The Antitrust Paradox: A Policy at War with Itself*. New York: The Free Press.
- Chu, T., & Delgado, A. (2009). Used Vehicle Imports Impact on New Vehicle Sales: The Mexican Case. *Análisis Económico*, XXIV(55), 347-364.
- Church, R., & Ware, R. (2000). *Industrial Organization: A Strategic Approach*. Boston: McGraw-Hill.
- Clark, J. M. (1940). Towards a Concept of Workable Competition. *The American Economic Review*, 30, 241-256.
- Clerides, S. (2008). Gains from trade in used goods: Evidence from automobiles. *Journal of International Economics*, 76, 322–336.
- Cross, J., Stephans, J., & Benjamin, R. E. (1990). Gray Markets: A Legal Review and Public Policy Perspective. *Journal of Public Policy & Marketing*, 9, 183-194.
- Davis, L. W., & Kahn, M. E. (2010). The Environmental Consequences of NAFTA. *American Economic Journal: Economic Policy*, 2, 58-82.
- Davis, T. (2013). *Cars and Air Pollution*. Retrieved from Arkansas Department of Environmental Quality: <http://www.adeq.state.ar.us/air/ozone/cars.htm>
- Dawson, D., Segal, J., & Rendall, C. (2003). *Review of the Competition Provisions of the Trade Practices Act*. Canberra.
- de Soto, H. (2000). *The Mystery of capital*. New York: Perseus Books.
- Deiningner, K. (2004). *Land policies for growth and poverty reduction: key issues and challenges ahead*. Aguascalientes: UN Inter-regional Special Forum on the Building of Land Information Policies in the Americas, October 2004.
- Demsetz, H. (1966). Some Aspects of Property Rights. *Journal of Law and Economics*, 9, 61-70.
- Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education. (2013). *March 2013 Automotive Update*. Canberra.
- Department of Infrastructure and Transport. (2010). *Final Regulation Impact Statement for Review of Euro 5/6 Light Vehicle Emissions Standards*. Canberra.
- Dogan, S. L., & Lemley, M. A. (2005). The Merchandising Right: Fragile Theory or Fait Accompli? *Emory Law Journal*, 54, 461-506.

- Dowling, J. (2014, March 5). *Imported used cars a threat to Australian market*. Retrieved from news.com.au: <http://www.news.com.au/finance/business/imported-used-cars-a-threat-to-australian-market/story-fnkgdhrc-1226845002155>
- Duhan, D. F., & Sheffet, M. J. (1988). Gray Markets and the Legal Status of Parallel Importation. *Journal of Marketing*, 52, 75-83.
- Easterbrook, F. E. (1984). Vertical Arrangements and the Rule of Reason. *Antitrust Law Journal*, 53, 135-173.
- Elzinga, K. G., & Mills, D. E. (2010). Leegin and Procompetitive Resale Price Maintenance. *Antitrust Bulletin*, 55, 349-379.
- Elzinga, K., & Mills, D. E. (2008). The Economics of Resale Price Maintenance. In W. (. Collins, III *Issues in Competition Law and Policy* (pp. 1841-1858). American Bar Association, Antitrust Section.
- Esteban, S., & Shum, M. (2007). Durable-goods oligopoly with secondary markets: the case of automobiles. *RAND Journal of Economics*, 38, 332-354.
- European Commission. (1997). *Green Paper on Vertical Restraints in EC Competition Policy*. Brussels.
- Federal Chamber of Automotive Industries. (2014, August 8). *Consumers benefit from Australia's competitive car market*. Retrieved from Federal Chamber of Automotive Industries: <http://www.fc.ai.com.au/specification/vehicle-price-and-specification-comparison>
- Fox, E. M. (2001). Parallel Imports, The Intrabrand/Interbrand Competition Paradigm, and the Hidden Gap Between Intellectual Property Law and Antitrust. *Fordham International Law Journal*, 25, 982-9856.
- Gallini, N. T., & Hollis, A. (1999). A Contractual Approach to the Gray Market. *International Review of Law and Economics*, 19, 1-21.
- Geradin, D., & Petit, N. (2006). Price Discrimination under EC Competition Law: Another Antitrust Doctrine in Search of Limiting Principles. *Journal of Competition Law and Economics*, 2, 479-531.
- Gilbert, S. D., Ludwig, E. A., & Fortine, C. A. (1986). Federal Trademark Law and Gray Market: The Need for a Cohesive Policy. *Law & Policy in International Business*, 103-143.
- Griffiths, J., Jaggi, R., & Nakamae, N. (2000, June 3). Surge in car thefts is a blow to trusting Japanese drivers and their insurers. *Financial Times*, p. 2.
- Grubel, H. G. (1980). International Trade in Used Automobiles and Problems of Economic Development. *World Development*, 8, 781-788.
- Grynberg, M. (2008). Trademark Litigation as Consumer Conflict. *New York University Law Review*, 83, 60-119.
- Gwartney, J., Stroup, R., & Walker, M. (1993). *What Everyone Should Know About Economics and Prosperity*. Vancouver: The Fraser Institute.
- Hahn, R. W. (2006). Introduction. In R. W. Hahn, *Antitrust Policy and Vertical Restraints* (pp. 1-9). Washington D.C.: AEI-Brookings Joint Center for Regulatory Studies.

- Hay, G. A. (1987). The Free Rider Rationale and Vertical Restraints Analysis Reconsidered. *Antitrust Law Journal*, 56, 27-35.
- Hilmer, F. G., Rayner, M. R., & Taperell, G. Q. (1993). *Hilmer, F. G., Rayner, M. National Competition Policy: Report by the Independent Committee of Inquiry*. Canberra: AGPS.
- House of Representatives. (1995). *Official Hansard, No. 204, 1995, Wednesday, 27 September 1995*. Canberra: Commonwealth of Australia.
- House of Representatives Commerce Committee (New Zealand). (2002). *Report on the Imported Used Cars (Commission of Inquiry) Bill*. Wellington.
- Janischweski, J., Henzler, M. P., & Kahlenborn, W. (2003). *The Export of Second-Hand Goods and the Transfer of Technology*. Berlin: German Council for Sustainable Development.
- Kambayaski, T. (2011, January 11). Japan's booming used car exports tackle Moscow, recession. *Business Recorder*.
- King, S. (2011, June 12). *Surcharging on credit cards*. Retrieved July 7, 2011, from Core Economics: <http://economics.com.au/?p=7509>
- Knoll, M. S. (1986). Gray-Market Imports: Causes, Consequences and Responses. *Law & Policy in International Business*, 18, 145-216.
- Landes, W. M., & Posner, R. A. (1987). Trademark Law: An Economic Perspective. *Journal of Law and Economics*, 30, 265-309.
- Landes, W. M., & Posner, R. A. (1988). The Economics of Trademark Law. *The Trademark Reporter*, 78, 267-306.
- Levido, B. (2010, January 15). *Buying a grey import*. Retrieved from Cars Guide: http://www.carsguide.com.au/car-reviews/buying-a-grey-import-13435#.VBqFO_mSzIV
- Lewin, N. (1986). The Ten Commandments of Parallel Importation. *Law & Policy in International Business*, 18, 216-239.
- Liebeler, L. H. (1987). Trademark Law, Economics and Grey-Market Policy. *Indiana Law Journal*, 62, 753-777.
- Macias, J., Aguilar, A., Schmid, G., & Francke, E. (2013). *Policy Handbook for Regulation of Imported Second-hand Vehicles*. Mexico: CTS EMBARQ Mexico.
- Mackie-Mason, J. K., & Metzler, J. (2009). Links between Markets and Aftermarkets: Kodak. In J. E. Kwoka, & L. J. White, *The Antitrust Revolution: Economics, Competition, and Policy* (5 ed., pp. 558-583). New York: Oxford University Press.
- Malueg, D. A., & Schwartzb, M. (1994). Parallel imports, demand dispersion, and international price discrimination. *Journal of International Economics*, 37, 167-195.
- Mears, T. (1997). A Right or a Rip-off: The Parallel Importing Debate. *Policy, Winter 1997*, 35-39.
- Mellor, J. (1999, May 20). UK decision ups ante on grey imports. *The Australian*, p. 18.
- Mohlo, I. (1997). *The Economics of Information: Lying and Cheating in Markets and Organisations*. London: Blackwell.

- Morgan, J. (2008, May 10). Yakuza Linked to New Zealand Car Imports. *The Southland Times*, p. 1.
- National Transport Commission. (2014). *Carbon Dioxide Emissions from New Australian Vehicles 2013: Information Paper, May 2014*. Melbourne.
- Navaretti, G. B., Soloaga, I., & Takacs, W. (1998). *When Vintage Technology Makes Sense: Matching Imports to Skills*. Washington D.C.: World Bank.
- Nettleton, P. (2001, November 21). Thieves go fishing for a mercedes; Gangs switch focus to prestige vehicles. *London Evening Standard*, p. 10.
- New Zealand Parliament. (1998). *Hansard: Questions for Oral Answer Questions to Minister - Serious Fraud Squad, Thursday, February 19*. Wellington.
- Newstead, S., Watson, L., & Cameron, M. (2013). *Vehicle safety ratings estimated from police reported crash data: 2013 Update - Australian and New Zealand Crashes During 1987 - 2011*. Melbourne: Monash University Accident Research Centre.
- NZ Transport Agency. (2014). *New Zealand motor vehicle registration statistics 2013*. Wellington.
- Pashigian, P. B., Bowen, B., & Gould, E. (1995). Fashion, Styling, and the Within-Season Decline in Automobile Prices. *Journal of Law and Economics*, 38, 281-309.
- Pawson, E. (2012, July 13). *Story: Cars and the motor industry*. Retrieved from Te Ara - the Encyclopedia of New Zealand: <http://www.TeAra.govt.nz/en/cars-and-the-motor-industry/page-2>
- Pawson, E. (2012a, July 13). *Cars and the Motor Industry – Sources of Cars*. Retrieved from Te Ara Encyclopedia of New Zealand: <http://www.teara.govt.nz/en/cars-and-the-motor-industry/page-4>
- Pelletiere, D. (2003). Why do countries restrict used good imports? An inquiry into the international political economy of used automobiles. *A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at George Mason University*. Fairfax.
- Pigou, A. C. (1920). *The Economics of Welfare*. London: Macmillan.
- Productivity Commission. (2014). *Australia's Automotive Manufacturing Industry*. Inquiry Report No. 70, Canberra.
- Richardson, M. (2002). An elementary proposition concerning parallel imports. *Journal of International Economics*, 56, 233-245.
- Ridyard, D. (2002, September 1). Intra- and inter-brand competition - the public policy debate. *British Brands*, pp. 4-5.
- Rothnie, W. A. (1993). *Parallel Imports*. London: Sweet & Maxwell.
- Ruff, A. (1992). Releasing the Grays: In Support of Legalizing Parallel Imports. *Pacific Basin Law Journal*, 11, 119-154.
- Schiraldi, P. (2011). Automobile replacement: a dynamic structural approach. *RAND Journal of Economics*, 42, 266-291.
- Sen, A. K. (1962). On the usefulness of used machines. *Review of Economics and Statistics*, 44, 346-348.

- Simon, H. A. (2000). Bounded Rationality in Social Science: Today and Tomorrow. *Mind & Society*, 1, 25-39.
- Sloane, A. (2005, January 22). Smart move for Mercedes; The next 20 months will see a flood of new Mercedes-Benz models in New Zealand. *New Zealand Herald*, p. 1.
- Staaf, R. J. (1987). The International Gray Market: The Nexus of Vertical Restraints, Price Discrimination and Foreign Law. *Inter-American Law Review*, 19, 37-96.
- Taylor, M. E., & Duke, A. (2014). Refocussing the parallel import debate. *Competition & Consumer Law Journal*, 22, 21-38.
- The Dog and Lemon Guide. (2014). *Japanese Secondhand Imports*. Retrieved from The Dog and Lemon Guide: <http://www.dogandlemon.com/articles/japanese-second-hand-imports>
- Tunny, G. (2011). Carr's car crash and Australia's reform malaise. *Policy*, 27(3), 15-22.
- U.S. Environmental Protection Agency. (2007). *Automobile Emissions: An Overview*. Washington D.C.
- United States Government. (2013). *Roundtable on Vertical Restraints for On-Line Sales - Note by the United States*. Paris: Organisation for Economic Co-operation and Development, Directorate for Financial and Economic Affairs, Competition Committee.
- US Environmental Protection Agency, Office of Transportation and Air Quality. (2000). *Emission Facts: Average Annual Emissions and Fuel Consumption for Passenger Cars and Light Trucks*. Washington DC.
- Varian, H. R. (1996). Differential Pricing and Efficiency. *First Monday*, 1(2)(5 August).
- W Lawyers. (2011). *Submission to the Productivity Commission on the Economic Structure and Performance of the Australian Retail Industry*. Sydney.
- Wensing, E., & Taylor, J. (2012). *Secure tenure for home ownership and economic development on land subject to native title*. Canberra: AIATSIS research discussion paper no. 31, Australian Institute of Aboriginal and Torres Strait Islander Studies.
- Willson, Q. (2001, July 27). Glad to be Grey: Fresh Hope for Owners of Hot Japanese Imports. *The Mirror*, p. 25.
- World Intellectual Property Organization. (2012). *Understanding Industrial Property*. Geneva: World Intellectual Property Organization.
- World Intellectual Property Organization. (2012a). *What is Intellectual Property?* Geneva: World Intellectual Property Organization.

Appendix: Price Discrimination

Price discrimination has generally been categorised according to the taxonomy originally developed by English economist Arthur Pigou (1920) into three separate categories:

- First-degree price discrimination means that the producer sells different units of output for different prices and these prices may differ from person to person. This is sometimes known as the case of perfect price discrimination.
- Second-degree price discrimination means that the producer sells different units of output for different prices, but every individual who buys the same amount of the good pays the

same price. Thus prices depend on the amount of the good purchased, but not on who does the purchasing. A common example of this sort of pricing is volume discounts.

- Third-degree price discrimination occurs when the producer sells output to different people for different prices, but every unit of output sold to a given person sells for the same price. (Varian, 1996)

While first-degree price discrimination may exist in theory, the information requirements arguable render it impossible to implement in practice because a seller must possess information on the willingness of each individual to pay for a product.

With second-degree price discrimination a producer can offer different price-quantity packages in the market in order to overcome information deficiency related to a lack of information regarding the willingness of consumers to pay for a product (Varian, 1996). One package will be targeted toward the high-demand person, the other package toward the low-demand person. It can often happen that the producer can construct price quantity packages that will induce the consumers to choose the package meant for them; or give the consumers an incentive to *self-select*.

In third-degree price discrimination, the producer is able to identify different consumer groups who have a different willingness to pay (Varian, 1996).