

**Company cars and fringe benefit
tax - understanding the impacts
on strategic transport targets
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Abbreviations and acronyms

ABS	anti-lock braking system
ACC	Accident Compensation Corporation
ANCAP	Australasian New Car Assessment Program
ARTA	Auckland Regional Transport Authority (now Auckland Transport)
CBD	central business district
ESC	electronic stability control
EU	European Union
FBT	fringe benefit tax
IRD	Inland Revenue Department
JTW	journey to work
MoT	Ministry of Transport
NZTA	New Zealand Transport Agency
PAYE	pay-as-you-earn (income tax)
TDM	travel demand management (also known as mobility management or transportation demand management)
UK	United Kingdom

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Executive summary

The aim of this research was to examine how fringe benefit tax (FBT) policies affect the provision of company cars and employee parking in New Zealand, and the resulting impacts on transport policy objectives.

The Inland Revenue Department (IRD) states that *Fringe benefit tax (FBT) is a tax on benefits that employees receive as a result of their employment, including those benefits provided through someone other than an employer.*

A range of exemptions exist, for example: *FBT is not charged on a car park provided to the employee, if the car park is on the employer's premises or the employer leases it with exclusive right to the property.*

The government's stated taxation and transportation policies are implemented through a range of measures. FBT is one measure used to implement taxation policy which may also impact on the ability of the government to achieve its transport policies.

How FBT policy treats company cars, employee parking and public transport subsidies can significantly affect the total (national) composition of the vehicle fleet, commuting patterns and location decisions (residential and commercial) and can therefore have significant economic, social and environmental impacts.

The research undertaken for this project found some current policies unintentionally encourage employees to choose larger vehicles, drive more kilometres annually, reduce use of alternative modes and choose more dispersed, automobile-dependent locations than would otherwise occur. These tend to increase traffic problems, including congestion, road and parking facility costs, crashes, energy consumption, pollution emissions and land-use sprawl. Reforming these policies so they are more neutral, efficient and consistent with strategic policy goals can provide a variety of community benefits (for households, businesses, governments and the environment). The research examined previous overseas research and the impacts of company car use and employer-provided parking in New Zealand.

Various analysis methodologies were used to investigate tax policy impacts in New Zealand. Motor vehicle registration data helped identify the types of company vehicles registered in New Zealand and their features. Company cars were found to be heavier and to have higher engine ratings than cars registered privately. Company car vehicles are typically owned or leased for three to five years before being sold as private vehicles, so any purchase distortion can have a long-lasting impact. Journey to work data (from the 2006 Census) was used to analyse commuting by company car in metropolitan Auckland, Wellington and Christchurch. Company cars were found to be used more for longer-distance commutes on routes where high-quality public transport was not available rather than for shorter commutes to the central business districts. This confirms overseas research that identifies a sorting mechanism, where those with longer commutes value company cars more than those with short commutes or faster public transport options.

Travel plan data was analysed to examine the impacts of company cars and employer-provided parking on transport mode share. Eleven travel plans representing 5770 employees were examined. Parking was found to be a significant contributor to commute mode choice; workplaces with free and ample parking tended to have much higher sole occupant car travel and low public transport mode share compared with workplaces with priced or limited car parking.

This study also examined the higher crash rates of company cars. The analysis suggests Accident Compensation Corporation levies could be better targeted to reflect risk and safety aspects using fleet

Australasian New Car Assessment Program (ANCAP) star ratings. A three-star ANCAP minimum standard for all new and imported vehicles is suggested as an option to improve overall fleet safety.

Car parking is a promising area for FBT reform, as it corrects both a travel distortion (subsidy of driving) and a tax distortion (a valuable benefit that is currently untaxed and is not horizontally equitable). To create a more balanced treatment between automobile and public transport expenses, the IRD prefers to treat parking subsidies as an alternative to salary payment, rather than add a special exemption for public transport. The IRD argues that adding another exemption represents another market distortion. However, this is only true if the currently exempt car parking issue becomes taxable. To continue to exclude parking from FBT and to disallow any change to favour public transport perpetuates the problem rather than resolves it.

Various policy reforms were evaluated in terms of their efficiency and equity, including:

- a graduated FBT based on CO₂ emissions, as used in the UK and Ireland
- the inclusion of employer-provided parking as a taxable benefit as in Australia
- the exemption of public transport or cycling costs, parking cash-out (employees who use alternative commute modes can choose cash or a subsidised transit pass, instead of subsidised parking), as in the USA.

Based on this analysis, this study recommends specific policy reforms that appear to be the most effective (at removing FBT distortion from the market) and feasible (in terms of ease of application and political acceptance).

It is recommended the IRD either address the parking subsidy by taxing the value of employer-provided parking or adopt another strategy to reduce the market distortion and economic policy failure. A range of options are also suggested to address issues related to FBT and the use of company cars. These include:

- using the Irish FBT allowances (related to vehicle emissions) as a potential basis for improving the New Zealand FBT regime
- realigning FBT policies to meet higher-order economic and transport policy objectives, specifically to reduce market distortion and traffic congestion
- making employer-provided parking a benefit for which FBT is payable.

Abstract

This report investigates the degree to which current tax policies influence travel behaviour (perhaps unintentionally) in ways that contradict strategic policy objectives. It also evaluates potential tax policy reforms that could help increase efficiency and equity.

Current New Zealand fringe benefit tax (FBT) policies encourage employers to offer company cars (including associated expenses such as insurance, fuel, tolls and parking), and employee parking subsidies, since as untaxed benefits they are worth more to employees than their cash wage value. Analysis of New Zealand data concerning vehicle purchase and ownership patterns, commute travel patterns and crash rates, and international research, indicates company cars tend to be larger and less fuel efficient. Employees who receive company cars tend to drive more annual kilometres, are more likely to live in more dispersed, automobile-dependent locations, and have higher crash rates than motorists who own their vehicles. The larger size of company cars appears to increase the overall average size and reduce the fuel efficiency of the future New Zealand vehicle fleet. This research also indicates that employees who receive significant parking subsidies (through FBT exemptions) are more likely to drive than use alternative modes of transport.

1 Introduction

The overall aim of this research was to examine the use of company cars in New Zealand and to identify how this impacts on other transport policy areas.

1.1 Research aim

The goals of the research were to:

- identify how current tax policies affect vehicle purchase and transport patterns in New Zealand
- evaluate the negative impact of these tax policies on local, regional and national policy objectives
- using New Zealand data, quantify impacts such as larger and less fuel-efficient vehicle purchases, increased vehicle travel, higher rates of car commuting, and higher traffic crash rates by employees offered company cars and subsidised employee parking
- consider obstacles to employers providing alternative transport benefits such as public transport passes
- assess whether employers provide other transport inducements and, if so, what type (eg cycling facilities)
- identify policy changes that have been used outside New Zealand to reduce the negative influences of company car use
- based on this analysis, provide specific recommendations for tax policy reforms to increase efficiency and equity, and to be more consistent with strategic policy objectives.

1.2 Background and context

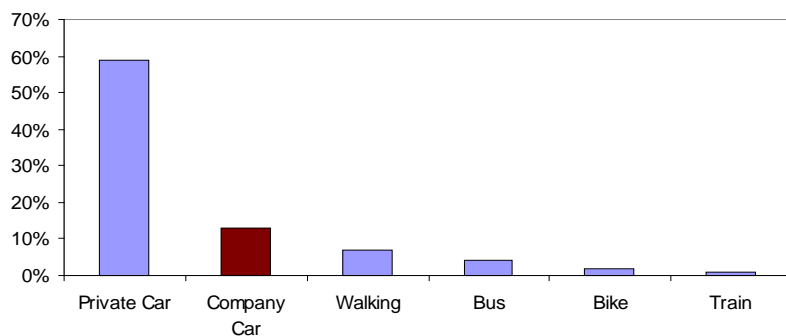
In New Zealand prior to 1985 the top marginal tax rate was 66%. A marginal tax rate of 66% meant there was a large incentive to pay employees in ways other than salary and wages given the high tax rate and a lack of fringe benefit tax (FBT). Businesses found, due to tax policy, a dollar spent to subsidise vehicles and parking was worth more than the same money provided as wages. FBT was introduced in 1985 to counter a growing trend in employment packages to provide untaxed benefits instead of taxable income. The top marginal tax rate was reduced to 33% in line with company tax. This reduction and the tightening of FBT resulted in fewer incentives to provide company cars than in the past.

Historically, New Zealand has been reducing personal income tax rates (in favour of consumption taxes). There is an opportunity to avoid increased consumption of high-polluting consumer goods by applying environmental taxes to the worst or least efficient products. Variable registration fees or variable company car tax rates could be part of this change. As petrol prices rise, company cars will become increasingly attractive to employees. Unless something is done to influence the purchase of company cars with better energy and emissions efficiency, they will continue to be higher engine-capacity vehicles instead of the more efficient vehicles the rest of the population tends to purchase.

New Zealand tax law makes a distinction between ‘work-related vehicles’, which are vehicles used for business purposes, such as delivery vans, tradesperson trucks and sales vehicles, and ‘company cars’, which are provided to employees as part of their compensation package, and so are driven for personal travel, including commuting, in addition to purely business travel. FBT law has not addressed employer-provided parking which has remained an untaxed benefit.

This research was undertaken in New Zealand in 2009 and 2010 and examined company car use in Auckland, Wellington and Christchurch. Figure 1.1 below uses 2006 Census journey-to-work data to show commute mode share.

Figure 1.1 Commute mode share



Company cars are the second largest commute mode, representing 13% of all commute trips. Fifty-nine percent of commuters travel by private car, 13% walk, 4% travel by bus, 2% bicycle and 1% commute by train (Statistics NZ 2006 Census). This analysis implies that 22% of all cars used in the commuter peak are company cars, ie more than one in five cars on the road.

Despite the significant proportion of company car use by the commuting public, the impact of this is largely unstudied. Previous overseas research indicates company cars tend to be larger, are driven further, and have higher crash rates than private cars, and that company car drivers live further from their workplaces. Economic theory and experience indicate employees who receive subsidised parking tend to commute more by automobile than employees who pay directly for parking.

Workplace travel planners have found subsidies applied via the provision of company cars and parking inhibits the effectiveness of workplace travel plans. Company car tax reform in the UK targeting emissions has been effective in changing the type of cars purchased and has raised the notion of using tax policy for more than revenue purposes.

These issues set the context for this research.

1.3 Approach

To address the project aims, the research undertook the following:

- a review of published research literature and policy practice covering both international and domestic contexts
- an analysis of existing secondary data on travel, taxation and company car usage in New Zealand
- a review of project approach and findings by experienced experts in the field including an international peer review.

1.4 Report structure

The report is structured as follows:

Chapter 2 explores international characteristics of company cars and how these compare with the New Zealand situation. Contrasts in company car policies between countries are also described.

Chapter 3 describes current tax policy, fleet characteristics and the impact of company cars on employee travel behaviour in New Zealand. The relative magnitude of incentives which company cars represent for employees is also explored.

Chapter 4 considers existing tax policy with regards to employer-provided parking, its impacts, the untaxed value of car parking, barriers to changing parking policies and options to address this issue.

Chapter 5 discusses the key principals of taxation policy and how this relates to broad transport and land-use policy objectives. A critique of current practices is presented followed by a perspective on these issues from discussions with the IRD.

Chapter 6 presents a discussion of the options for both company car policy and parking policy in New Zealand. Barriers to reform are presented and opinions from various stakeholders on the issues identified are outlined.

Chapter 7 presents a summary of the key findings of the review.

Chapter 8 presents a summary of the recommendations and preferred policy alternatives to address the issues identified.

2 Company cars – international perspectives

This chapter explores international characteristics of company cars and how these compare with the situation in New Zealand. Company car policy contrasts between countries are also described.

2.1 Company car characteristics

This section explores company car fleet characteristics, usage, safety, and energy and emission impacts.

2.1.1 The fleet

Although company cars only make up around 10% to 15% of the total vehicle fleet at any one time, they represent more than half of all *new* vehicle purchases (table 2.1) and because they are generally sold after a few years, they have a large influence on the composition of the future vehicle fleet.

Table 2.1 Share of company cars in fleet or new car sales

Share of company cars in fleet	Year	Country	Source
60%–70% of new car sales 15% of total fleet	2008	New Zealand	Perry Kerr, NZ Motor Industry Association NZTA MV registration data
15% of total fleet	1997	Australia	Luk and Richardson (1997)
42% of new vehicle fleet	2002	Germany	European Commission Directorate-General for Environment (2002)
27% of new vehicle fleet	2002	Denmark	European Commission Directorate-General for Environment (2002)
45% of new vehicle fleet 11% of total fleet	2002	Netherlands	European Commission Directorate-General for Environment (2002); Graus and Worrell (2008)
36% of new vehicle fleet	2002	Finland	European Commission Directorate-General for Environment (2002)
50% of new vehicle fleet	2002	Sweden	European Commission Directorate-General for Environment (2002)
50% of new vehicle fleet	2004	UK	Inland Revenue (UK) (2004)
50% of the 11.6 million new car sales in EU (2008)	2008	EU	Naess-Schmidt & Winiarczyk (2010)
56% of new car sales 60% of new car sales	2003 2006	Israel	Cohen-Blankshtain (2008)

In New Zealand, private buyers accounted for 33% of the new car market in 2009 with the remaining 67% attributed to companies, rental cars and government fleets (source www.autotalk.co.nz). In New Zealand company cars make up only 10% of all registered cars (NZ Transport Agency (NZTA) registration data), but 60% to 70% of new vehicle sales are for company cars (Perry Kerr, NZ Motor Industry Association, pers comm 2008), which is much higher than in most countries. Company cars dominate new car sales in New Zealand because most private buyers currently purchase second-hand vehicles. As a result, company car purchases significantly influence the future vehicle fleet.

This indicates the importance of company car sales to manufacturers, and might explain why fleet purchasers are offered discounted rates unavailable to private buyers. These rates can act to discount company car values for FBT purposes relative to their list price valuation. Because of the dominance of

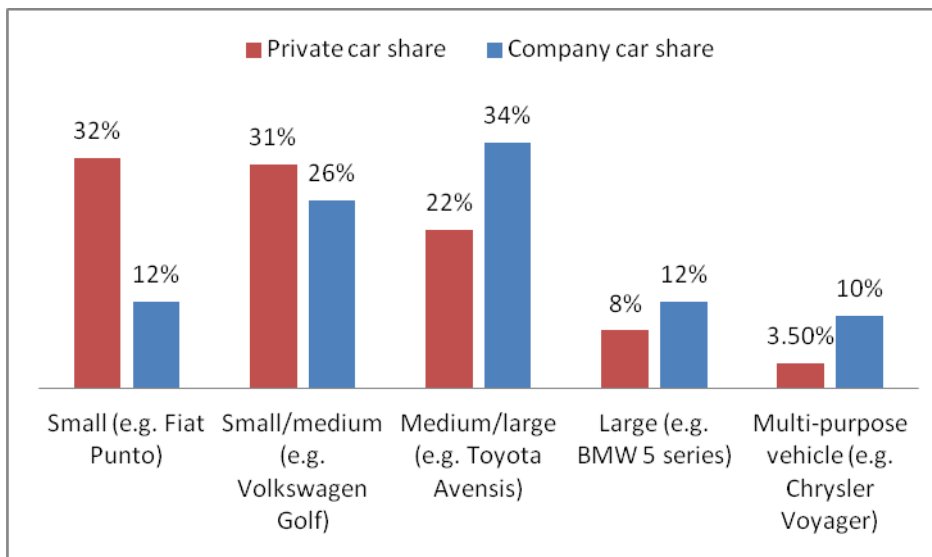
company cars in new vehicle sales, it would be in the interest of the New Zealand motor vehicle industry to support FBT policies that encourage purchases of high-value company cars.

Similar patterns exist in other countries. For example, in 1997, Ford and Holden Australia sold 72% of their new vehicles to fleets (Haworth et al 2000). In the UK, 53% of new cars are company owned or financed (Broughton et al 2003). Given the bulk purchasing power of fleet leasing companies and firms with large vehicle fleets, the taxation of purchase price as a basis for establishing the market value is an imperfect approach; it can generate significant ‘horizontal inequity’ in the application of taxes between those who buy their own car compared with those who have one provided in their employment package.

2.1.2 Vehicle size and engine capacity

Previous research (Wilmink et al 2002; Graus and Worrell 2008) identified that company cars in The Netherlands had larger engines than the rest of the vehicle fleet (figure 2.1).

Figure 2.1 Vehicle size of company cars and private cars in The Netherlands



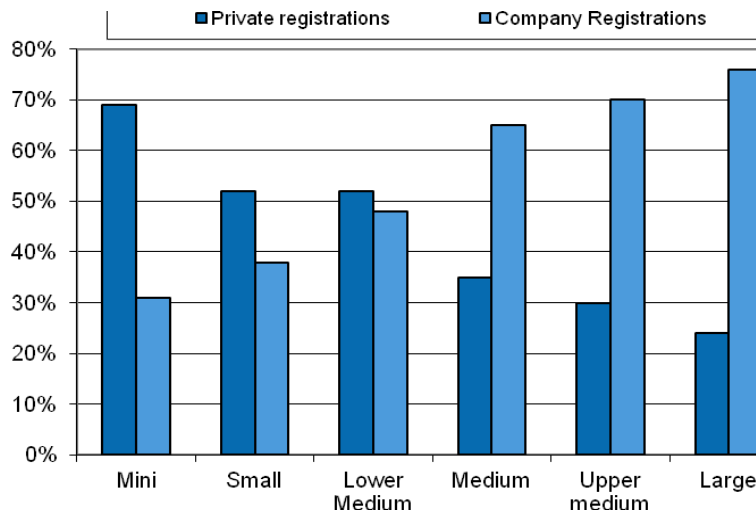
Source: Wilmink et al (2002)

In a study of vehicle registrations in 18 European nations, Naess-Schmidt and Winiarczyk (2010) found a significant trend for larger and more expensive cars to be purchased by companies rather than by private individuals (figure 2.2).

The impact of the dominance of these larger and more powerful cars is also felt on the secondary market. Company cars are replaced early in their life as warranties expire and depreciation has been applied. Shoup (1982) found company cars were replaced on average after just over three years.

The ‘oversupply’ of more expensive, subsidy driven company cars to the market should increase the market loss that companies – or leasing companies face when off-loading these cars. (Naess-Schmidt and Winiarczyk 2010)

Figure 2.2 Company car and private car registrations by car type in Europe

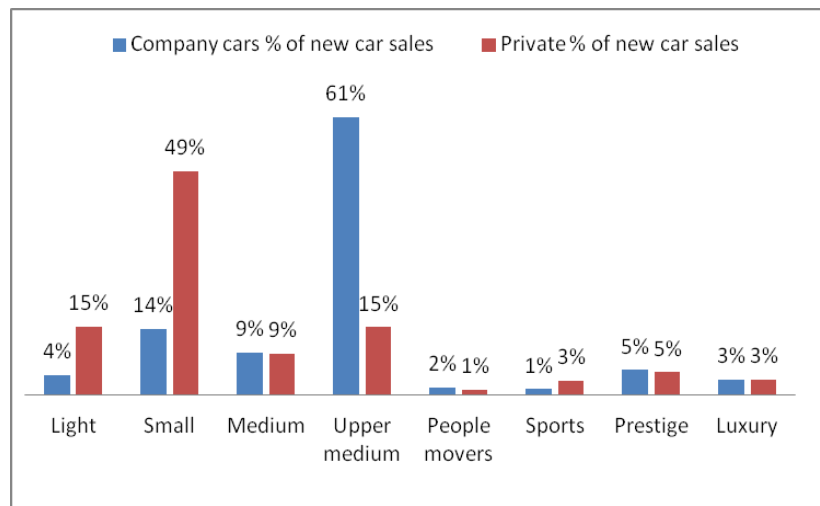


Source: Naess-Schmidt and Winiarczyk (2010)

New car sales in Australia in 1997 were analysed by Burt (1998), who showed fleet cars were predominantly upper medium-sized. These larger vehicles made up 61% of new car sales to fleets but only 37% of private sales. While light and small cars made up 64% of private sales, they represented only 19% of fleet sales. There is a preference for company cars in Australia to be larger and more powerful vehicles, partly driven by the taxation rules in place. The prevalence of heavier, larger and more powerful cars in the fleet is due to the fleet purchasing decisions of companies, which differ from those of the public. If the cars were privately owned the Australian fleet would have a smaller vehicle profile.

Naess-Schmidt and Winiarczyk (2010) found more than 60% of all medium, upper medium and large cars in the EU were company owned (figure 2.3).

Figure 2.3 EU car size and company or private ownership



The trend towards purchasing large company cars increases the size of vehicles available on the second-hand market especially in the upper medium segment. Larger cars can be less fuel and emission efficient than smaller cars and retain this characteristic for their entire life. While they remain as company cars for the first four to five years, they will be in the second-hand car fleet for another 5 to 15 years. The

additional fuel consumption associated with larger company cars has been estimated in other studies at 8% (Naess-Schmidt and Winiarczyk (2010)).

The value of these cars is also higher causing the fringe benefit to be higher as the individual gains access to a vehicle they would not necessarily buy if they had to pay for it. Fleet companies are aware of declining residual values and have begun to push smaller economical vehicles so they are not left with difficult-to-sell larger cars.

While historical studies of company cars identified they were larger, heavier and used more fuel, very recent trends (in the last few years) show a change in this pattern (in both New Zealand and Australia), particularly as government and corporate fleet managers seek to achieve sustainability and efficiency targets.

From a dominant 24 percent share of new car sales in 2004, now, after the first four months of 2010, large cars account for just 14 percent of new cars sales. Small cars (1.3 – 1.5 litre) have grown in popularity from 23 percent in 2004 to around 28 percent today, the largest of all segments. Light cars (1.6 – 2.0 litre) have shown good growth, up from 11 percent in 2004 through to 18 percent today. (Motor Trade Association 2010)

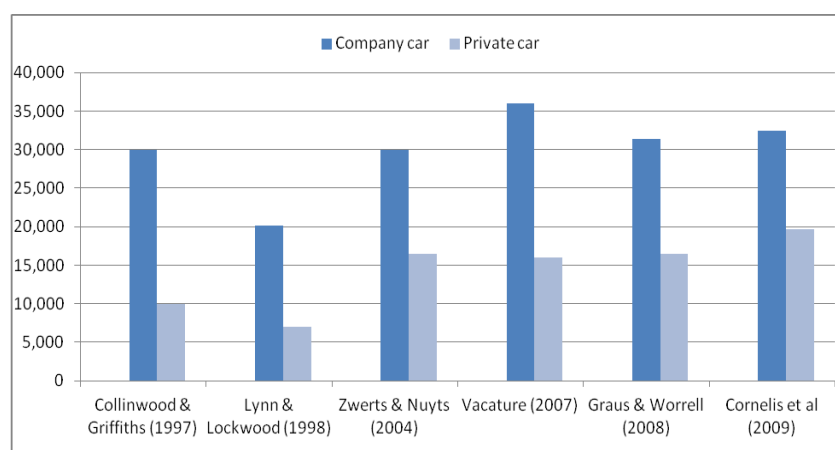
2.1.3 Vehicles per household

If there are restrictions on the private use of the company car, a household may retain their existing vehicle. A 2009 study examined the effect of company cars on household car ownership and found a correlation between company cars and household car ownership in the range of 0.29 to 0.68 (Gutiérrez-i-Puigarnau and van Ommeren 2009). The increase in the total vehicle fleet has been estimated at 9% (Naess-Schmidt and Winiarczyk 2010).

2.1.4 Kilometres travelled

Previous studies identified that the annual distance driven was typically double for company cars than for private cars (figure 2.4).

Figure 2.4 Average annual distance driven in company cars and private cars



Source: Booz & Company analysis of the sources listed above.

Figure 2.4 also shows older studies gave a lower total annual usage than more recent studies. Over time, driving distances for both company and private individuals have been increasing. The typical annual distance travelled for company cars is around 30,000km. A number of factors may explain this. Many company cars are used for daily work purposes (eg by sales representatives). Company cars provided as

fringe benefits may be the preferred choice of employees who live far from work while those who live close to work may prefer a cash equivalent instead. In The Netherlands, the average commuting distance for company car owners is nearly 66% higher than the average distance for private car owners (Graus and Worrell 2008).

Gutiérrez-i-Puigarnau and van Ommeren (2009) stress that:

The purchase price of the company car is taxed but not the use so this provides an incentive for the employer to subsidise private travel.

The use of fuel cards and employer subsidy of all fuel costs effectively means company cars have no marginal cost for the users; hence, there is an incentive to use the company car as much as possible even for private trips. Cohen-Blankshtain (2008) also found tax policy can cause a distortion in use:

Current taxation policies result in increasing numbers of company cars and growing numbers of transport users who are not sensitive to the marginal cost of car use and make excessive use of the car. As a result a significant portion of travel demand management (TDM) measures cannot affect this group.

If employers offer employees a choice between a company car or cash, this creates a distortion towards long-distance commuters with few public transport options favouring company cars, and those with good public transport or walking and cycling options choosing cash. While this situation is an improvement on a no-choice option for those who can walk, cycle or use public transport, it still leaves the employer paying the running costs of those who live the furthest from their employment. In households with two full-time workers, there can be a strong incentive for the person who works the furthest from home to have a company car. In addition, some people with company cars let their spouse use the company car while they walk or take public transport to work. Thus, the employee bases the use of the company car on who is driving the longest distance. Alternatively, the choice about where to live in relation to work can be influenced by the transport options available. Company car users have little or no commuting costs and so are more likely to choose a longer commute.

Providing subsidies to company cars on a scale such as is suggested in this study represents serious distortions of consumer choice: in essence making it artificially attractive for consumers to take home their remuneration in the form of cars. (Naess-Schmidt and Winiarczyk 2010)

Research suggests employees with company cars can pay nothing for petrol or car maintenance as these costs are usually paid with a fleet or fuel card and billed directly to the company. With no marginal costs to pay, there is no incentive for company car drivers to reduce distances travelled, drive economically, or select an efficient vehicle. This market failure leads to the types of distortions found in other research:

In 2001 the average annual commuting distance for company cars in the Netherlands was 12,700 km in comparison to 5,600 km for driver owned cars. (Graus and Worrell 2008)

Dargay (2005) found having a company car in the household increased commuting by car for both genders, but more so for men (coefficient 0.57) than for women (coefficient 0.31). Having a company car also reduced the chances of changing commuting mode (coefficient -0.24).

A study of company travel subsidies in London found 50% of all cars entering central London during the survey period 7am to 1pm were company cars (Kompfner et al 1991). Over 50% of commuters in both company and private cars had a parking space provided. Most public transport passengers received no transport subsidy, while those who did predominantly received a loan to pay for the annual ticket. Knight et al (2000) found 80% of all cars entering central London during the day received some form of transport subsidy, with 44% being company cars. In other research, Kompfner et al (1991) found one in five

individuals who had a company car chose to travel by public transport instead. This indicated around 20% of company cars provided in London were not used for commuting to work; thus, their use was almost entirely for recreation in the weekends.

2.1.5 Safety

Research suggests company car drivers are more likely to have crashes than other drivers even after allowing for the additional exposure risk based on distance travelled (table 2.2).

Table 2.2 Company cars and crash rates

Finding	Location	Study
Company car drivers are 49% more likely to have crashes.	Great Britain	Lynn and Lockwood (1998)
Company car drivers are 53% more likely to be involved in injury crashes.	Great Britain	Broughton et al (2003)
In Queensland, crashes involving fleet vehicles account for 25% of road fatalities and 45% of work-related fatalities.	Australia (QLD)	Murray et al (2002) Evaluating and improving fleet safety in Australia
27% of fleet vehicles are involved in a crash each year.	Australia (NSW)	Benchmarking study Lumley General Insurance, cited in Collingwood (1997)
Over 50% of company car drivers had a crash in the last five years.	Survey of 23 countries	LeasePlan (2003) Driver survey 2002
While the average annual crash rate for fleet vehicles is about 30%, the majority of councils are understood to have nearer to 50% of vehicles involved in crashes.	Australia (NSW)	Sochon (1999) Improving driver and vehicle fleet safe policy and guidelines for local government in the southern Sydney region.
Work-related traffic fatalities account for an average of 29% of all work-related fatal injuries in New Zealand (yearly estimate ranged from 25% to 40%).	New Zealand	New Zealand Environmental and Occupational Health Research Centre (2003)
The crash liability is 30% for company car drivers based on ownership alone and 40% to 50% when confined to those who drive regularly on business.	Great Britain	Downs et al (1999)
Around 150 New Zealanders are killed in or by a company vehicle every year. About 25% of New Zealand's commercial vehicles are involved in some sort of collision each year.	New Zealand	New Zealand Company Vehicle (April 2009, p48)

Around half of company car drivers have had a crash in the last five years. As a result there has been a focus on driver education and training. Fifty-two percent of LeasePlan drivers in New Zealand have had professional driver training (LeasePlan 2003).

Company car drivers have about 50% more accidents than 'ordinary drivers', when differences in demographic and exposure variables have been allowed for. (Lynn and Lockwood 1998)

This included allowing for mileage increasing the exposure risk.

People driving company vehicles are twice as likely to have a crash as those in private vehicles. It makes sense – for both employee safety and the bottom line – to address this safety record. (Karen Dickson, Manager AA Driver Training (New Zealand Company Vehicle February 2009)

In a study of Sydney councils, 50% of fleet vehicles had been involved in a crash the previous year.

Whilst the average crash rate for fleet vehicles is about 30%, (that is a third of the fleet will be involved in some sort of accident in each year), the majority of Councils are understood to have nearer to 50% of vehicles involved in crashes. The bulk of these accidents are in the light fleet, with about 60% of the accidents having the Council driver at least partially at fault. (Sochon 1999)

Increased crash rates in company cars may be explained by the fact that drivers do not own the vehicle, and do not have to pay for the damage to the vehicle or pay for insurance or importantly the insurance excess. The absence of this price – or cost-based incentive – to drive safely may have an overly strong influence on the way these vehicles are driven. While these factors are not related to their FBT status, they can be important in relation to road safety outcomes, fatal injury and workplace crash reduction strategies.

Other factors that may contribute to increased crash rates in company cars include high annual vehicle kilometres, the time of day, fatigue issues and some increased risk of drink-driving, speeding and other driver-related factors. Pool vehicles can be more powerful than an employee's private vehicle, indicators may be on the opposite side and braking may be more or less sensitive than the driver is accustomed to.

There is a potential attitudinal risk associated with driving vehicles that are not directly owned by the driver. While company car drivers may not 'drive it like it's a rental' or 'drive it like you stole it', there is a potential for a 'diminished responsibility effect' that needs to be addressed through a mix of driver training and effective employer, lease company and insurance policy. Insurers could give discounts for companies with driver training programmes and the Accident Compensation Corporation (ACC) could add more accurate risk assessment to the motor vehicle and employer partnership accounts.

The Manslaughter and Corporate Homicide Act 2007 in the UK has refocused attention on the duty of care that employers have towards those who drive as part of their employment. The education and training of drivers and use of cars with high safety ratings is expected to increase because of this Act. However, at the time of writing this report, no research into the effectiveness of the Act appeared to have been published.

Company cars are considered workplaces for employees who drive as part of their work duties. These workplace vehicles are more likely to have advanced safety features. Each manufacturer has different names for their innovations due to patents and trademarks. Safety features such as electronic stability programmes (ESP®), roll over mitigation, roll movement intervention, load adaptive control, enhanced under-steering control, anti-slip regulation, front, side and curtain airbags, electronic brake force distribution, anti-lock braking system (ABS), emergency brake assist, brake assist system, dynamic stability control, vehicle stability control and traction control are all common features of company cars. More advanced technologies such as a pre-collision system are emerging. While airbags and ABS are common in second-hand imported vehicles, the more advanced features are further away. Five-star Australasian New Car Assessment Program (ANCAP) ratings are also common features of fleet cars.

In this day and age the more ANCAP stars you have on a fleet vehicle the better it will fare in the market. (New Zealand Company Vehicle April 2009, p38)

The introduction of safety features can give a false sense of security, which leads to increased risk taking that offsets safety benefits to some extent (Chirinko and Harper 1993).

2.1.6 Energy and emissions

Energy and emissions have become an increasingly important part of government policy.

It is not an exaggeration to claim that the future of human prosperity depends on how successfully we tackle the two central energy challenges facing us today: securing the supply of reliable and affordable energy: and effecting a rapid transformation to a low-carbon, efficient

and environmentally benign system of energy supply. The world's energy system is at a crossroads. Current global trends in energy supply and consumption are patently unsustainable – environmentally, economically, and socially. (International Energy Agency 2008)

The transport sector makes up a large section of total emissions and of total energy consumption; as a result, many countries have targeted the transport sector in order to address their overall energy and emissions. Emissions from road transport account for the largest share of national transport emissions at 90%. This represents 38% of the total energy carbon dioxide equivalent emissions for New Zealand (MED 2009).

Emissions from national transport continue to account for the largest share of total energy emissions. National transport emissions have grown by 64% since 1990 at an average growth rate of 2.8% per annum. (MED 2009)

The road transport sector has to dramatically change the emissions profile of the fleet or it will end up paying in some manner for the emissions created. Some changes have already been noted. Prior to the high oil prices of 2007, the trends were towards larger vehicles and cars had become heavier and more powerful, reducing efficiency gains. The recent increase in fuel prices driven by demand has been the predominant reason for the trend towards vehicles that are more fuel efficient. Manufacturers have responded by making cars and engines lighter by using more aluminium and plastics.

The problem is exemplified in The Netherlands:

Of all passenger cars in the Netherlands, 11% are classified as company cars, which consume 21% of the total energy consumption by passenger cars. (Graus et al 2008)

2.2 Company car policy in economies similar to New Zealand

New Zealand has high levels of household car ownership; it is in the top five in the world on a car per 1000 population basis. The New Zealand transport, economy and employment context are most similar to Australia, the UK and other western democracies.

2.2.1 Australian company car tax policy

Australian FBT uses a statutory formula that is applied against the base value of the car (purchase price or lease price) less depreciation if over four years old. The fraction is less for each increasing bracket of distances travelled, so those travelling the furthest pay the least tax as shown in table 2.3.

Table 2.3 Australian FBT statutory fraction on company cars

Kilometres travelled	Statutory fraction
More than 40,000	7%
25,000–40,000	11%
15,000–24,999	20%
Less than 15,000	26%

(Australian Tax Office 2009)

In a survey of 25 employers representing 2766 company cars, 15 out of 25 respondents said they routinely requested employees to check odometer readings near the end of the FBT year and to increase kilometres if the next concessional tax level could be reasonably attained (Kraal 2008).

Warren (2006) noted ‘If the ultimate objective of taxing fringe benefits is to make employees and employers indifferent as to whether fringe benefits or wage income is provided, then Australia’s approach does not achieve this goal’.

Table 2.4 shows how a \$A20,000 car would be taxed if available to the employee for the whole year. There is a clear incentive to drive further in order to pay less tax.

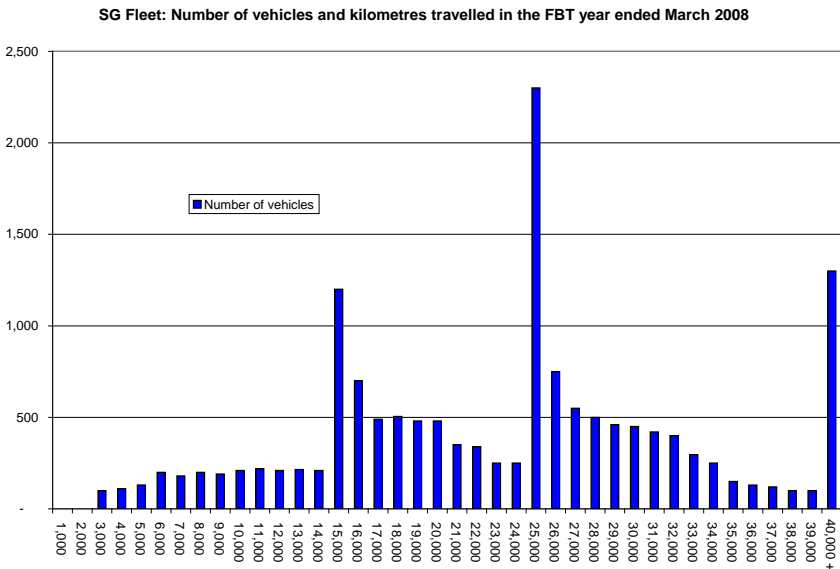
Table 2.4 Worked example of statutory fraction of FBT on a \$A20,000 company car in Australia

Km claimed	Base value	Statutory fraction	Application of statutory fraction	Gross up value	Grossed up value	FBT tax rate	Tax payable
>40,000	\$20,000	7%	\$1,400	2.0647	\$2,890.58	46.5%	\$1,344
25,000-40,000	\$20,000	11%	\$2,000	2.0647	\$4,129.4	46.5%	\$1,920
15,000-24,999	\$20,000	20%	\$4,000	2.0647	\$8,258.8	46.5%	\$3,840
Less than 15,000	\$20,000	26%	\$5,200	2.0647	\$10,736	46.5%	\$4,992

Source: Australian Tax Office 2009

There is further evidence of company car drivers travelling extra distances to meet the closest threshold. As shown in figure 2.5, based on 15,500 company cars leased by Sgfleet (Australia), there is an over-representation of vehicles just above the 15,000km, 25,000km and 40,000 km thresholds (The Treasury Australia 2010).

Figure 2.5 Statutory threshold effect on kilometres travelled by Sgfleet company cars



Based on the Sgfleet submission to the 2009 Review of Australia's Automotive Industry, as cited in the submission of the Federal Chamber of Automotive Industries to Australia’s future tax system (The Treasury 2010).

This illustrates the negative impacts of distance-based FBT thresholds, which encourage company car users to travel more in order to reduce tax liability. New Zealand does not have such a distance-based FBT system. Under New Zealand FBT, use of ‘work vehicles’ to travel between home and work is allowable personal use. There is no distance measurement so those who live the furthest away receive the largest benefit. Tax policy that reduces the tax payable based on kilometres travelled has distortionary effects.

2.2.2 UK company car tax policy

The UK changed its tax treatment of company cars in 2002 to encourage the purchase and use of environmentally friendly cars to target a reduction in carbon emissions (see the website of Her Majesty's Revenue and Customs www.hmrc.gov.uk). Prior to the changes there was a fixed charge for fuel used for private travel regardless of actual use (table 2.5).

Table 2.5 UK company car tax policy prior to 2002 reform

% tax on list price	Distance threshold
35%	Less than 2500 business miles
25%	2500 to 17,999 business miles
15%	18,000 or more business miles

The policy changed from a distance basis, which tried to allow for the increased rate of depreciation and residual value based on distance driven, to an emissions-based system where the tax range still had a maximum of 35% but had discounts for low-emission vehicles.

The impacts of company car tax reform in the UK (www.hmrc.gov.uk) can be summarised as follows:

- Overall losses in revenues from income tax and national insurance contributions are estimated to be £135 million for 2003/4, £145 million for 2004/5 and £120 million for 2005/06.
- Average CO₂ emissions figures have decreased by around 15g/km in 2004 (over and above the general reduction in CO₂ emissions from cars in recent years).
- The number of company cars has reduced by 25% (400,000) from 1.6 million to 1.2 million.
- There has been a substantial increase in company cars running on diesel, from around 33% in 2002 to 50% to 60% at the end of 2004.
- The proportion of company car drivers provided with free fuel for private use has also fallen significantly since 1997, from around 57% to 30%.

The private use of company cars is calculated on a pence per mile basis (table 2.6). Therefore, those who benefit most from longer distance commutes pay an appropriate amount of tax.

Table 2.6 Taxation of private fuel use UK

Engine size	Petrol	Diesel	LPG
1400cc or less	13p	12p	9p
1401cc to 2000cc	15p	12p	10p
Over 2000cc	21p	15p	15p

Source: www.hmrc.gov.uk

The carbon dioxide thresholds have been adjusted over time with a zero emissions and ultra low (75g/km) threshold added in 2010 (table 2.7).

Table 2.7 UK company car CO₂ tax thresholds 2010

Tax on list price	CO ₂ (g/km) threshold
0	0
5%	75 or less
10%	76
15%	121
16%	135
17%	140
18%	145
19%	150
20%	155
21%	160
22%	165
23%	170
24%	175
25%	180
26%	185
27%	190
28%	195
29%	200
30%	205
31%	210
32%	215
33%	220
34%	225
35%	230

Source: www.hmrc.gov.uk

There is an additional 3% added if the car runs solely on diesel, up to the maximum 35%.

The UK experience has shown, given an incentive, low-emissions cars are chosen by employees and employers. However, if there are alternatives such as employee car ownership schemes people may switch to purchasing their own vehicles, which in the UK analysis were on average 5g/km more polluting than the average employer chosen car (www.hmrc.gov.uk).

In the UK, the total number of company cars did decline, with 65% of employees receiving cash instead (which would be subject to tax). The revenue loss was higher than expected as employers chose the lower emissions cars resulting in the tax income dropping. In addition, the fuel-efficient cars and private mileage drop reduced fuel tax revenue. It is not uncommon for a new car model to be 20% to 25% more efficient than the previous one. This will be an issue for all tax authorities as vehicles become more efficient. This represents a significant revenue risk, especially in New Zealand where the fuel taxes are hypothecated. The cost of steel and bitumen is increasing at the same time as cars are becoming more efficient. There is

some suppression of transport demand which reduces the petrol tax revenue while road building is becoming more expensive.

2.2.3 Company car and FBT reform in Ireland

Ireland has replaced company car FBT based on distant thresholds with FBT based on CO₂ emissions (table 2.8).

Table 2.8 Ireland emissions allowances for benefit in kind taxation of company cars

Vehicle emissions category	CO ₂ emissions (g/km)	Original market value %
A	0-120	30%
B	>120-140	30%
C	>140-155	30%
D	>155-170	35%
E	>170-190	35%
F	>190-225	40%
G	>225	40%

Source: Irish Tax and Customs www.revenue.ie

To avoid revenue loss, Ireland retained the former maximum threshold of 30% and now charges those vehicles with higher emissions an additional percentage of their list value rather than offering a significant discount for low-emissions vehicles. A similar approach could be used in New Zealand to reduce revenue loss.

Ireland amended its FBT tax laws in 1997 effective from 1999 onwards to exempt employees and directors from benefit-in-kind taxation, where an expense has been incurred by an employer on the provision of a monthly or annual bus or train pass for the employee or director. The employer must purchase the monthly pass as a salary sacrifice, thus the employees receive a tax advantage by receiving the public transport pass in lieu of salary before tax. The impact of the Irish scheme was not available at the time of publishing this report. However, the Irish experience is likely to be similar to that in the UK, with a significant switch to fuel-efficient vehicles.

2.2.4 The US experience of tax-free public transport benefits, cash out and Eco passes

In the absence of taxation of free parking provided by employers, a second-best approach of subsidising public transport was triggered in the USA by the oil shock in the 1970s. Monthly passes were introduced by public transport agencies; however, there were limited sales outlets and large employers were offered the option of selling monthly passes at discounted rates to employees. This informal subsidy was legalised by the Tax Reduction Act 1984, which allows a \$15 per month subsidy of public transport. A similar idea of enabling employees to choose between cash or parking was suggested by Donald Shoup in 1990 and has been an option for some employees in California. When given a choice between subsidised parking and subsidised public transport, some employees will choose public transport.

The effectiveness of tax-free public transport benefits has been analysed, showing public transport use rose in workplaces by an average of 34% in the San Francisco Bay Area Commuter Check program and an average of 39% in a national review of 22 studies (Baker et al 2010). In theory, offering commuters a choice between different modes of transport enables them to choose public transport, as it is subsidised equally with driving and parking. However, given the convenience of door (home) to door (company car park) travel, the public transport option is only effective when it is faster than driving and the walk to the

office is short. For this reason it is often successful in the congested CBDs of the USA. Forty-three percent of San Francisco Bay Area Rapid Transit (BART) passengers work for employers offering a public transport benefit programme (Oram 2008).

Employers can benefit from lower car parking demand especially in the CBD where land values make parking spaces expensive to provide.

It is hard to underestimate the role of workplace parking policies in urban transportation. Free parking is a potent market distortion with profound effects on transit demand, auto ownership, land use patterns, and home ownership decisions, such as commuting distance or the choice between an apartment or a single family residence. (Baker et al 2010)

Enabling a tax concession for public transport adds another subsidy of motorised transport, while those who walk or bicycle receive no subsidy. Even if a bicycle subsidy is allowed, the relative value is low as a bicycle may cost much less than a company car or annual public transport ticket. Subsidy of bicycles has been part of tax reform in several countries. Bicycles have low running costs after the initial purchase. A limited number of people live within cycling range of their work and others may not see cycling as a viable option; therefore, in terms of total revenue loss a bicycling subsidy is a low-risk option.

The U-Pass program of the University of Washington reduced the percentage of employees driving alone to the university from 33% to 23%. The price of parking at the university was increased by 50% and the revenue was used to subsidise public transport. The success of the U-Pass resulted in the Seattle Metro introducing a subsidised Flexpass for employers. In 2005, 130 workplaces and 118,000 commuters used the Flexpass program (University of Washington 2005).

2.2.5 Comparison of FBT policies

The impact of company car tax policy varies from country to country and the scale of impact is linked to the incidence of company cars in employment packages. In countries where company cars are available for a larger proportion of the work force, the impact on the transport system is much greater. Over time, company cars have diminished as a fringe benefit. If a large number of employers offer company cars, this can become self-perpetuating as employees expect a company car as part of their employment package.

Table 2.9 presents a summary and comparison of the major features of FBT policies with respect to company cars in New Zealand and other countries.

Table 2.9 Comparison of FBT tax policies

Country	Company cars	Personal use	Workplace parking	Public transport
New Zealand	Taxed at 20% of car's initial value or 36% of depreciated value	Fixed % included in car value. No variation for actual use	Exempt	Taxed
Australia	Lower tax % based on distance	Included in % so lower based on distance	Taxed	Taxed
Ireland	Increasing % for CO ₂ emissions	Taxed per mile	Taxed €200 per annum	In lieu of pre-tax salary
UK	Increasing % for CO ₂ emissions	Taxed per mile	Exempt	Subsidies paid to bus operators exempt
USA	Based on value of vehicle	51 cents per mile	Exempt up to \$230 per month	Exempt up to \$230 per month

Sources: Fringe benefit tax guide (IRD 2009); Irish Tax and Customs www.revenue.ie; www.hmrc.gov.uk; Australian Tax Office www.ato.gov.au; www.irs.gov

Workplace parking is exempt in New Zealand (if provided on the employer's own premises) but not in Ireland or Australia.

Public transport is taxed in New Zealand (at the time of drafting the report). In the USA, public transport tickets provided by employers are exempt from FBT.

Only New Zealand has a fixed personal use rate while all other countries require personal use to be measured and tax paid on a per mile basis or equivalent.

The UK has been progressive in introducing emissions-based taxation, which has also been adopted by Ireland and Belgium. Most European nations also consider emissions in vehicle registration fees.

3 The company car in New Zealand

This chapter describes current tax policy, fleet characteristics and the impact of company cars on employee travel behaviour in New Zealand. The relative magnitude of incentives which company cars represent for employees is also explored.

3.1 Current tax policy

The IRD allows two methods for identifying the value of the company car. This amount is added to the employee’s annual income and taxed using income tax rates as shown in table 3.1.

Table 3.1 Income tax rates as at 31 March 2010

Annual income	Tax rate
\$0-\$12,250	0.1429
\$12,251-\$39,110	0.2658
\$39,111-\$53,850	0.4925
\$53,851 and above	0.6129

As most employees receiving company cars are already earning income over \$53,851, they will be paying FBT at 61.29%. While the tax rate at 61.29% is high, the valuation of the company car is where employees can gain some advantage.

The first method for deriving the tax book value of a company car is to take the:

- original cost price less the total accumulated depreciation of the vehicle, or
- cost of the vehicle if acquired after the beginning of the tax year.

FBT is applied at 36% on the book value price per annum, or 9% if paid quarterly.

The second method is the cost price method where the list value is used without depreciation and the FBT is applied at 20%, or 5% if paid quarterly.

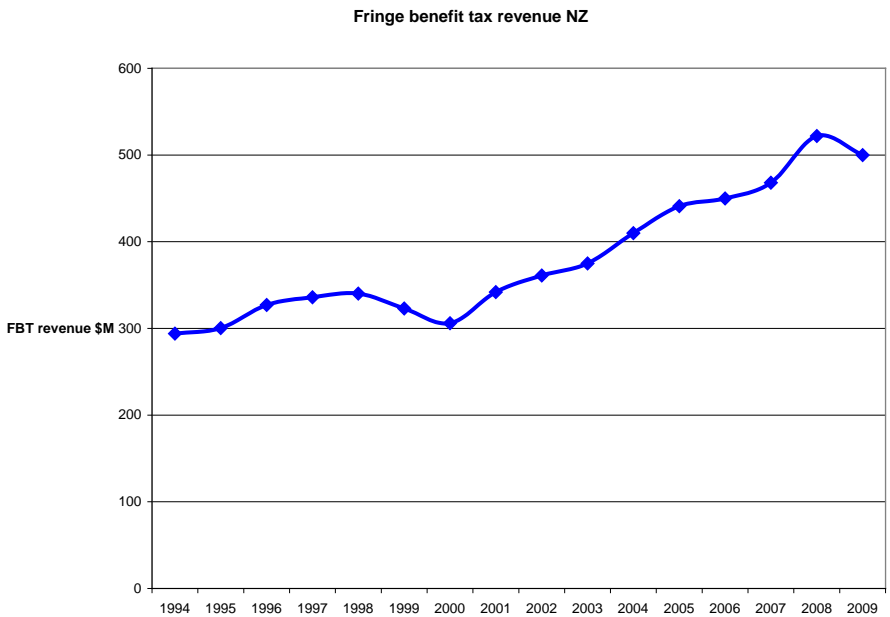
The current tax policy has a minimum book valuation of \$8333 for any vehicle, even after depreciation has been applied to cover the average ongoing savings that employees make each year from having an employer-provided vehicle, irrespective of the vehicle’s value. The intent is that the minimum valuation includes the residual value of the vehicle, ie \$8333 taxed at 36% is \$3000, which represents the ongoing benefits of car ownership, including warranting, registration, insurance and running costs.

Both of these methods include the ability to reduce the tax liability based on the days when a vehicle is not available for the employee’s private use. This provides company car users with the ability to reduce their costs when they are not using the vehicle. This is not available to private car owners whose registration, insurance and warranty costs remain fixed regardless of use. While fuel-running costs are nil when the vehicle is not in use, all other costs are still incurred.

3.1.1 FBT revenue trends

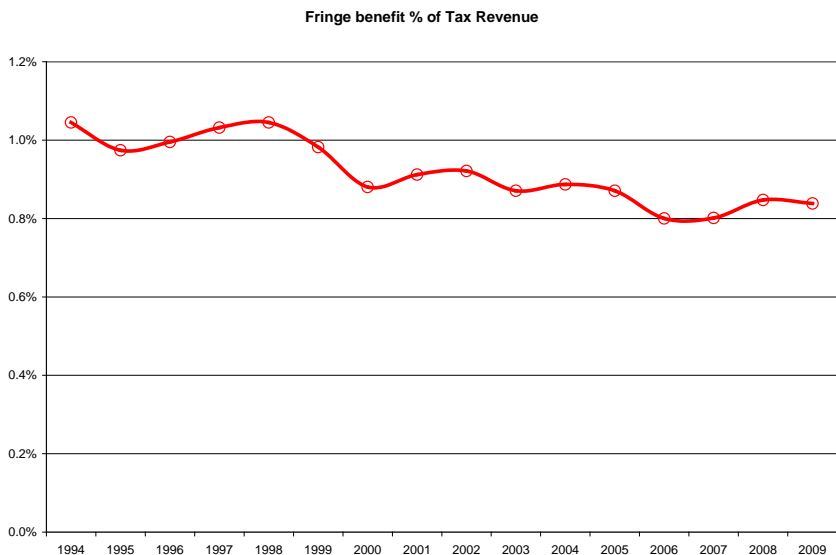
FBT provides around \$500 million to the New Zealand government (figure 3.1). Most of this relates to vehicles.

Figure 3.1 New Zealand FBT revenue 1994-2009 (data provided by IRD New Zealand)



FBT is now less than 0.9% of tax revenue in New Zealand. Tax cuts in October 2010 to the top rate of personal tax further reduced the incentive to avoid tax via company cars and also reduced FBT revenue (figure 3.2).

Figure 3.2 FBT percentage of total tax revenue (data provided by IRD New Zealand)



3.2 Fleet characteristics

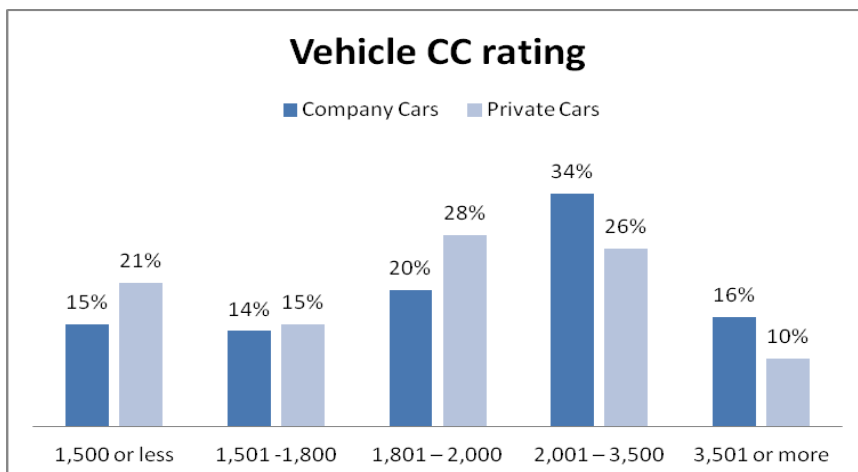
Based on vehicle registration data (NZTA as at Feb 2010), there are 252,000 company cars registered to companies in New Zealand. According to the 2006 Census, 212,000 people drove to work using a company car on census day. This translates to 10% of registered vehicles in 2010 and 13% of journeys to work in 2006. Company cars make up a significant part of the total vehicle fleet and remain part of the

fleet when they are sold after three to five years. The following analysis provides insight into the differences between company cars and the rest of the fleet.

3.2.1 Engine capacity

Analysis of the entire New Zealand car fleet demonstrates that company cars have higher engine ratings than the rest of the fleet (figure 3.3).

Figure 3.3 New Zealand engine rating (cc) by ownership type



New Zealand motor vehicle registration data, NZTA February 2010

Fifty percent of company cars in New Zealand have engines over 2000cc compared with 36% of cars owned by individuals. This 14-percentage point difference represents significant energy consumption and emissions distortion that could be controlled by linking engine size and emissions to FBT, as is the practice in the UK. Some employers link status with engine size, and so provide upper management with larger vehicles (such as V8 cars) while middle managers are given smaller cars. Employers have always had some restriction on vehicle choice; formally this was price based rather than engine size based. Employers are now moving to more fuel-efficient company vehicles. Where previously employees could choose six-cylinder cars, some employers are now restricting the choice to four-cylinder vehicles. Employers may need to consider relocation costs or cash instead of company cars, especially for those living long distances from work.

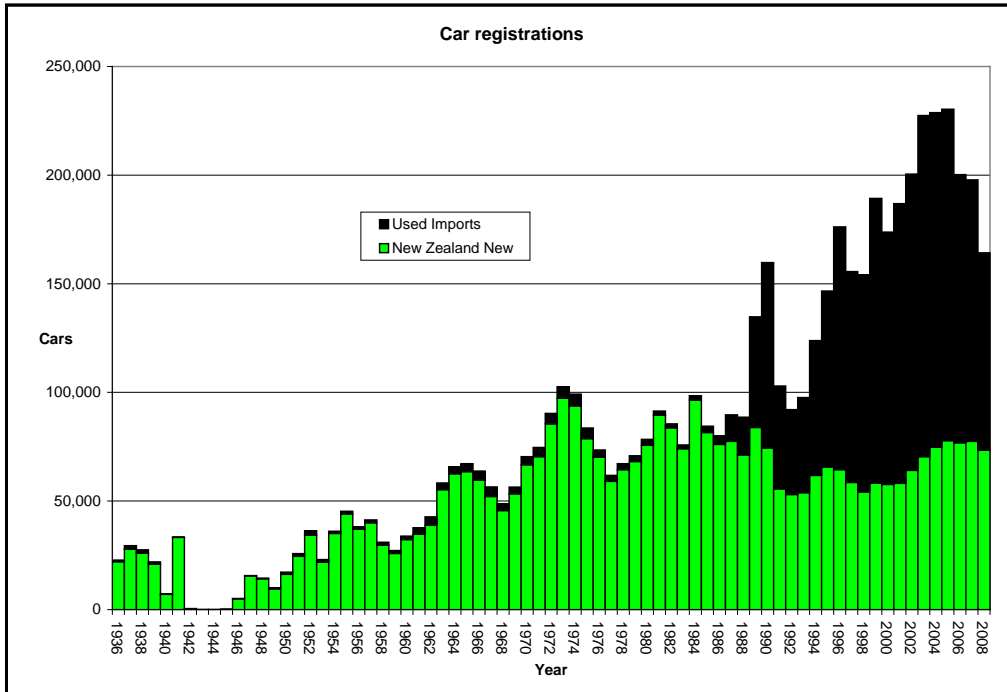
Company cars make up around 60% to 70% of new car sales in New Zealand¹ and around 10% of the fleet is company owned (New Zealand motor vehicle registration data February 2010). These cars will be on the road for the next 15 years or so. If the company car fleet has a higher emissions and energy use profile than the rest of the fleet, this needs to be addressed. The larger, heavier and less fuel-efficient company car fleet has been historically an international problem.

The average scrap age for New Zealand new cars and second-hand Japanese imported vehicles is 18 years and 16 years respectively (MoT 2007). While a car may be used for the first three to five years of its life as a company vehicle, it will be in private hands for the remaining 13-15 years. This skews the entire vehicle fleet towards larger engine cars than would otherwise be purchased. This means the ‘principal-agent’ problem has long-term implications for the whole New Zealand fleet, as employees often choose a less fuel-efficient option for a company car than they would if they were paying for the fuel themselves.

¹ Motor Trade Association, New Zealand press release, May 2010, www.mta.org.nz/n1711.html

FBT policy was introduced in the 1980s; however, since then the growth of used imported vehicles has changed the price of car ownership significantly, resulting in a huge growth in cars per household (figure 3.4).

Figure 3.4 Car registrations 1936-2008



Source: NZTA motor vehicle registration data

The lack of vehicle policy, regulation and incentives has meant New Zealand's vehicle fleet is not as new as it could be and the new cars are not as safe, fuel efficient or environmentally friendly as they could be in a more restrictive policy environment. The lack of policy in effect has enabled a price-based market to flourish where second-hand Japanese cars dominate car sales, with an age restriction as a blunt policy tool. The lack of a local car manufacturing industry to protect puts New Zealand in an ideal position to be selective about imported cars, thus ensuring the worst cars in terms of efficiency, emissions and safety are kept to a minimum. It is hard to argue that low car prices are needed to ensure cars are affordable given New Zealand's high car ownership per capita status.

When most cars were bought new, the fleet had a low variance in safety and emissions variables. Now that most cars entering the market are imported second-hand from Japan, they are around six to eight years old causing a lag in the adoption of new safety, efficiency and emissions standards in New Zealand's fleet. Adding an emissions-based FBT may cause more employers to abandon the provision of company cars, thus resulting in an even older fleet. Any policy aimed at emissions needs to address the second-hand Japanese market and new car fleet.

3.3 Impacts on employee transport behaviour

Employees may be offered the option of a company car at the job offer stage in recruitment. Employees weigh up the advantages and disadvantages between a company car and cash, if cash is offered. Those with longer commutes have a greater incentive to choose a company car as the value of the vehicle is taxed, but not the expenses related to running costs.

The effect of a company car on the logarithm of commuting distance is statistically significant and is about 0.14 (Gutiérrez-i-Puigarnau and van Ommeren 2009).

There is not the same financial incentive for drivers to choose smaller cars if a third party is paying the fuel bills. The addition of a carbon price to fuel has limited or no effect on company car drivers who are not paying fuel costs. The distortion towards cars with larger engines is a classic principal-agent problem where the individual who chooses and uses the vehicle does not pay for its costs. Fleet-leasing companies reacted first to the issue of fuel efficiency, due to their exposure to residual values. While employers are now acutely aware of fuel costs this has not been the case historically.

Eighty percent of New Zealand companies pay for private fuel usage (Leaseplan 2003). Changes in price cause changes in travel behaviour. If employees are not exposed to increases in running costs, the effects of increases in fuel, insurance and maintenance costs or the introduction of a carbon tax will have minimal effect. FBT has no variable cost for fuel (for the employee) so again there is a lack of incentive for the employee to reduce fuel use if the car is a company car. With fuel prices at historically record highs, the incentive for employers to reduce fuel costs may make changes to FBT to include taxation of private use palatable.

3.3.1 Transport elasticities

Elasticities measure the change in behaviour that results from a change in price (table 3.2). If fuel prices increase there are impacts on vehicle ownership, fuel efficiency and distances driven. If there are distortions in policy that artificially subsidise fuel or the type of vehicle driven there will be a multiplier effect on distances driven. Employees who do not pay for fuel are immune to these effects and employers end up covering these costs.

Table 3.2 Estimated long-run transport elasticities (Johansson and Schipper 1997, p209)

Estimated component	Fuel price	Income	Taxation (other than fuel)	Population density
Car stock (vehicle ownership)	-0.20 to 0.0	0.75 to 1.25	-0.08 to -0.04	-0.7 to -0.2
Mean fuel intensity (fuel efficiency)	-0.45 to -0.35	-0.6 to 0.0	-0.12 to -0.10	-0.3 to -0.1
Mean driving distance (per car per year)	-0.35 to -0.05	-0.1 to 0.35	0.04 to 0.12	-0.75 to 0.0
Car fuel demand	-1.0 to -0.40	0.05 to 1.6	-0.16 to -0.02	-1.75 to -0.3
Car travel demand	-0.55 to -0.05	0.65 to 1.25	-0.04 to 0.08	-1.45 to -0.2

If individuals are insulated from the normal triggers caused by price changes, transport behaviour is distorted. Externalities such as emissions have been internalised in prices via carbon taxes or carbon dioxide-based charges to better represent the impacts in a tangible way.

Parking subsidies provide a significant untaxed benefit to employees who drive, which is not provided to those who use other commute modes. Parking elasticities measure the impact of an increase in parking price. Many employees pay nothing for parking as it is provided by their employer. Any introduction of a price would have an impact on travel behaviour.

The importance of a comprehensive parking strategy is demonstrated in table 3.3 where increases in price in one area cause a shift to other areas nearby. With the increase of parking prices in cities, employers will find more employees asking for a car park as part of their employment. Employer-provided parking needs to be considered in developing transport strategies for parking strategies to be effective.

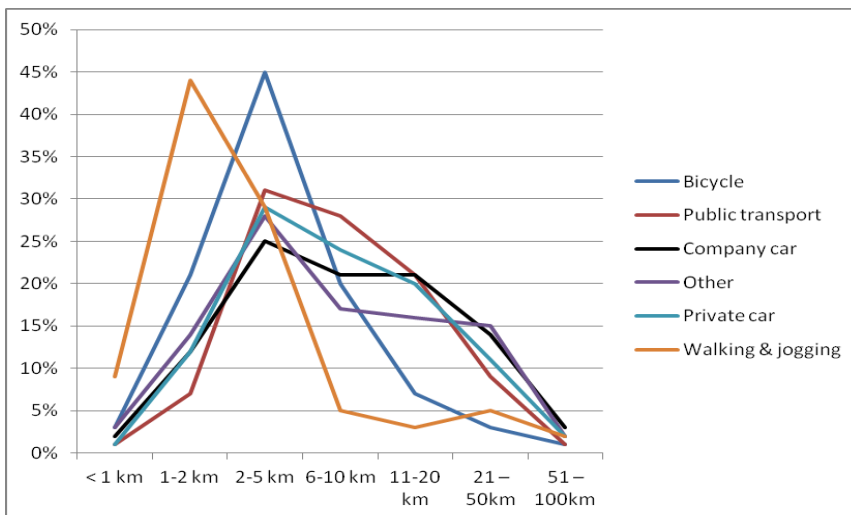
Table 3.3 Parking elasticities (Hensher and King 2001, table 6)

	Preferred CBD	Less preferred CBD	CBD fringe
Car trip, preferred CBD	-0.541	0.205	0.035
Car trip, less preferred CBD	0.837	-0.015	0.043
Car trip, CBD fringe	0.965	0.286	-0.476
Park & ride	0.363	0.136	0.029
Ride public transit	0.291	0.104	0.023
Forego CBD trip	0.469	0.150	0.029

3.4 Journey to work by company car in New Zealand

In New Zealand, the company car is used for longer journeys than other forms of transport. Seventeen percent of journeys over 21km are made by company car compared with 10% by public transport and 13% by private car (figure 3.5).

Figure 3.5 Journey length by mode of transport



Source: Statistics NZ: 2006 Census journey to work data

Respondents who would prefer a company car were asked to give their reasons. 19% said I live quite a distance from work so it makes sense to have an 'all-expenses-paid' company car. (NZ Management Magazine, Ideal Salary survey 2004)

If company cars can be purchased or leased by employers at lower prices than an employee can access, then the employee is gaining a benefit. If a brand new car is provided rather than an imported second-hand Japanese vehicle, which is the norm for most vehicle purchases by the public, there is potentially an additional incentive for the employee to opt for a company car in lieu of salary. In order to examine the impacts of company cars on employee travel behaviour, the journey to work by company car as measured in the census was mapped.

Of those who travelled to work by company car on census day 2006, 86 percent were male and 14 percent were female. Almost one-third (30 percent) of those who took a company car

to work were legislators, managers, and administrators. Nearly half of those who took a company car to work were aged 35 to 49 years. (Statistics NZ 2006)

With 86% of company cars driven by men, the company car is an interesting indicator of gender inequality in employment. This could also help explain why women make up 68% of public transport users.

3.4.1 Mapping of journey to work by company car users

In order to examine the spatial patterns of company car use, census data was used to identify where company car drivers lived and where they worked. The 1996, 2001 and 2006 census journey to work data was used to identify the trends in journey to work by company car in Auckland, Wellington and Christchurch. The origin and destination area unit from 2006 journey to work census data was used to identify those who drove to the CBD areas in Wellington, Auckland and Christchurch. Specialised data was provided by Statistics New Zealand for this analysis. Four maps for each city were developed, the first two using the percentage of people who drove by company car from each census area unit in 1996 and 2006 to examine commuting patterns over a 10-year period. The third map identified commuting patterns to the CBD. The CBD is the dominant employment area and also has the most high-value parking. The fourth map identified the employment destinations of company car drivers in 2006.

Table 3.4 Number of journeys to work by company car on census day

Urban area (population) (2006)	Journey to work 2006	Journey to work 2001	Journey to work 1996
Auckland (1.4 million)	48,771	42,096	47,874
Wellington (390,000)	11,901	11,376	14,316
Christchurch (390,000)	13,476	10,683	12,840
Rest of New Zealand (2,232,900)	138,060	100,515	95,757
Total New Zealand (4,367,800)	212,208	164,670	170,787

Table 3.4 shows the trend in journey to work by company cars, including an analysis by city. Overall a growth trend is demonstrated; however, most 2001 values are slightly below those for 1996. This may be linked to the introduction of the multi-rate system in 2000 which attributed fringe benefits at the marginal tax rate of the employee rather than at the flat rate which previously overtaxed low and middle-income employees and undertaxed those in the highest tax brackets.

Overall, Auckland and Christchurch indicate growth trends while Wellington shows a decline. Growth is demonstrated in the rest of New Zealand.

For most people driving company cars in Auckland, Wellington and Christchurch the CBD is not their destination.

3.4.2 Journey to work by company car in Auckland

On both 1996 and 2006 census days, there was a higher percentage of employees using a company car to drive to work in the outer areas of Auckland than in the inner areas (figures 3.6 and 3.7). In 2006 fewer than 5% of CBD residents used a company car to get to work while in areas like Beachlands and Maraetai over 20% of residents drove to work in a company car.

For those who live on the outskirts of the city with a long commute, a company car is a highly valuable part of an employment offer. Housing costs are lower in outer suburban areas thus the subsidy of driving enables people to live further away than they might otherwise choose if no company car was available.

Despite 20% of vehicles in Beachlands being company cars, none travelled to the CBD. There is also a ferry from Pine Harbour in Beachlands, which takes 30 minutes to the CBD while the journey by car would be an hour or more. The impact of the Gulf harbour ferry from Whangaparaoa is also apparent.

Figure 3.6 JTW by company car Auckland 1996

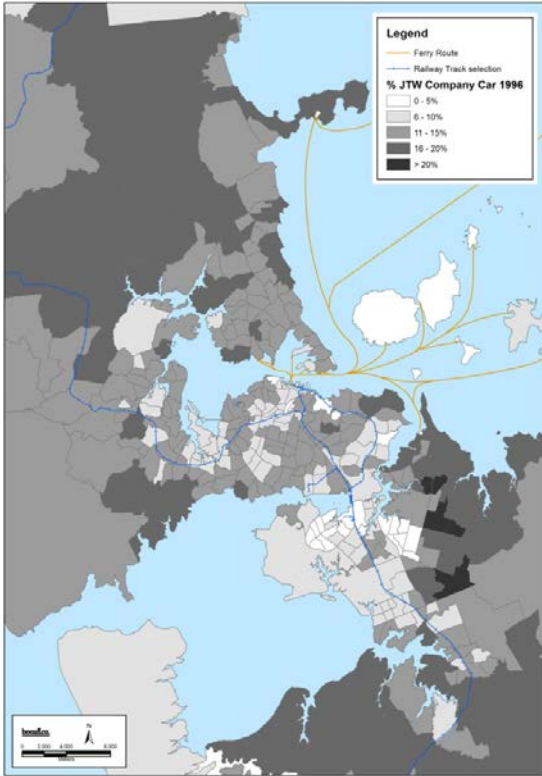


Figure 3.7 JTW by company car Auckland 2006

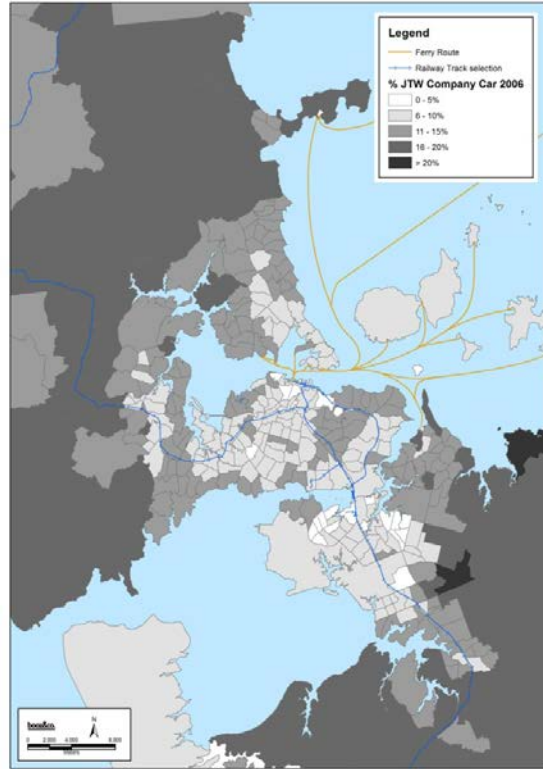
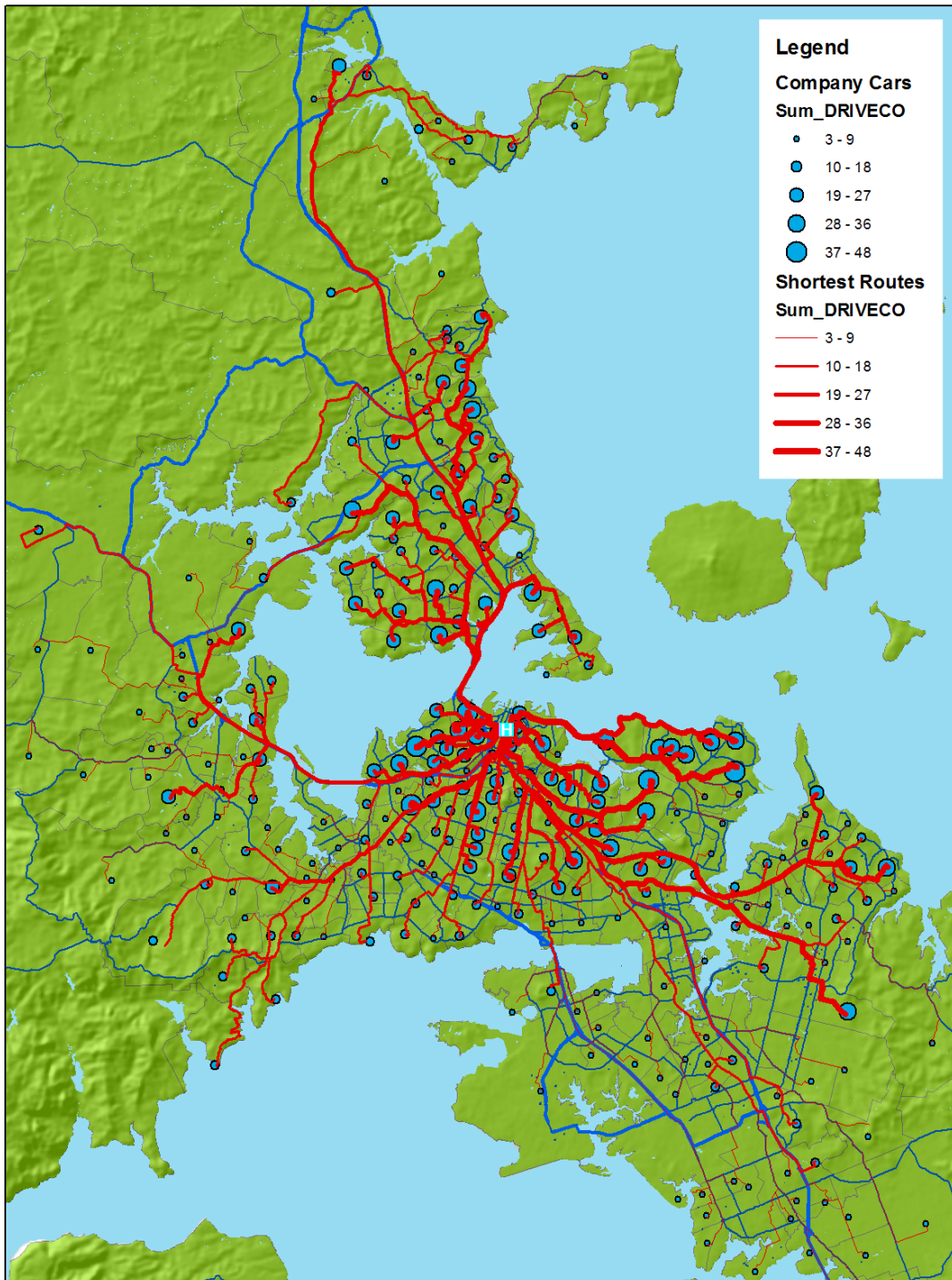


Figure 3.8 Driving to the CBD by company car in Auckland (2006)



Ollivier & Co

Source: Dept of Statistics
22 October 2010

Origin - Destination

2006 Census by Areaunit
Company Cars to CBD

Figure 3.8 shows the concentrations of company car drivers using major roads. On the 2006 census day 4188 people drove to the CBD in a company car, which represented only 8.6% of the total number of people (48,771) driving a company car. Nevertheless, there were strong concentrations of company car

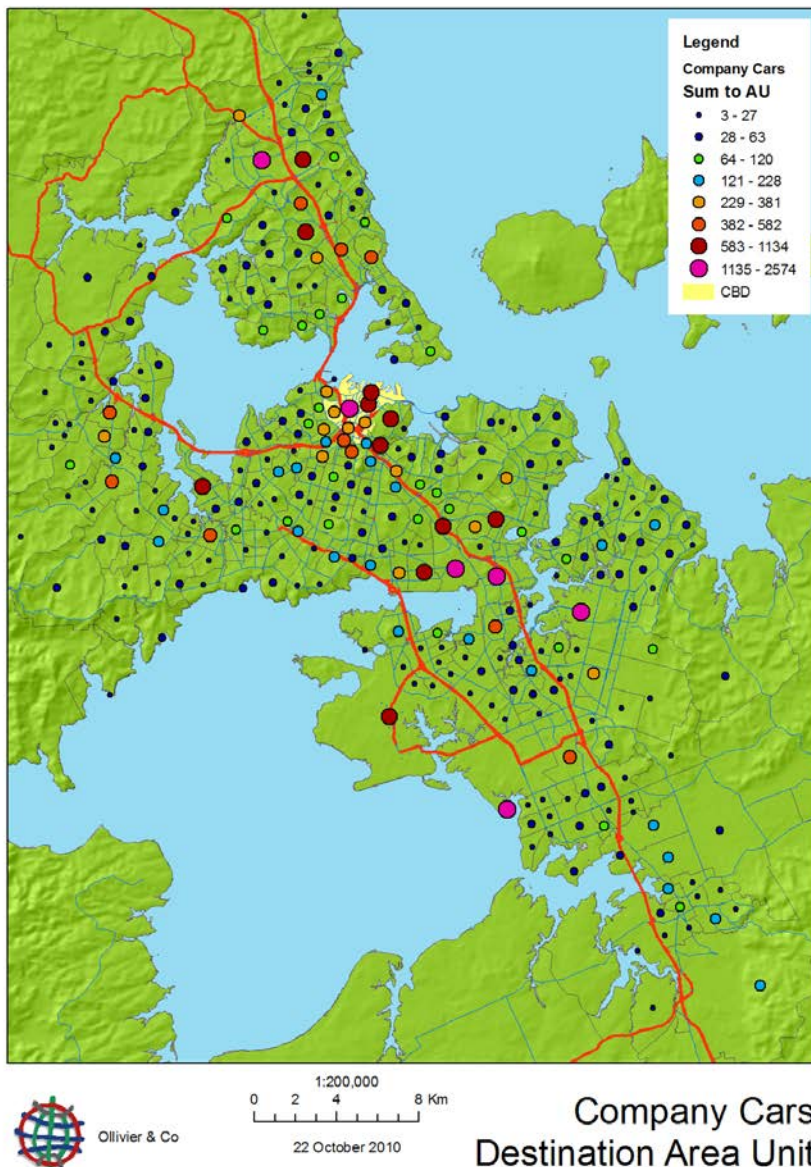
trips on congested major arteries of the CBD. In theory many of these trips could have been made using the Northern Busway, ferries or the train. Some 44,000 of those travelling by company car were travelling to other areas in Auckland.

There is some evidence of lower company car use where public transport routes are more attractive. On the 2006 census day there were fewer company car drivers on the routes with bus lanes such as Dominion, Sandringham and Manukau Roads. Areas like Devonport and Half Moon Bay with fast ferry trips to the CBD also had lower rates of company car usage.

Employment locations driven to by company car are widely dispersed in Auckland (figure 3.9). Industrial areas and employment parks can be identified by higher concentrations of company car use. Some employment locations are isolated from residential suburbs.

Public transport networks make driving the easiest commuting option. These employment parks are typified by large car parks and a lack of surrounding residential neighbourhoods. These spatial patterns are an urban planning rather than company car issue.

Figure 3.9 Journey to work destination of company cars in Auckland (2006)



3.4.3 Journey to work by company car in Christchurch

Over the 10-year period between censuses, company car use decreased among inner area residents and increased for residents of outer areas (figures 3.10 and 3.11).

Figure 3.10 Journey to work by company car in Christchurch (1996)

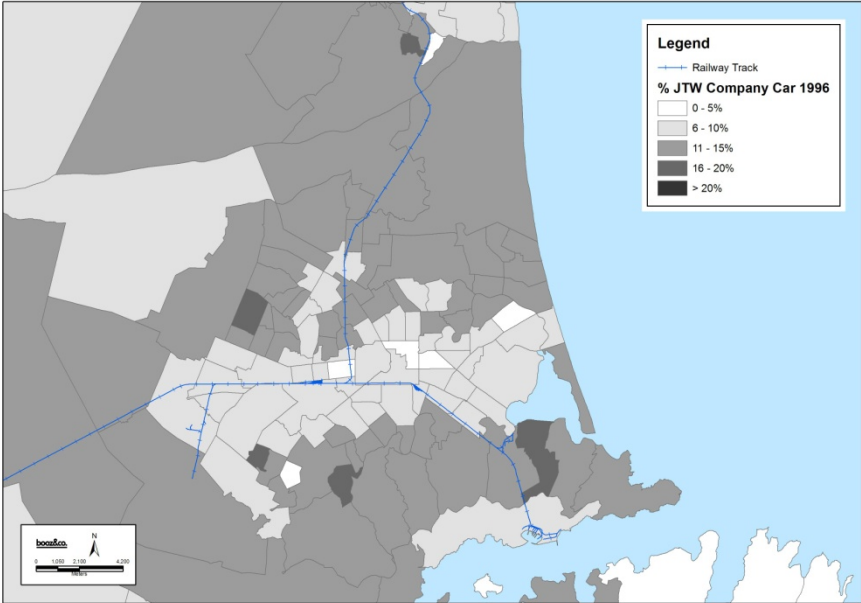
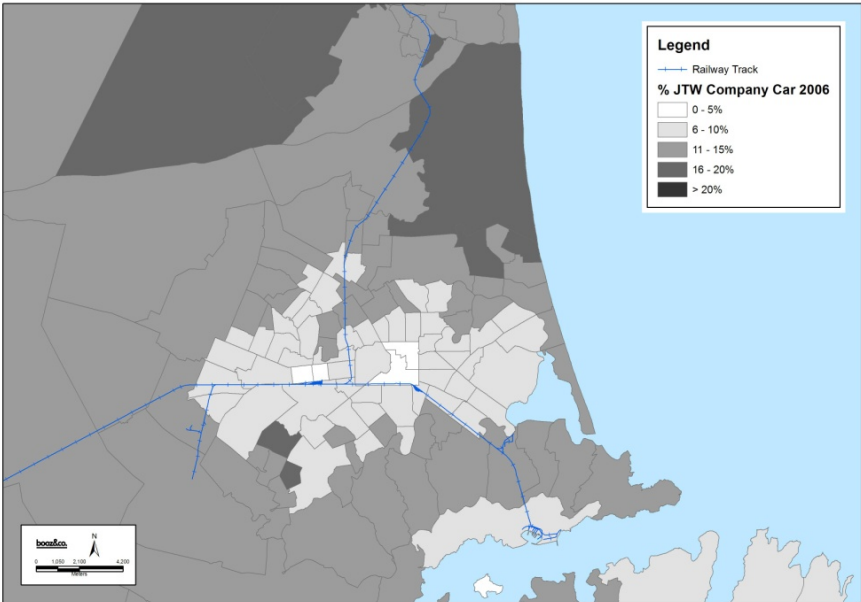
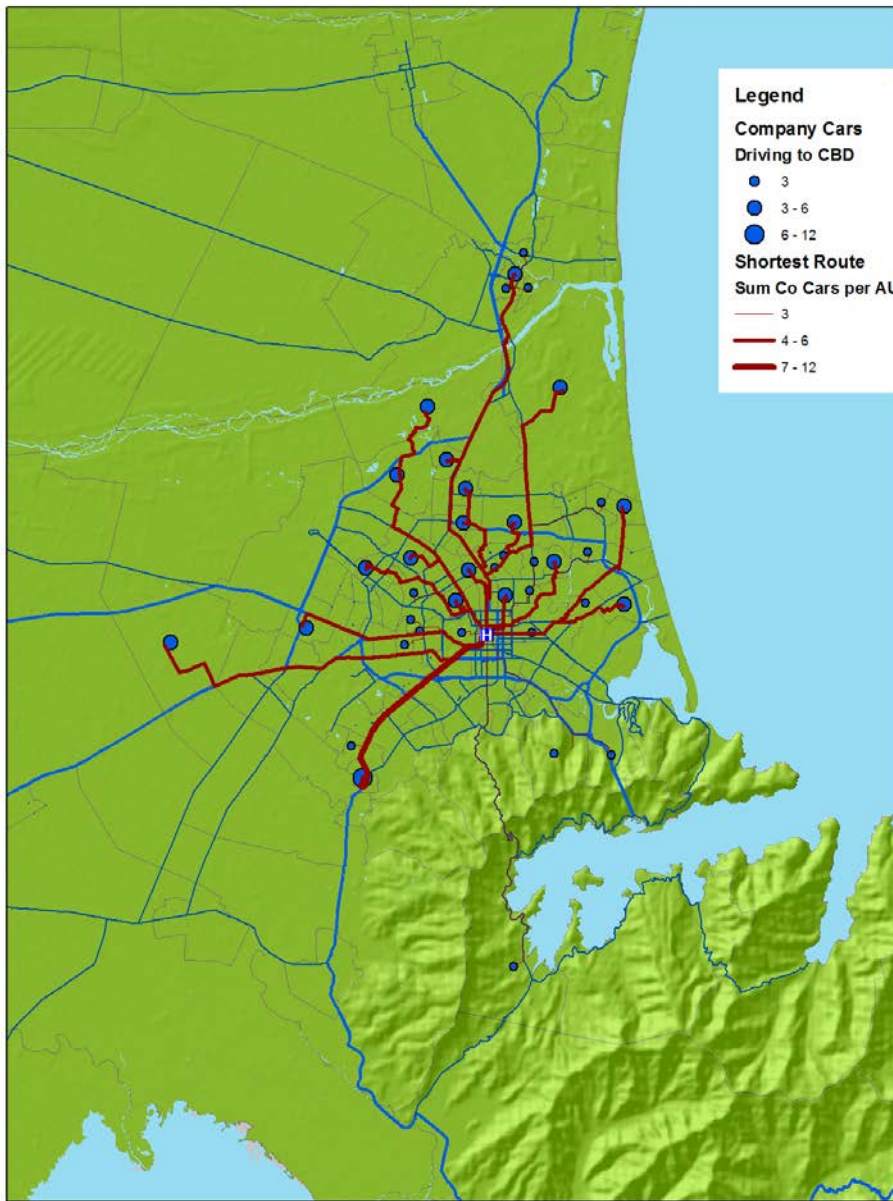


Figure 3.11 Journey to work by company car in Christchurch (2006)



Like Auckland, the inner areas of Christchurch had low rates of company car use on both census days compared with the newly developed areas.

Figure 3.12 Percentage driving to the CBD by company car in Christchurch



Ollivier & Co

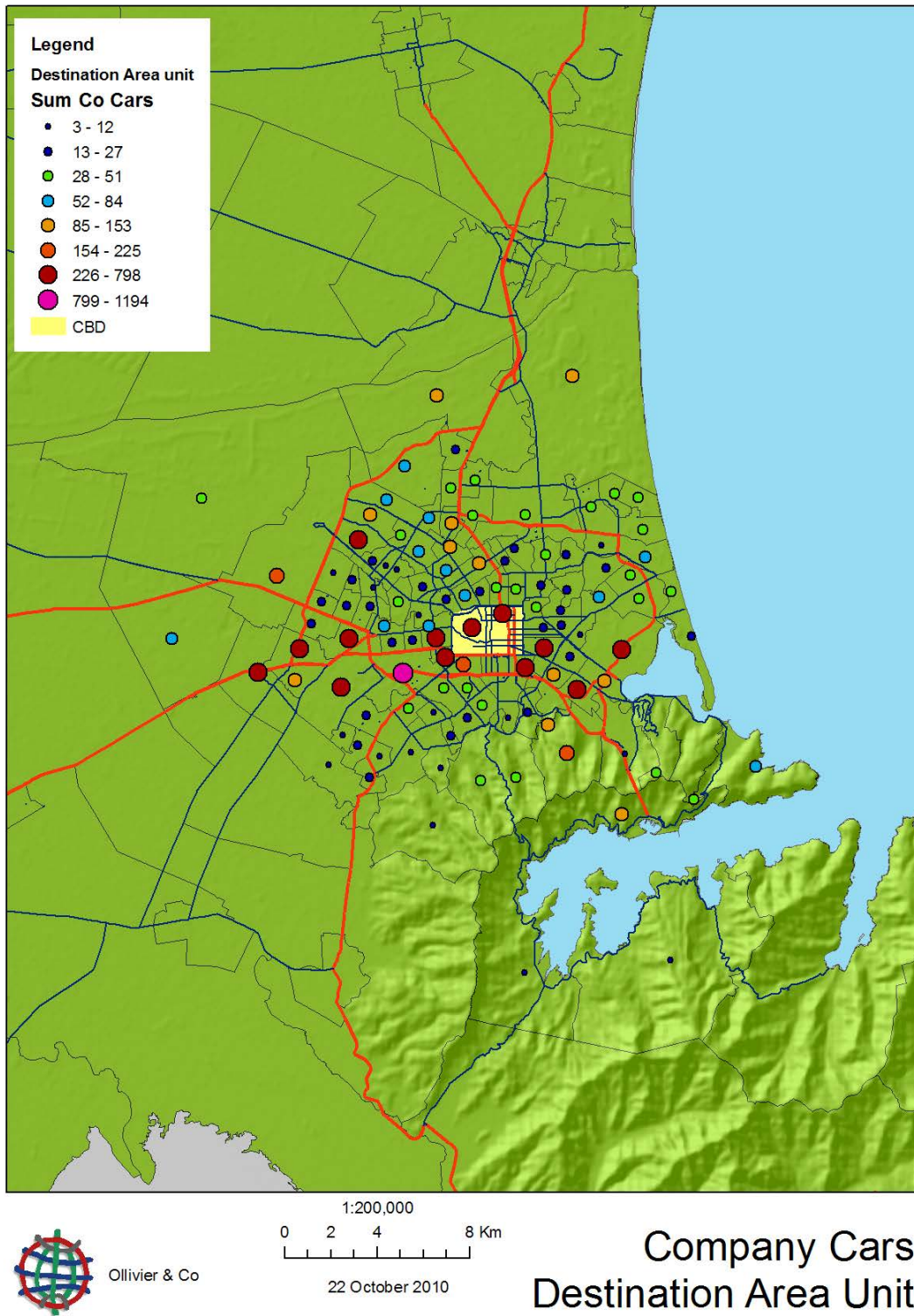
Source: Dept of Statistics
22 October 2010

Origin - Destination

2006 Census by Areaunit
Company Cars to CBD

In Christchurch, on the 2006 census day, the CBD was the destination for 18% of those driving company cars. The outer areas had higher rates of company car use than the inner areas. Christchurch has company car journey destinations that are aligned to the industrial areas, highlighting a separation between residential and work locations (figures 3.12 and 3.13).

Figure 3.13 Journey to work destination of company cars in Christchurch



3.4.4 Journey to work by company car in Wellington

Wellington, New Zealand's capital, has a high concentration of government jobs and a relatively compact CBD well served by public transport. It also has New Zealand's highest public transport mode share. Government departments tend to use pool vehicles more than company cars. In both the 1996 and 2006 census years fewer than 6% of Wellington's CBD and central area residents travelled by company car, while a much higher percentage (16% to 20%) of residents in outer areas used company cars (figures 3.14 and 3.15). These figures also show that by 2006 there was a slight decline in the percentage of residents in some areas who used company cars.

Figure 3.14 Journey to work by company car in Wellington 1996

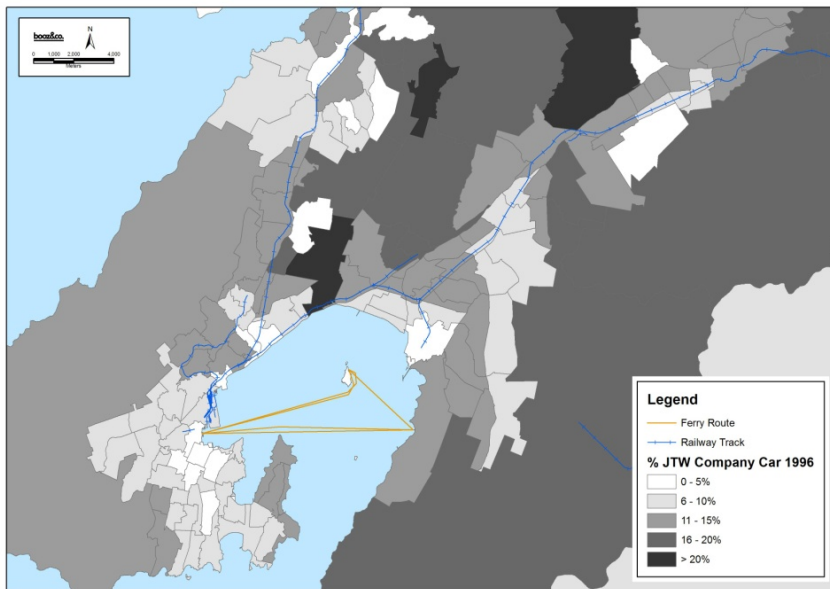
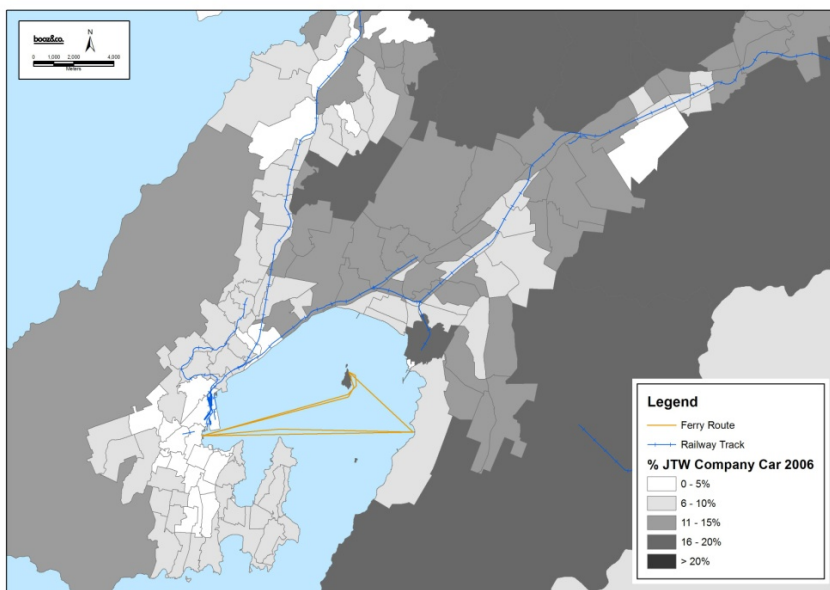


Figure 3.15 Journey to work by company car in Wellington 2006

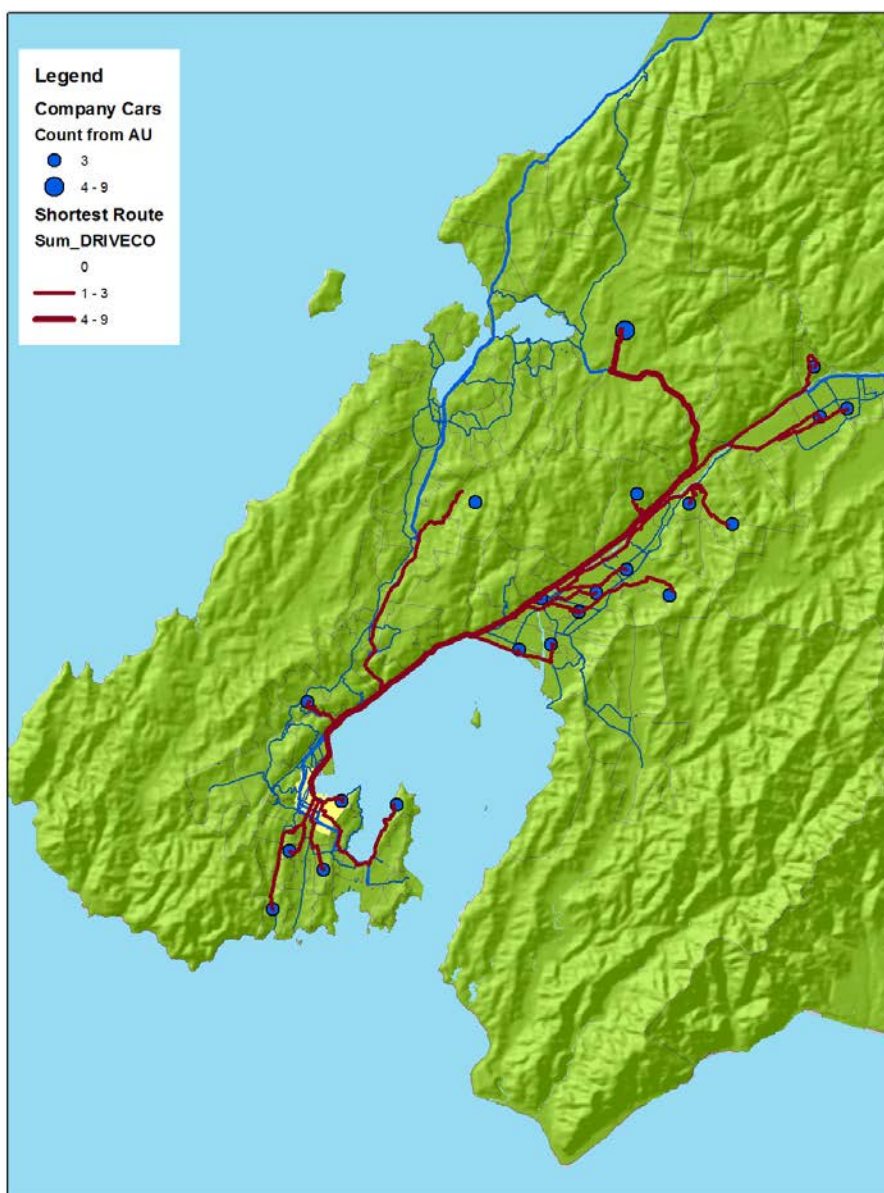


Data was analysed to identify CBD employment destinations. There was evidence of a lower company car use where public transport, such as the rail service and the Days Bay ferry, was a viable option.

In Wellington, transport corridors are concentrated in the valleys, which are also accessible by train. On the 2006 census day 2403 people drove by company car to the CBD, which represented 20% of the total driving by company car in Wellington.

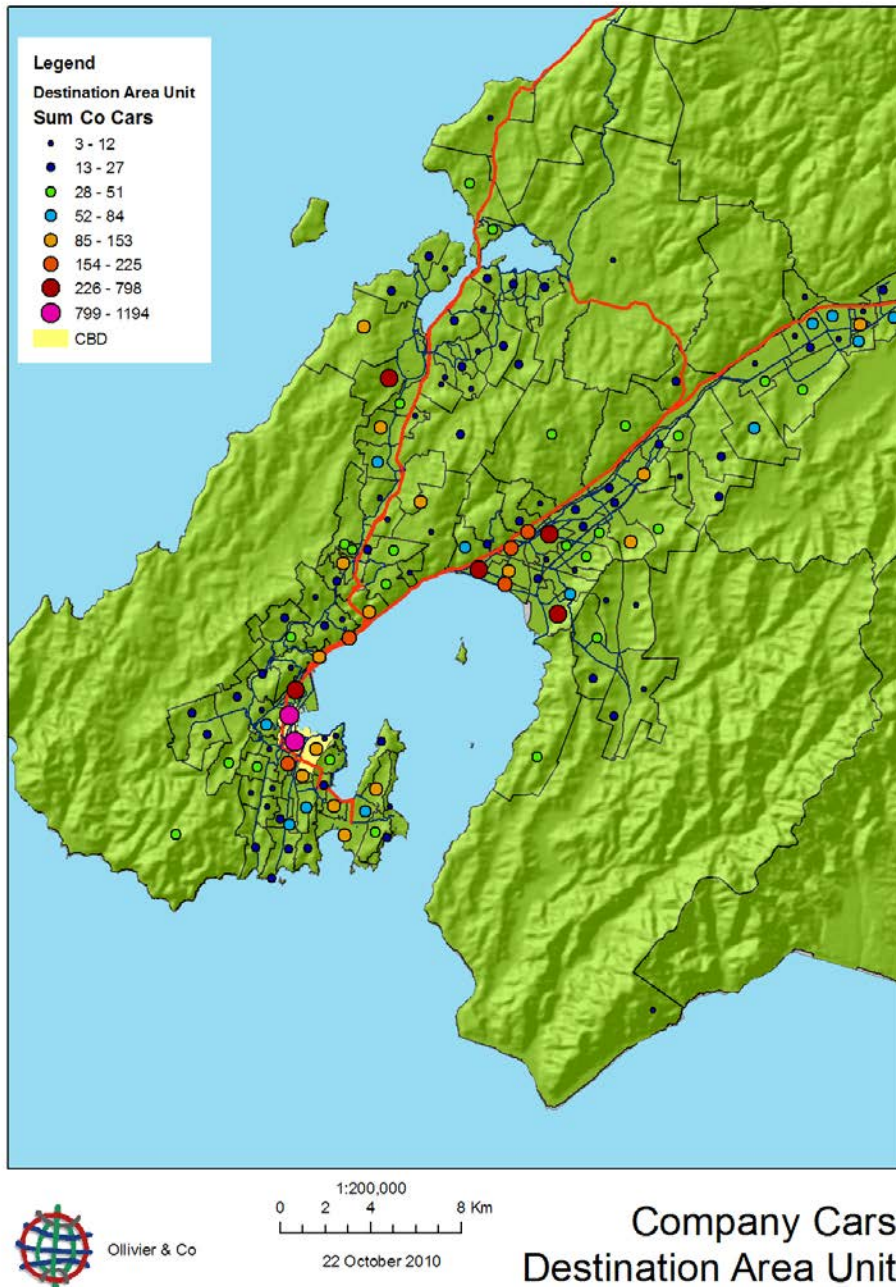
Over 2000 vehicles can still take a single traffic lane over one hour to clear and, as many of these cars were travelling parallel to the rail lines in Wellington, most of the drivers would have had an alternative way of reaching the CBD. Figure 3.16 shows the percentage who drove a company car from each area unit to the CBD and the shortest available road route. It can be seen that many company car drivers drove long distances.

Figure 3.16 Percentage driving to the CBD by company car Wellington



Journey to work by company cars is less dispersed in Wellington, with a concentration in the CBD and around the CBD fringe (figure 3.17).

Figure 3.17 Journey to work destination of company cars in Wellington



3.4.5 Analysis of workplace travel plans

Development of workplace travel plans received funding of \$1.3 million in the 2009 National Land Transport Programme (NLTP) (NZTA 2009). Most of the initial travel plans were in government departments and were developed under the G3 2006 sustainability reporting guidelines initiative. On the whole, travel plans have been introduced in relatively few workplaces. Travel demand management (TDM) programmes in New Zealand and overseas are more likely to be considered by employers with parking shortages – typically hospitals, universities and workplaces that have moved to premises with less parking.

The lack of any annual public transport pass in New Zealand and the FBT implications have minimised the subsidy of public transport by employers in New Zealand cities.

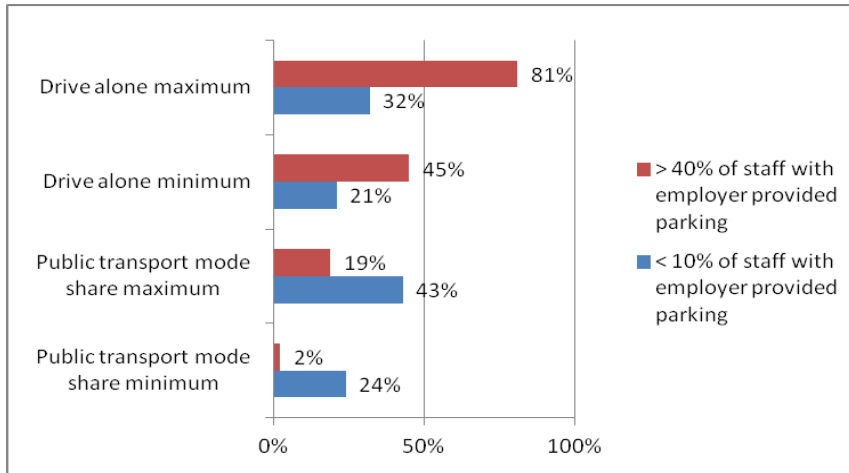
The travel plan process is relatively prescriptive and, despite many workplaces completing the initial baseline travel survey, very few go on to complete the second stage review. Analysis of 11 workplace travel plans covering 5777 employees shows that where parking is restricted public transport use is high (see table 3.5 which draws on Auckland Transport workplace travel plan data).

Table 3.5 Analysis of workplace travel plans

Workplace	No. employees surveyed	% with company car provided	% with car space provided	% driving alone	% driving with passengers	% on public transport
A) CBD location	629	Not asked in survey	4.6%	21%	7%	43%
B) CBD location	352	2.4%	7%	27%	7%	24%
C) Multi-site suburban locations	137	Not asked in survey	47%	81%	7%	2%
D) Provincial city location	252	9%	Not asked in survey	81%	6%	1%
E) Airport multiple employers	179	Not asked in survey	Not asked in survey	79%	10%	0.2%
F) Multiple locations including CBD	1222	3%	54%	59%	12%	17%
G) District Health Board – hospitals	596	Not asked in survey	50%	45%	4%	19%
H) District Health Board – hospitals	1247	Not asked in survey	61%	74%	2%	4%
I) CBD location	869	3%	6%	32%	10%	35%
j) CBD location	131	Not asked in survey	31%	46%	14%	14%
K) Road construction worksite	163	Not asked in survey	41%	67%	25%	0%
Total	5777	4.4% average	33.5% average	55.6% average	9.5% average	14.5% average

Auckland Transport (formerly Auckland Regional Transport Authority (ARTA)) provided travel plan data with all personal details removed as a sample for analysis. Individual workplaces have not been identified for confidentiality reasons and because the intent was to identify general trends rather than the individual performance of each workplace travel plan.

Based on 5777 responses to travel plan surveys, those employers who offer parking for large portions of their staff have low public transport use (figure 3.18).

Figure 3.18 Parking provision and mode share

Source: Booz & Company analysis of ARTA data

Where parking was available for less than 10% of staff, public transport use ranged from 24% to 43% and the drive alone share was between 21% and 32%. Where parking was available for over 40% of staff, the drive alone share ranged from 45% to 81% and public transport use ranged from 2% to 19%.

The travel plan surveys included a question about what would make it easier to walk, cycle, carpool or increase the use of public transport. The most common answers were that:

- showers at work would increase both walking and cycling
- public transport would be used more often if fares were subsidised and it was frequent and reliable
- reserved car parks for car pools were the most effective means of improving the uptake of car-pooling.

Company cars are typically provided to around 3% of the workforce while employer-provided car parking is estimated to be provided to over 50% of the workforce. Parking is much more important in a travel plan context than company cars, so to address travel demand, a parking focus is most effective. Some workplace travel plans have many incentives but, unless parking is restricted, most people continued to drive.

Workplace travel planners have identified issues of distortion in the application of FBT, especially around parking compared with employer subsidy of cycling or public transport. It is common for those involved in travel planning to call for FBT reform to resolve this distortion. The IRD is also aware of the value of car parking that is currently untaxed and would be interested in closing the revenue loss from this. Lack of public transport limits its value as an alternative for many worksite locations making FBT exemption of public transport relatively ineffective for this group. Making employer-provided parking a taxable fringe benefit does have some difficulties especially around the valuation of parking and opposition from employers and employees.

Given the importance of parking to the success of TDM, if parking policy is distorted by FBT policy it reduces the viable options for travel plans.

The surest way to ensure trip reduction with parking management, or any other TDM strategy, is to limit the amount of parking available to employees. (US Department of Transportation (1993) Guidance manual for implementing employer based TDM programs)

Company cars form a different kind of barrier to travel plans in workplaces, creating an imbalance between environmental culture aspirations and management behaviour. If managers are rewarded with

cars this effectively undermines a multimodal transport plan that is aimed at reducing single-occupant car travel.

3.5 Magnitude of incentive for employees

This section considers the relative scale of incentives which company car tax advantages provide for employees.

The Automobile Association (AA) has developed a running cost guide including the fixed costs of vehicle ownership. Running costs are based on 14,000km. Table 3.6 compares the costs of private ownership with the FBT valuation methods set out in the IRD (2009) FBT guide.

Table 3.6 AA vehicle ownership and IRD FBT valuation

Category of vehicle	Small 0-1500cc	Compact 1501cc- 2000cc	Medium 2001cc- 3500cc	Large 3501cc+
Average cost of vehicle	\$23,729	\$31,880	\$43,092	\$64,458
Total fixed costs	\$4421	\$5580	\$6889	\$9759
Total running costs	\$2411	\$2705	\$3402	\$4005
AA annual cost of car ownership	\$6832	\$8285	\$10,291	\$13,764
Average cost of vehicle (AA)	\$23,729	\$31,880	\$43,092	\$64,458
FBT valuation cost price method	20%	20%	20%	20%
FBT cost price valuation	\$4746	\$6376	\$8618	\$12,892
Average value of vehicle (third year)	\$15,350	\$20,288	\$27,421	\$36,442
FBT book value method	36%	36%	36%	36%
FBT book value	\$5526	\$7304	\$9872	\$13,119
Difference cost price method	\$2086	\$1909	\$1672	\$872
Difference book value method	\$1306	\$981	\$419	\$645
% difference between AA and IRD	31%	23%	16%	6%
% difference between AA and IRD	19%	12%	4%	5%

Source: NZ Automobile Association (www.aa.co.nz/motoring/buy-sell/vehicle-valuation/) Accessed October 2010.

Both the cost price and book value FBT methods undervalue the cost-benefit of car ownership by between 4% and 31% because:

- Employers and fleet leasing companies also gain bulk discounts when purchasing vehicles.
- In addition, the FBT calculation allows employees to reduce their costs on days when they do not use the company car. There are 229 working days per annum after annual leave (three weeks), weekends and statutory holidays are removed so company car owners can reduce their costs by a further 37% if the car is only used on working weekdays.
- The AA calculations use an annual distance of 14,000km while company cars typically travel 30,000km per annum. The undervaluation estimate is conservative, as these additional factors would reduce taxable benefit even further.

FBT policy is not updated regularly so when fuel prices rise rapidly the valuation of running costs built into tax policy rapidly becomes out of date. The FBT rate was reduced from 24% to 20% in 2006 to represent

the lowering of motoring costs since 1985. Ironically, motoring costs have risen significantly since 2006. For many employees, parking is an additional cost that those parking on employers' premises in company cars receive tax-free. FBT rates were further reduced in line with the personal tax cuts on 1 October 2010.

The FBT valuation is a fixed % so the value of the car determines the tax payable regardless of running costs. The IRD set a minimum tax book valuation of \$8333 to allow for the value of car ownership when the car has depreciated to minimal resale value.

FBT is intended to identify the additional private benefit value of the vehicle excluding its use as a business vehicle. Company cars are used in a variety of ways. While those used as sales vehicles may be taxed appropriately, those provided as a perk and primarily driven to and from work and for personal use at other times are undervalued. Some company cars are used by spouses while the employee travels to work by another mode.

Table 3.7 shows that once parking costs are added, the FBT system is undervaluing the benefit of company cars by 20% to 50% (AA New Zealand 2010; IRD 2009).

Table 3.7 Magnitude of incentive - company cars

Category of vehicle	Small 0-1500cc	Compact 1501cc- 2000cc	Medium 2001cc- 3500cc	Large 3501cc+
AA annual cost of car ownership	\$6832	\$8285	\$10,291	\$13,764
Parking cost (see later)	\$2725	\$2725	\$2725	\$2725
Cost of ownership and parking	\$9557	\$11,010	\$13,016	\$16,489
FBT cost price valuation	\$4746	\$6376	\$8618	\$12,892
FBT book value	\$5526	\$7304	\$9872	\$13,119
% difference cost price valuation	50%	42%	34%	22%
% difference book value	42%	34%	24%	20%

At the time of writing this report there were 252,000 company cars in New Zealand, so the aggregate magnitude of the under-taxation of car parking can be estimated. If 50% of company cars have car spaces provided, and these are valued at \$10 per day, or 126,000 times over 229 working days, we have a currently untaxed value of \$288.5 million per annum. When taxed at 61.25% this becomes \$176.7 million per annum.

4 Understanding employer-provided parking

This chapter considers existing tax policy with regard to its impact on employer-provided parking, the untaxed value of car parking, barriers to changing parking policies and options to address this issue.

4.1 Current tax policy and parking

In New Zealand, parking is currently exempt from FBT (IRD 2009):

- An employer who provides employees with car parks is not subject to FBT if the car park is on the employer's premises.
- This exemption extends to employers who lease car parks for their employees, provided the employer has an exclusive right to occupy the property.

The extension to include leased parking spaces enables employers to provide parking in nearby commercial parking buildings. Thus, it is common for employers who have run out of parking on their premises to lease car parks in the surrounding neighbourhood for employees. These employees may or may not be driving company cars. Local urban planning regulations also have an impact as minimum parking standards may require a certain number of parking spaces to be provided. The employer has to build these car spaces and can reduce wages by providing parking instead.

4.2 Impact of policy on employer and employee behaviour

Employer-provided parking is untaxed, causing a price distortion in transport choice. This represents a problem for both the IRD and transport policy. Parking is a high-value untaxed benefit for many employees and, as such, represents lost revenue from an IRD and Treasury perspective. Parking subsidies encourage people to own more vehicles, drive more and use alternative modes less. This increase in demand tends to result in more parking supply, which encourages automobile-dependent sprawl.

Commercial public transport becomes more viable when users pay directly for parking. This is the case in Auckland and Wellington and to a lesser extent in Christchurch, Hamilton, Tauranga and Dunedin. The value of the parking provided is highest in areas with the highest demand and restricted supply; this is directly linked to congestion with high-price parking in areas subject to congestion. Availability of 'free' employer-provided parking in the CBDs of New Zealand's main cities provides a direct incentive to drive to the very destination that is most congested and best served by public transport.

The cost of providing parking is generally embedded in rent costs and can be deducted as a business expense. Employer-provided parking is a tax revenue loss and a failure of horizontal equity with car drivers gaining a non-taxable benefit that is not available to those using all other transport modes to travel to work. Parking is a more commonly provided benefit than company cars and can represent a bigger challenge for FBT policy.

4.3 Equity, vehicle travel, commute mode share, energy and emissions impacts

Ommeren and Wentink (2010) examined minimum parking requirements and tax policies in the USA and estimated a deadweight loss of about 30% of resource parking cost, about US\$30 billion per year. This excludes other welfare losses of these policies due to increased energy use, pollution, congestion and

reduced agglomeration. For Europe, the welfare loss is estimated to be about 12% of the resource parking costs, approximately €5 billion per year.

Most employer-provided car parking is onsite so is highly valuable but unpriced. In high density areas, nearby public parking establishes the market price for parking. Employer-provided parking is of more value than the nearest public car park as it is onsite and involves only a short walk within the building. If parking were included as a taxable fringe benefit, a wider group of commuters would consider these costs and a regulatory distortion of the market would be removed.

Subsidised parking at workplaces in the CBD, encouraged by IRD tax policy, increases the subsidy requirements for public transport and adds to traffic congestion.

In a study of 82 TDM programmes Kuzmyak et al (2010) found:

Parking fees (priced parking) together with restricted parking averages 27.6 percent vehicle trip reduction, while restricted parking overall and priced parking overall both average 24.6 percent.

This compares with a vehicle trip reduction of 14% when parking is not addressed in the TDM programme. They conclude:

The supply and price of parking serving a worksite have the single largest effect on the performance of employer-based TDM programs. Not only does limited parking or the existence of parking fees discourage solo driving outright, but such conditions also tend to increase the appeal of travel alternatives and other TDM strategies.

Given the converse is true (that parking demand is higher because FBT is not charged), current application of FBT policy generates a market distortion biased towards car use and against more efficient modes. This should be of significant interest as the government is losing legitimate FBT revenue while subsidising public transport (by a higher amount) reflecting foregone fare payments that additional travellers would make.

A 25% to 27% reduction in vehicle trips is a significant reduction in peak travel demand with potential congestion benefits to the wider economy. Provision of free car parking at employers' worksites results in an oversupply of single-occupant cars being driven to work. Shoup (1990) found that employers with free (subsidised parking) had single occupant trip rates of 71% and public transport mode share rates of 13% while those with no subsidies had single occupant vehicle trip rates of 54% and public transport mode share rates of 36%.

4.4 Quantifying the untaxed value of car parking

The cost to use car parking is extremely variable with most rural areas and towns having an abundant supply of free parking. Even in urban areas, the price to park for a day can vary between free on-street parking to \$25 a day or more within a 2km radius. The cost of employer-provided car parking is demonstrated by an analysis of car parking rates in Auckland.

Table 4.1 provides the range of parking rates in Auckland city using the advertised early bird daily rates.

Table 4.1 Examples of the cost of parking in Auckland city (2010)

Car park	Cost of all-day early bird parking	Annual cost based on 229 days
Mercury Lane (Auckland Council)	\$8	\$1832
Downtown (Auckland Council)	\$12	\$2748
Civic (Auckland Council)	\$12	\$2748
Fanshawe St (Auckland Council)	\$10	\$2290
K Road (Auckland Council)	\$8	\$1832
Victoria St (Auckland Council)	\$12	\$2748
Hobson St (Wilson's)	\$10	\$2290
IAG House (Wilson's)	\$20	\$4580
Lower Albert St (Wilson's)	\$13	\$2977
ANZ Centre (Wilson's)	\$14	\$3206
Average	\$12	\$2725

Source: Auckland City Council website (responsibility for parking has since moved to Auckland Transport) and Wilson's parking website

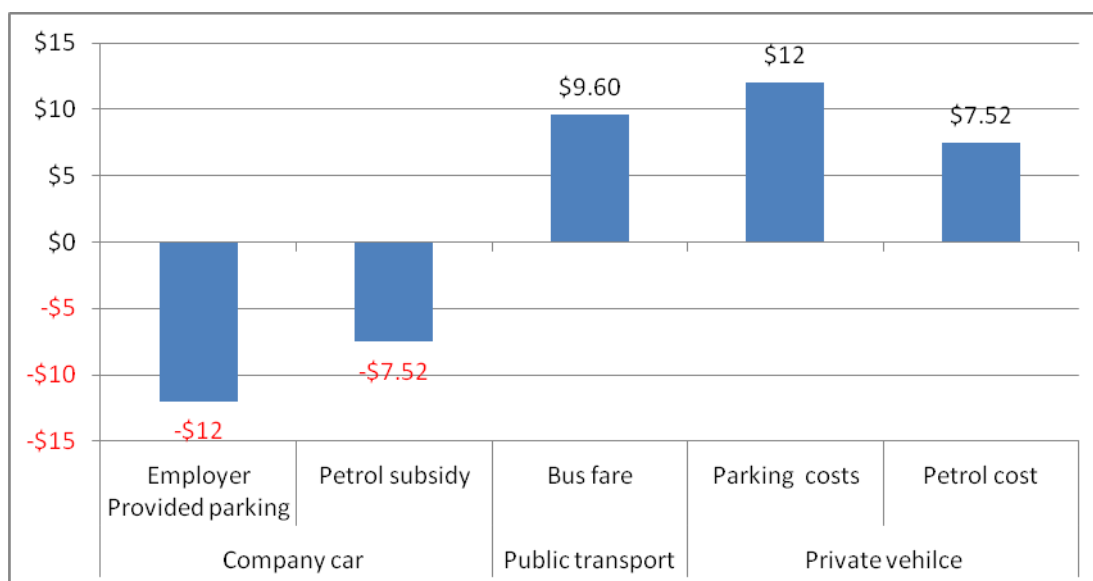
From the above table it is clear that in many cases the council car park undercuts the commercially operated car park. The most common parking charge paid by drivers is the casual early bird daily rate. The average is used to calculate the annual value of parking for 229 working days. The average cost of parking is \$12 for 229 days and the annual taxable value of an employer-provided car park is \$2725.

The cost of building each car space is between \$10–30,000 and maintenance typically costs another \$500 per annum. The value of the fringe benefit provided by car parking is a function of the cost of construction and maintenance plus any other reasonable earnings that are foregone if the space is provided at a reduced (or nil) cost.

4.4.1 Comparison of parking and public transport charges

Using the charges or fees for parking and public transport use in Auckland, a comparison was made of the daily price of commuting 20km (40km return) by public transport, company car or private vehicle (figure 4.1). A petrol price of \$1.90 per litre and fuel consumption of 9.9 litres per 100km were used in this analysis.

Employees who either pay for public transport or drive and pay for petrol and parking have direct and daily out-of-pocket expenses. Company cars and employer-provided parking are a one-off decision that precludes employees from making different transport choices on a daily basis. An employee who drives their own car and pays for parking does so with their after tax income. An employee parking in an employer-provided car park may or may not receive a lower salary but the car park is not seen as a taxable benefit under current FBT law. The actual petrol subsidy received is also not taxed. The FBT is based only on the cost or book value of the vehicle. The costs of crashes and injuries and the environmental costs of pollution are also much higher for cars than for public transport, especially on a per person carried basis.

Figure 4.1 Comparison of 20km commuting charges by mode

4.4.2 Annual cost of employer-provided parking or public transport

It is useful to compare the relative subsidy of employer-provided parking with public transport ticket prices. By dividing the 229 working days used for parking into a five-day week, we have 46 weeks. Forty-six 10-trip tickets can be used to measure public transport costs as a comparison (tables 4.2 and 4.3). A monthly pass is a common ticket type and can be used interchangeably on all modes and with all operators.

Table 4.2 Auckland rail fares (August 2010) (www.maxx.co.nz)

Train fares by stage count	Cost of adult 10-trip ticket	Annual cost based on 46 weeks
Ten-trip 1 stage rail	\$12.50	\$575
Ten-trip 2 stage rail	\$25	\$1150
Ten-trip 3 stage rail	\$34	\$1564
Ten-trip 4 stage rail	\$43	\$1978
Ten-trip 5 stage rail	\$51.50	\$2369
Monthly pass all operators	\$225 (per month)	\$2700 (12 months)

Table 4.3 Auckland bus fares (August 2010) (www.maxx.co.nz)

Bus fare by stage	Cost of adult 10-trip ticket	Annual cost based on 46 weeks
Ten-trip 1 stage (5km)	\$14	\$644
Ten-trip 2 stage (10km)	\$28.50	\$1311
Ten-trip 3 stage (15km)	\$38.50	\$1771
Ten-trip 4 stage (20km)	\$48.50	\$2231
Ten-trip 5 stage (25km)	\$57	\$2622
Monthly pass all operators	\$225 (per month)	\$2700 (12 months)

From this comparison, the value of free parking at work (average \$2725) is similar to the value of public transport fares (maximum \$2700).

Workplace parking is a significant portion of the parking provided in the CBD of Auckland (table 4.4).

Table 4.4 Car parking in Auckland city

Parking type	Number of car parks	% share
Residential	3174	6%
Private non-residential (workplaces)	24,666	50%
Council on street	4177	8%
Council off street	4434	9%
Privately owned public (parking buildings)	12,912	26%

Source: Auckland Council pers comm

Employer-provided car parks are included in the private non-residential group, which makes up 50% of the parking available. The 24,000 employer-owned car parks in Auckland city have a value to each regular commuter of around \$12 a day or \$2725 per annum; a tax-free benefit totalling \$65 million per annum. If 50% of the car parking in Auckland city costs the users nothing, effective parking strategies can be undermined by employer-provided car parking.

4.5 Benefits of addressing parking distortions

Taxing the value of employer-provided parking would provide revenue for the IRD and reduce driving to work. Some employees may be offered higher incomes instead of free parking; this again would benefit the IRD as PAYE tax would be paid on the increased income.

Employer-provided parking is a benefit available only to those who drive and it has greater value in areas where parking prices are high. Those who benefit most in dollar value from free parking at work are those who also drive when congestion is worst. In addition, the most valuable land used for parking is in the CBD and if primarily used for employee parking is an unproductive use of CBD land.

While it may not be a direct tax policy to subsidise people to drive and park in the CBD of New Zealand’s four main cities, by ignoring the taxable value of employer-provided parking it is a policy by omission.

Taxing parking as a benefit would improve horizontal equity, transport efficiency and transport choice (see next chapter) as it provides a price for the driving and parking option that is not present in the employer tax-free parking option.

The subsidy for free parking in Auckland CBD is equal to the cost of public transport fares (per employee). Therefore a policy that allows free parking at work and not providing free public transport distorts travel patterns towards driving instead of other modes.

A tax concession that allows employers to pay for public transport *or* parking could have a neutral revenue effect. Employers could then be given the option of offering a public transport subsidy instead of providing tax-free parking while public transport incurs FBT.

5 FBT and transport

This chapter discusses the key principals of taxation policy and how this relates to broad transport and land-use policy objectives. A critique of current practices is presented followed by a perspective on these issues from discussions with the IRD.

5.1 FBT and horizontal equity

The goal of FBT policy is to tax anything that employers provide to employees in place of salary and wages. Fringe benefits that reduce an employee's private outgoings are effectively a payment of additional salary and wages. All other employee's salary and wages are taxable, and so to ensure neutrality of treatment fringe benefits should be taxable on an equivalent basis. Some gaps in current FBT policy impact on travel behaviour. These gaps include the exemption of car parking and lack of valuation of distance travelled in company cars.

Robust and fair tax policy relies on those with equal incomes paying an equal amount of tax (known as horizontal equity). There are geographic differences across New Zealand regarding transport access relevant to FBT:

- Public transport is only available in major cities so any policy that reduces tax on public transport will only benefit urban taxpayers. Congestion is an urban issue and urban road construction is an expensive public good.
- The most valuable car spaces that are currently untaxed are also in urban areas. A car space is priced to users at around \$10 per day in Wellington, Auckland and Christchurch.
- Horizontal equity does not exist in relation to parking costs with urban drivers having significant parking costs that do not apply in smaller towns and cities.

Employers who provide free 'on premises' parking are exempt from FBT. This raises issues of horizontal inequity between those with employer-provided car space and those without.

Employees who received subsidised or free parking from their employer effectively pay less tax than those who pay for parking themselves or pay to commute by public transport.

FBT is calculated on the price or book value of the vehicle rather than the relative utility value. Therefore, those who use a car the least pay the same tax as those who make excessive use of company cars. Policies that have been proposed to improve horizontal equity of the tax system often highlight the need to remove tax exemptions for employer-provided parking and apply FBT on company cars in relation to the distance travelled.

5.2 Tax neutrality and environmental taxes

5.2.1 Tax neutrality

The concept of tax neutrality is based on the principal that tax is intended to have a neutral impact on how individuals and companies make decisions (ie choose to invest). Income taxes should not divert investment from one area into another. Good tax policy does not arbitrarily favour one group or industry over others, such as motorists versus non-motorists, and therefore the automobile and fuel industry over other industries. Sound tax policy should also be economically neutral (tax policy does not favour one industry or consumer good over others, such as automobile and fuel purchases over other goods) or

biased to achieve a specific outcome (such as taxing cigarettes at a higher rate to reduce smoking and raise revenue to pay for additional health costs).

Companies and individuals should make decisions based on economic benefit or merit rather than based on tax policy. The tax neutrality of FBT in relation to company cars is difficult to achieve because:

- the provision of car parking has a significant taxable value but is not taxed
- the cars provided are typically new vehicles while most New Zealanders buy second-hand vehicles when purchasing a vehicle of their own. The salary sacrificed is less than the value of the vehicle provided, hence FBT is not a neutral effect
- those with the highest parking costs and longest commutes benefit most from current tax policy.

It has been suggested that tax benefits provided for company cars be extended to assist in paying for public transport fares. A policy that targets public transport is not neutral according to tax policy principals. Public transport is only a viable option for some employees, while those who walk or cycle obtain no benefit and those who do not live near public transport may not have viable options. By excluding benefits for those who walk and cycle, a tax exemption for public transport fares would also be horizontally inequitable.

5.2.2 Externality taxes

The goal of externality taxes is to correct the pricing signals so externalities such as congestion, crashes and pollution are included in the price and thus the decision process. The taxes are used as a pricing mechanism rather than being a traditional revenue gathering mechanism. They can be considered as charges, levies or externality prices so that neutrality objectives are met. Externality pricing is a more accurate description of their function than a tax. Externality-based taxes differ from income taxes in that they have a deliberate diversion intention. The intent is to divert investment away from activities that cause the externality or towards measures that mitigate the effect.

The tax system can be designed to encourage certain behaviour (the UK company car tax system is an example of this). It can be argued the externality tax introduces a price to counterbalance externality distortions in the market. Before externalities are priced, they are not included in the decision-making process and hence decisions are made without considering the full consequences. In the worst case, the products with the lowest costs of production and highest externalities can have the lowest price. This is the case with cars in particular. Cars with the least safety features and limited emissions controls are cheaper to buy than cars with advanced safety features, particle filters and high fuel efficiency features.

Environmental taxes are aimed at taxing externalities to resolve market failures. These taxes are aimed at changing behaviour with the tax reflecting the externality price. This tax is not paid equally (in terms of horizontal equity) with many choosing to avoid paying the tax by choosing a product with a lower externality impact and therefore a lower tax burden.

Effective externality taxes generate lower revenue as the externality impact is reduced. Thus, the tax system loses revenue in favour of lower externalities. While society as a whole may benefit from lower rates of pollution, congestion or crashes, the government on the other hand will collect less revenue. However, the government will benefit in terms of lower costs related to congestion, crashes and pollution-related illness. The financial benefits may accrue over the long term, eg rates of cancer and deaths related to pollution will fall in the long term but tax revenue will decrease in the same year the tax is introduced. Externality impacts are often long term and are spread across all sectors of society and the environment, not just government sectors. As a result of the UK experience with company car tax reform based on emissions, there was a switch to low-emissions vehicles as company cars. This achieved the goals of lower

emissions but had a corresponding drop in FBT revenue. There was also evidence of a switch to the use of private vehicles (which tend to be less fuel efficient and have higher emissions) and expense reimbursement.

5.2.3 Tax policy dilemma

The ideological differences between an 'ideal' income tax and an 'ideal' externality tax make them incompatible. Income taxes are ideally unavoidable while taxes aimed at changing behaviour are most successful if people change their behaviour to avoid the tax (and potentially no tax gets collected).

Transport and environmental policy has increasingly targeted reduction in emissions and a focus on transport efficiency by discouraging single occupant travel in favour of more efficient and environmentally lower-impact modes. If all transport choices had the same external effects then neutral policy could be applied. The cost of emissions has not been borne by the emitter and this market failure needs to be addressed by various measures such as regulation, pricing and taxation. Policy alignment is important to avoid environmental and transport policy being undermined by tax policy.

5.3 Transport efficiency

Transport efficiency is not typically a major consideration when developing tax policy. FBT policy appears to have avoided the relative resource requirements and impacts of driving compared with other modes. By omitting car parking as a taxable benefit, allowing work vehicles to be exempt and taxing public transport fare subsidies, taxation policy has acted to encourage car use rather than be neutral to mode choice. The additional externality impacts related to driving include:

- traffic congestion
- road and parking facility costs
- crashes
- energy consumption
- pollution emissions
- sedentary living/obesity
- urban sprawl.

These are generally ignored in current FBT policy. The tax is focused on the purchase price and depreciated price of the vehicle and acts like a subsidy in favouring longer distance driving over shorter commutes and alternative modes of travel. Transport efficiency is not well addressed in existing taxation arrangements for company cars.

5.4 Land-use development efficiency

In New Zealand, FBT is calculated on the value of the vehicle, which means the distance it is driven and the cost of fuel are not taken into account. Those who benefit the most in these circumstances are those who have the furthest to travel to get to and from work. This is not an effective policy in regard to land-use efficiency as it creates incentives biased in favour of motor car use and long commute distances. These act to encourage fringe or rural living in favour of living close to the workplace. Urban consolidation and the reduction of urban sprawl is seen as a major aim of land-use policy in most western countries. Current FBT policy conflicts with these aims.

5.5 Assessment

Current FBT as applied to company cars and tax-free car parking at work can be said to be problematic when evaluated against the tax ideals of horizontal equity, tax neutrality, transport efficiency and land-use development efficiency.

FBT is neutral in its treatment of vehicles' energy efficiency and emissions, so there is no financial incentive to choose low emissions or fuel efficient vehicles. Individuals may elect to choose a company car that is more powerful and inefficient as they are not paying for the petrol, thus they choose a car that they would not have chosen if they were buying it privately.

Transport policy has increasingly become multimodal in its focus and there has been increased investment in public transport. Travel plans and TDM initiatives have been implemented. In Auckland, initiatives like the Northern Busway and the upgrade of the rail system demonstrate an ongoing commitment of government. These direct investments encourage commuting to the CBD by public transport and involve large amounts of government expenditure. Current FBT policy conflicts with these transport policies (and projects) by encouraging increased car use (subsidised by government). Commuters get mixed policy messages; on one hand they are paying for improved public transport infrastructure through petrol tax and property rates and at the same time others are afforded a tax-free incentive to continue driving to work.

Variable registration fees have been introduced in some countries based on CO₂ emissions and engine size or based on Euro standards. Annual registration fees need to be high for this to have a major influence on purchase decisions. Regulations such as the Euro standards are a much more effective measure as they target vehicle manufacturers thus preventing inefficient and polluting cars from being manufactured (at least in those countries where the standards apply). The introduction of low sulphur diesel in 2006 and the removal of leaded petrol in 1996 and the requirement for catalytic converters are all good examples of effective regulation to reduce pollution. New Zealand has restricted new car sales and imported Japanese vehicles based on similar emissions standards in the 2007 Vehicle Exhaust Emissions Rule. This has the advantage of affecting the entire fleet rather than just the company car portion. The gradual tightening of emissions standards via regulation is the most appropriate means of addressing this issue.

5.6 Tax reform and revenue neutrality

Tax reform often comes with the proviso of revenue neutrality. The Treasury and IRD wish to maintain tax revenue so any change in tax is expected to maintain current revenue. Effective environmental taxes have the goal of influencing behaviour and, if effective, result in tax avoiding behaviour that reduces revenue but also reduces externalities. Thus, many of the policies aimed at pricing externalities, if effective, result in a declining tax revenue stream much like taxes on alcohol and tobacco.

Transport-related externalities are more difficult to tax as they are not uniform across the product range. Congestion is specific to a time and place with many areas of the country never affected. As such, a tax on petrol does nothing to reduce congestion and more specific road pricing measures are needed.

5.7 Inland Revenue perspective

The above issues were canvassed in discussions with the IRD. Tax policy is set at the macroeconomic level and is revenue based. The IRD uses FBT to capture tax avoidance. If employers did not offer cars instead

of salary and wages there would be no need for FBT. The IRD protects tax revenue by taxing things used in place of cash in employment packages.

The IRD view is that the tax system should not distort behaviour. The IRD opposes using tax to create incentives and holds that allowing the exemption of public transport from FBT would reduce tax revenue and distort behaviour towards public transport use. The IRD is more interested in capturing the currently lost revenue that employer-provided car parking represents. Employer-provided parking needs to be addressed as a benefit in kind and taxed as such. The issue therefore is one of establishing a fair value of parking and political acceptance. Traditionally 'on-premises' parking benefits are exempt and parking prices vary considerably making it difficult to establish the scale of benefits.

Using an average parking amount could be a second-best approach to that of an actual value system. Part of the problem is that parking is unpriced on a per person basis when it is on employer premises. However all cities have both public and private parking buildings which do provide a good indication of the value of parking. Linking the employer's value of parking to the value of the nearest public or private car parking building may be an option for establishing fair value. All-day early bird parking rates are actually similar in each urban centre due to competition between parking operators (including council-owned car parks). This might also be an option to consider.

The reliance on PAYE income tax rather than a focus on user charges and behaviours causes those who behave in desirable ways to subsidise those who do not. The change to hypothecate petrol tax from July 2008 has assisted in making the costs of road use more aligned to the cost of provision. This is an example where tax policy has been aligned to transport impacts and efficiencies. Company car tax is part of income tax policy, and is therefore removed from the transport policy area despite its implications for transport.

Vehicle levies do not currently distinguish between cars registered as company cars and private vehicles, despite their clearly different risk and travel behaviour profiles. Motorcycle users have had large increases in their levies to reflect their higher risk and actual cost. In principle the same approach should be applied to company cars to reflect their much higher crash and injury rates.

Allowing a tax exemption for public transport creates an incentive to use public transport instead of walking, cycling and car use. Employees whose employers decide not to offer public transport passes are disadvantaged and pay a higher tax burden. Public transport is limited to the urban environment, but even within cities not all transport requirements can be met by public transport. Therefore, a tax exemption that can only be used by a portion of taxpayers is clearly inequitable. The equity issues identified in company car and car parking FBT would also apply if public transport were exempt from FBT.

The IRD preference would be to include the valuable benefit that parking represents as an alternative to salary payment rather than add another exemption for public transport. It considers that adding another exemption is adding another wrong to the system to make it right. However, this would only be the case if the currently exempt car parking became taxable. To continue to exclude parking from FBT and to disallow any change to favour public transport would perpetuate the problem rather than resolve it.

The neutrality of tax policy (especially with regards to environmental issues) has increasingly been abandoned in favour of targeted tax policy with environmental objectives. The UK company car tax policy is a good example. In New Zealand, the Ministry of Transport formulates transport policy but company car taxation in New Zealand is related to personal income tax and despite its impact on transport and the environment, it is determined by Inland Revenue and Treasury. Thus, the impacts on transport may be irrelevant or incidental in tax policy but have a major implication for the effectiveness of Ministry of Transport policy.

6 Options, constraints and opinions

This chapter presents a discussion of potential options for both company car policy and parking policy in New Zealand. Barriers to reform are presented and opinions from various stakeholders on the issues identified are outlined.

6.1 Potential company car tax reforms

Several reforms are feasible including:

- a graduated FBT based on CO₂ emissions, as used in the UK and Ireland
- inclusion of petrol subsidy as a benefit
- stronger incentives within vehicle registration costs for safety and emissions benefits.

Company cars comprise 10% to 15% of the total vehicle fleet at any one time, but are more than half of all new vehicle purchases. Policy reforms to address safety and emissions should address the entire vehicle fleet rather than having a narrow focus on company cars.

6.1.1 Addressing safety issues

Company cars have a much higher crash risk and there are ways to support better choices in company car and private vehicle purchasing decisions. ACC levies are currently based on vehicle type (table 6.1). There is also an ACC component in petrol prices, which does allocate risk on a usage basis.

Table 6.1 ACC levy rates 2010

	Vehicle type	ACC licence levy	Motorcycle safety levy	Total ACC levy
Petrol powered vehicles	Passenger vehicles (cars, buses, taxis etc.)	\$198.46		\$198.46
	Vintage/veteran vehicles and tractors	\$ 69.46		\$ 69.46
	Mopeds	\$ 99.24	\$30.00	\$129.24
	Motorcycles 600cc or less	\$297.70	\$30.00	\$327.70
	Motorcycles over 600cc	\$396.92	\$30.00	\$426.92
	Goods service vehicles (trucks, vans and utes)	\$238.15		\$238.15
Non-petrol powered vehicles	Passenger vehicles (cars, buses, taxis etc.)	\$311.38		\$311.38
	Vintage/veteran vehicles and tractors	\$108.98		\$108.98
	Mopeds	\$133.12	\$30.00	\$163.12
	Motorcycles 600cc or less	\$331.58	\$30.00	\$361.58
	Motorcycles over 600cc	\$430.08	\$30.00	\$460.08
	Goods service vehicles (trucks, vans and utes)	\$467.08		\$467.08

Source: ACC 2010

There is potential for a risk-rated ACC levy system to better align safety features to levies. All petrol cars pay the same \$198.46 ACC levy despite having ANCAP safety ratings ranging from one star to five stars. A risk loading based on ANCAP stars could be added. The safety features and high ANCAP star ratings of most company cars are a positive benefit of company cars and have occurred without any real regulatory

or financial support. A minimum star rating regulation could improve the safety of the overall New Zealand fleet. The second-hand Japanese car market is based on selecting vehicles to import; importers can adjust to changes in regulations by importing vehicles that meet the safety standards. This may increase the price of second-hand cars but the safety benefits will be long-term benefits in the form of less death and injury.

This approach could apply to the ACC partnership programme with lower employer premiums for companies with four- and five-star fleets (table 6.2).

Table 6.2 Potential ACC safety levy for cars

ANCAP star rating	ACC safety levy for cars
One star	\$100
Two stars	\$80
Three stars	\$50
Four stars	\$10
Five stars	\$0

A registration-based ACC levy is too small to make much difference in purchasing decisions and most safety-based decisions are made on company policy grounds.

An alternative is to have a three-star ANCAP minimum standard for importation so that all cars entering New Zealand have a good safety standard. The motorcycle safety levy sets a precedent for this approach. A regulation that affects all imported passenger cars is a more effective initiative than targeting only company cars. The majority of manufacturers have most of their cars in the three- to five-star range, so the minimum standard could easily be implemented across the entire fleet (second-hand imported vehicles and newly built).

Given the much higher risk of crash and injury associated with company cars, policy that influences their safety features is needed. Currently, there are no clear incentives in ACC levies or FBT to provide safe cars. A lack of clear policy direction provides a gap where safety is not directly encouraged by any incentive despite the overall cost savings that could be achieved through reduced crash and injury externality costs.

A coordinated approach between the IRD and ACC would be required to implement a tax advantage or ACC levy discount for providing company cars with five-star safety ratings (for example) or with electronic stability control, airbags and other safety features. Cars that cannot be sold in other markets due to either poor emissions or low safety standards can be sold at low prices on the New Zealand market. Our safety and emissions standards can afford to be set at a higher level with selective importation of vehicles, as we have no domestic car industry to protect and there are already high levels of car ownership.

The New Zealand motor vehicle industry is entirely import based. Restriction of imported vehicles based on vehicle age, emissions and safety can be an effective way to improve the fleet. New company cars generally have four- to five-star safety ratings and could have safety and fuel efficiency incentives or penalties applied through FBT. There are large variations in fuel efficiency across the fleet with some vehicles using 3 litres per 100km and others using 18 litres per 100km. While the technology has been available for a long time, the vehicle industry, the public and governments have not insisted on efficient and low carbon emissions. Where the primary purpose of company cars is for a sole occupant to commute, there is no need for a large and inefficient car.

6.1.2 Differentiated fringe benefit tax rate based on emissions

Changing FBT from the dollar value to a differentiated tax rate based on emissions seems to be a suitable policy. This is used in the UK and Ireland. Variable registration and annual use taxes based on CO₂ can affect purchasing decisions.

Restrictive emissions regulations have not had a major impact on vehicle prices which indicates this type of regulation could be acceptable (in that emission standards could be raised without a negative financial impact on New Zealand consumers).

Historically, company cars have had larger engines and this has distorted the New Zealand fleet more towards these cars than if all vehicles were privately purchased. However, the company car market reduces the average age and now introduces new safety and fuel efficiency into the fleet.

The recent increase in fuel prices combined with the global recession has caused a rapid change in the type of company cars purchased and leased. A change to FBT policy that taxes emissions and offers discounts for safety features would reinforce current best practice. Broader regulatory policies aimed at safety and emissions of the total fleet would be more effective and FBT reform should focus on taxing employer-provided parking, or as a second-best option affording public transport and cycling the same subsidy as parking.

6.1.3 Taxing private use using commute distance

The current policy establishes a fixed percentage taxable value of the vehicle that includes an assumption about average annual distance travelled and an assumption regarding the split between business and private travel. This approach is easy to apply but imprecise and inequitable. By adding a value for each kilometre of distance between home and work, the extra benefit that long-distance commuters gain could be taxed. While this would capture the primary commute, other private use would not be measured. It would be a single measure so would be easy to apply. By adding a per kilometre value for the commuting benefit of subsidised running costs a person commuting 20km from home to work (40km per day) would have their taxable income increased to match the fringe benefit received.

This approach would more equitably tax the benefit of receiving a company car and having commute to work costs paid for.

6.1.4 Recommendations

To improve the horizontal equity of the tax system, employer-provided parking should not receive a tax exemption and those who gain the most value in terms of private distance travelled should pay more than those who travel shorter distances. Company cars can be taxed at different rates based on their emissions and safety benefits rather than value alone. If car parking is not taxed then an exemption for public transport subsidy should be added as a second-best policy. Subsidy of cycling can also be exempt in the absence of a correction of the parking subsidy. Complementary policies concerning stricter emissions and safety regulations on imported vehicles will improve the efficiency and safety of the fleet. ACC levies can also be better targeted to give discounts to vehicles with high safety ratings and penalties to those with a lack of safety features. Councils can also apply parking levies and introduce maximum parking standards rather than minimum standards in urban planning regulations. Council-owned car spaces could minimise all day commuter parking and reduce parking supply in association with improvements in public transport.

6.2 Barriers to company car tax reforms

Most opposition to reform is likely to come from those fleet providers, employers and employees who currently benefit from the current tax policy.

Employers can reduce wage costs by substituting wages for company cars and parking. Employers have access to discounted vehicles, which may be required to provide business functions anyway. In Australia some employers have been known to obtain motor vehicle trader licences (totally unrelated to their business) in order to maximise the benefit at sale from cheap company car purchases.

Fleet providers and car sales yards also have a stake in supplying company cars and a significant proportion of new vehicle sales supply this market.

Employees with company cars who live a long way from where they work may be opposed to a more accurate assessment of the commuting benefit they receive. Employees who currently receive company cars or car parking especially in cities may also be opposed to changes. Employees who cycle, walk, use public transport or pay for their own parking may be in favour of changes as this would improve equity for them.

6.3 Observations on changing business culture

The shift away from hierarchical structures to flatter management structures reduces the need for status-linked remuneration. There is also a trend to have pool cars available for work purposes during the day. These pool cars are 'work vehicles' (see glossary) often including logos, bolted-down seats and cargo net screens. Pool fleets are often homogeneous vehicles purchased in bulk. Pool cars typically have smaller engines and access is not status based. There may still be a few fringe benefit vehicles reserved for upper management. The practice of garaging pool vehicles at home may be prompted by a lack of secure parking at an employer's premises or as a way of rewarding staff.

The problem has traditionally been that staff members view their company car as being a status symbol, so downsizing was not a popular option, but FleetSmart really has seen a change in this attitude where clients and their staff are taking the environment more seriously and purchasing smaller vehicles where practical. This attitude has been driven from the top down, with many managers moving from V8s and V6s to 4 -cylinder options. (Alan Roberts, FleetSmart, New Zealand Company Vehicle Feb 2009, p54)

The company car is often the only choice of subsidised transport available; however, if companies wish to offer public transport as an option then annual passes would make this easier. People living near rail, ferry or busways can travel fastest by public transport. As employment packages have become more flexible and more individually tailored, there has been some improvement in the alternatives offered.

Coca Cola Amatil New Zealand (CCANZ) switched from four-wheel-drive Suzuki Vitaras to Volkswagen Golf 1.9 I TDI diesels between 2008 and 2010. Some representatives had monthly fuel bills of \$1000 with the Vitara; however, on the same route, the Golf TDI consumed \$250 of fuel (New Zealand Company Vehicle April 2010, p46). This sort of change reflects the global shift away from the four-wheel-drive SUV to fuel-efficient vehicles. Companies may have been motivated by high fuel prices in 2008 and 2009, which still remained high in 2010 and 2011.

Some companies have adopted a four-cylinder maximum policy thus reducing car choices. Suppliers are aware of this trend and are offering more four-cylinder vehicles.

However, status-based cars can still be fuel efficient. European manufacturers have been producing efficient diesel and hybrid luxury cars for some time. Companies have been downsizing the engines while

the cars remain the larger-size vehicles. Mercedes Benz has several diesel hybrids (C220 EDI, E 250 CDI, S400 and the E300 Bluetec Diesel Hybrid). BMW has also a range of diesels with low carbon dioxide emissions and good fuel economy.

Manufacturers are already strongly focused on luxury models with efficient engines; therefore, there will soon be many more choices in terms of efficient low-emission vehicles in the market. For example, a four-cylinder Ford Falcon became available in late 2011. The advances in engine efficiency have been achieved without major reductions in power output. Some also achieve this via the switch to second- and third-generation common rail diesel engines with better power output. The diesel fleet will continue to grow in New Zealand as it has in Europe. Petrol engines are not as energy efficient as modern diesel engines and if particulates are minimised, emissions can be lower.

The commercial vehicle market (delivery vans and small trucks) has also seen changes in company policy with some companies moving to efficient diesel vans and even hybrid delivery trucks. Some of this is driven from overseas policies. For example, Coca Cola USA uses hybrid delivery trucks and a Hino hybrid is used in Auckland.

A shift to smaller vehicles addresses energy conservation and emissions reductions. It does nothing to reduce traffic congestion, crashes or sprawl, or the inequity of a tax policy that favours automobile commuters over people who rely on other modes.

6.4 The fleet providers' perspective

Fleet providers in New Zealand have been fast to react to the changing requirements of their customers. The increasing importance of environmental performance has been met with emissions limits being included in the standard specifications of vehicles reviewed in industry magazines.

Market and labour conditions have not yet forced executives out of their six cylinder cars, but it is only a matter of time before this happens. (New Zealand Company Vehicle December 2008, p14)

There is no doubt that the six cylinder vehicle is no longer the mainstay of the New Zealand company fleet and the average cubic capacity of our car park has certainly dropped. (New Zealand Company Vehicle December 2009, p50)

The cars on offer are now typically four cylinder and two litres or less. It is rare to find cars with official fuel efficiency figures of over 10 litres per 100km. Most are around the five to six litres per 100km mark. Active fuel management systems can be used in V8 cars making them run on four cylinders some of the time to reduce fuel consumption.

The incentive to change vehicle choice has come through high oil prices rather than through government intervention and the market has had a fundamental and likely long-term shift.

Ten years ago, nobody gave a damn. Today, the three biggest questions that get asked by organisations looking at prospective new business vehicles are:

- 1. How many crash safety stars does it have?*
- 2. How economical is it on fuel?*
- 3. How clean are its emissions?*

(Lease Plan Steering Column Autumn 2010)

The company car fleet of the future is likely to have much lower emissions, better safety and fuel efficiency than in the past. The increasing use of stop-start technology reduces fuel consumption while stopped or idling at traffic lights or in congested traffic. Testing of stop-start vehicles in Auckland conditions as reported in *New Zealand Company Vehicle* shows they will save fuel.

The Eco-Start Sprinter had proved to be about 10 percent more economical and considering that the cost of the option is only \$365 inclusive of GST, we think that it would pay for itself many times over particularly for urban operators. (New Zealand Company Vehicle August 2009)

Given the availability of stop-start options and their cost effectiveness, it is likely they will be widely adopted. Small hybrid electric/diesel trucks with idle stop are now available that suit the delivery market in urban environments. Cars are being designed with low drag coefficients, low roll resistant tyres, lighter engines and CVT transmissions. Holden has spark ignition direct injection petrol engines while Ford has its ECO boost range of engines, which are typically 20% to 25% more efficient than their previous engines.

Fleet leasing companies are left with a vehicle to either sell or lease at the end of lease contracts. The residual value of vehicles has an influence on the range and price of vehicles they offer to employers.

Fuel (price) has had a major impact on the residual values of the large 6 cylinder category of vehicle. There has been a permanent mind shift to find alternatives. (New Zealand Company Vehicle February 2009, p62)

The leasing operators can see that in an environment of high fuel prices, they will not get the residual prices they have in the past and some have reduced the number of six-cylinder vehicles on offer.

Three years ago (2006) Lease Direct decided to forgo second time leases on six cylinder vehicles because of the high costs involved in maintenance which had to be factored into lease payments. (New Zealand Company Vehicle October 2009, p62)

Lease Direct specialises in second-time lease cars so has to have a long-term view of the market. Once vehicles are returned they will be selling back into the second-hand market dominated by second-hand Japanese vehicles; therefore, they must have vehicles that will sell in that market. In 2009 and 2010, there was a trend for leasing contracts to be extended from 36 to 45 months, which has mitigated the residual value impact of releasing vehicles into a market where there was little demand for them (New Zealand Company Vehicle December 2009, p51). The drop in demand is both recession and petrol price driven, with demand for larger V8 and V6 cars dropping considerably and the smaller vehicle market outselling the large vehicle section.

The sustainability and efficiency goals of employers have been identified quickly by fleet providers who have responded with programmes to identify ways to reduce emissions and increase energy efficiency. Examples of sustainability-focused products aimed at employers include the Custom Fleet Drive Lightly programme and Fleetsmart's EcoFleet service.

The growth in diesel vehicle sales has largely been driven by the inherent energy-density benefits of diesel fuel and the improvements in modern diesel engine performance. Lightweight aluminium common rail diesel engines in association with advanced particle filters will become increasingly common, with the Ford Fiesta Ecocentric being one example.

Diesel hybrids like the Peugeot 3008 Hybrid4 are the next generation. While the particulate emissions are of more concern with diesel engines, this can be addressed by particle filters and other methods. Diesel vehicles also have an advantage for transport pricing policy purists as they pay distance-based road user charges so reflect road use more accurately than petrol excise.

Vehicle manufactures are also targeting fuel consumption (a proxy for carbon dioxide emissions). Mazda Motor Corporation has a target of reducing the fuel consumption of Mazda vehicles sold by an average 30% by 2015 (New Zealand Company Vehicle October/November 2008, p15).

The importance of the company car market in keeping the New Zealand fleet up to date with innovations should not be underestimated. Fleet providers can import cars with or without new innovative features (such as safety or efficiency improvements) and if employers are not given any reason to opt for such features, there is no guarantee the New Zealand fleet will, in the future, reflect improvements to safety, efficiency and emissions. A safety strategy that targets company cars and rental cars can influence the vast majority of new cars, while a comprehensive strategy would need to include the second-hand market.

Changes to the regulation of Japanese imported vehicles in association with changes to company car tax policies could assist in ensuring both second-hand and new car sales include these types of innovations. At present, the pricing signals are absent. The incentive to purchase cars with safety features is consumer driven, with no requirement to display the safety features when selling a vehicle. Fuel price incentive has only been recently strong enough to cause a change in car purchasing decisions. European manufacturers have had much more stringent emissions controls under EU standards so have had incentives to develop efficient engines; hence, they are well advanced in their production of diesel engines compared with American and Australian manufacturers who have had to catch up quickly to maintain market share in the new world of high price oil since 2007. The lack of good policy may have assisted in the demise of the US auto industry, which was still focused on large vehicles with relatively inefficient engines when fuel prices soared. Some of the more successful American cars such as the Chrysler 300c were made possible with Mercedes Benz diesel engines.

6.5 Corporate responsibility

6.5.1 Workplace safety and company vehicles

The New Zealand Department of Labour stipulates employers must take all practicable steps to ensure their employees are safe from harm while they are working. Concerning driving, ‘all practicable steps’ would include having processes for ensuring any vehicle used for work purposes is:

- roadworthy and warranted
- adequately and appropriately insured
- loaded and used only within its specified capability.

These are minimal requirements and a more robust guide is found in *Your safe driving policy* (August 2010), which is jointly published by the NZTA, ACC and the Department of Labour.

The safe driving policy guide has much better direction and suggests that employers:

- choose vehicles with a high safety rating
- provide driver education
- deal with driver tiredness and distraction
- reduce speeding and promote use of safety belts and other features
- provide incentives to ensure safe driving.

The policy provided as a model in the document has some guidance on vehicle procurement and suggests:

- buying and/or hiring vehicles that rate four or more stars in the ANCAP tests

- choosing vehicles with electronic stability control (ESC), ABS brakes and side head-protecting airbags
- buying and/or hiring vehicles that are light coloured
- fitting all vehicles with a first aid kit, fire extinguisher, torch and emergency triangle.

This joint approach to education materials is commendable and could lead to more coordinated regulation. The guide also makes it difficult for employers to argue they did not know what types of things they could do to make the workplace safer. It would be difficult to justify purchasing a fleet with a one- or two-star ANCAP rating. As features such as ESC and ABS become almost standard, choosing vehicles without them becomes questionable. Any change to ACC levies or the partnership programme to incorporate some sort of registration or levies discount for ANCAP ratings or for airbags, stability controls or braking systems would impact on the total vehicle fleet. Given the large portion of the fleet that enters New Zealand as second-hand cars any policy needs to consider the wider impacts of policy adoption.

Cars are part of the workplace for many employees and, as such, the safety features available are important considerations under Occupational Safety and Health (OSH) regulations regarding provision of a safe place to work. While there is not an explicit requirement to have the latest safety features, most employers whose employees drive as part of their job incorporate safety concerns in their procurement decision. Employers have responsibilities under duty of care and safe workplace environment requirements; however, how this is interpreted and implemented in terms of fleet procurement and driving policies is largely left to employers.

6.5.2 Environmental performance

Many companies have changed how they report performance to include environmental performance as part of triple bottom line reporting. The transport emissions of a vehicle fleet can be a significant part of a company's total emissions and therefore come under scrutiny. Company car choice becomes aligned to these principles and therefore considers driver safety, energy efficiency and emissions. A status-based company car with a larger engine size for upper management may be incompatible with this new philosophy.

This year (2008) we committed to replace all of our current fleet with more environmentally efficient vehicles, which we estimate will reduce our carbon emissions by 600 tonnes per year once the whole fleet is replaced. (Westpac New Zealand Stakeholder report 2008)

Alan Large, Westpac category manager: Reducing carbon dioxide emission and total cost of ownership was one part of the equation but the procurement team also had to factor in safety features, fuel efficiency and fit for purpose. (New Zealand Company Vehicle December 2008)

Increasingly, company sustainability strategies are influencing fleet choices. Progressive Enterprises sustainability strategy aims to reduce their carbon dioxide footprint by 40% from 2006 to 2015. By changing the company car cars to efficient and low carbon dioxide emissions vehicles a 30% reduction in the footprint of the fleet was achieved. (New Zealand Company Vehicle December 2008)

I would think that in two to three years' time environmental and social responsibility will be the key driver in fleet purchases. Charles Wilmer LeasePlan (New Zealand Company Vehicle October/November 2008)

Companies with European or UK head offices are increasingly directing global policies, which reflect the market conditions that exist in the EU, with increasingly restrictive emissions policies. If fleet lease and

company purchase of new cars with high safety and environmental benefits can be encouraged without reducing the overall size of the company car market then the environmental and safety standard of the fleet can be improved.

The recent increase in oil prices has achieved a significant change in the transport market. The industry has had a painful period of adjustment that could have been made easier by earlier and unambiguous government policy signals (regarding environmental, congestion and peak oil considerations).

6.6 Potential policies to address employer-provided parking

Policy applied by different segments of government needs to align to ensure the objectives of the various policies are complementary rather than undermining each other.

Employer-provided parking and the requirement to provide minimum levels of parking is perhaps the main area for a change in policy focus. There is a major focus on reducing congestion and to increase use of public transport in Auckland, Wellington and Christchurch, yet parking provided on premises by employers is tax free and at no cost to employees. The cost of this parking is hidden in the rents paid by employers. There may be no daily out-of-pocket charge for those who drive and park at work.

Taxation of employer-provided car spaces happens in Canada, Sweden and Australia and Ireland. These countries have similar economies, car ownership and urban rural population patterns. In Ireland the tax only applies to selected cities, a €200 per annum parking levy on employees using car parking facilities provided by their employer has been introduced in the cities of Dublin, Cork, Galway, Limerick and Waterford. The levy is reduced for job sharers, part-time employees, people on maternity leave and shift workers. The levy does not apply to disabled drivers. This type of limited application parking levy can target the tax to those cities where parking has a value, where congestion has an impact and where public transport alternatives are available.

Employer-provided car parking is taxed as a benefit in Australia.

A car parking fringe benefit will not arise from providing parking facilities for employees unless there was a commercial car parking station within one kilometre of the employer provided facility, and that car parking station charged more than \$7.07 for all day parking at the start of this FBT year. (Australian Tax Office 2009)

The \$7 threshold isolates the tax to urban areas where parking is valuable, congestion problems exist, and public transport alternatives are available. A similar amendment to New Zealand tax law would assist in aligning Australian and New Zealand tax law, and reduce the significant tax revenue loss that this untaxed benefit currently represents.

New Zealand local authorities in the absence of nationwide action have introduced measures to combat the market failures that lead to smog and congestion. Several cities have introduced car parking taxes or low emissions zones. Low emissions zones can focus on heavy goods vehicles to increase the turnover towards the newer diesel engines with lower emissions. The visible smoke test is also an important measure introduced to target the worst vehicles. The banning of wood burning fires in Christchurch is an example of a localised regulatory approach. The congestion charges in Singapore and London also address the congestion issue through a charge or tax-based measure. Common resources such as road space require pricing (taxing) to reduce market failure.

6.6.1 Local parking levies

A levy or tax on all CBD parking is another measure that has been used to target congestion in cities. A broader-based parking strategy would be more effective than an employer-focused tax policy.

The 2009 Auckland regional parking strategy has signalled a change to maximum parking regulations but also identified that the strategy would take many years to be effective.

Without a mechanism enabling a public agency to impose a charge or levy on existing parking spaces in specific centres or areas, the rate of change in the availability of existing off-street car parking spaces is likely to be slow as it would rely primarily on the outcome of planning consent applications for redevelopments or for changes in use of existing buildings.

Research into CBD parking levies is suggested. Many countries and cities apply levies, fees or taxes on parking. A selection is shown in table 6.3.

Table 6.3 Selection of cities with car parking taxes

City	Tax on parking	Features
Australia	Employer-provided parking is subject to FBT	Commercial parking within 1 km of the workplace costs > \$7
Canada	Employer-provided parking is subject to FBT	
Sweden	Employer-provided parking is subject to FBT	
Melbourne	\$800 per long-stay CBD parking space pa	Revenue funds CBD transport improvements
Perth	\$195 per CBD space per annum	Revenue used to fund inner city free bus service
Sydney	\$2040 per space in the CBD pa \$720 per space in other centres pa	Revenue used to fund public transport infrastructure
Montreal	\$300 per CBD space pa	Revenue used to fund public transport
Vancouver	21% sales tax on parking transactions	
Ireland	€200 parking levy pa	Applicable in Cork, Dublin, Galway, Limerick and Waterford. Employers deduct the levy from net salary. Provision of monthly or annual bus, train passes to employees is exempt from income tax
Los Angeles	10.6% on fee based parking	
New York city	18.5% tax on commercial parking 10.5% for Manhattan residents	
Oakland	10% tax on parking revenue	
Pittsburgh	50% sales tax	
San Francisco	25% sales tax on commercial off street non-residential transactions	
Santa Monica	10% tax on parking revenue	

The collection of parking levies and taxes by the local government rather than federal or central government enables the tax revenue to be spent locally on visible improvements to local transport infrastructure. This makes the taxes more acceptable to the public. Employer car parking would need to be included in any CBD levy for this policy to be effective.

The city councils in Auckland, Wellington and Christchurch also own parking facilities. They can influence the parking price, type and supply. The managers of council-owned car spaces may have revenue targets and be motivated to ensure maximum occupancy rather than to achieve other TDM goals. Hence much of the parking supply in Auckland provided by the city council is priced lower than the surrounding commercial operators. It is targeted at long-stay commuters, with most of the car parks used by early bird (in before 9.30am) parkers. If all the council car parking buildings became short-stay parking, there would be an oversupply of short-stay parking and a sudden shortage of commuter parking.

The Melbourne levy had a less than expected impact on mode share. The authors of a review found:

One of the main reasons for the levy's relatively small impact is that the driver does not typically pay for the cost of parking. As economic conditions change, and as labour contracts are renegotiated, there may be increased opportunities to place the burden of the parking levy on to drivers. (Hamer et al 2009)

If employers pay the cost (instead of the employee) then parking levies will have minimal effect on mode share changes. In the Melbourne example, the charge was levied against the facility owners (not even employers) at a time of heightened competition (due to reduced car mode share for CBD travel). The result was an escalation in short-term parking fees (as they are inelastic) and a reduction in long-term parking fees (as demand for long-term parking is highly elastic).

A similar argument could be applied to FBT on parking; if the employer pays this the employee may not be exposed to this new cost. This type of policy may take a long time to have its full effect – as employers can only change employment conditions when contracts are changed this may only be for new employees. The Irish parking levy is paid from employees' incomes so it is a clearer incentive for those who can avoid parking to do so.

6.7 Barriers to parking policy changes

Introducing a tax on employer-provided parking might result in a reduction in the provision of onsite parking and shift parking to elsewhere in the CBD. The CBDs of Auckland, Wellington, Hamilton, Christchurch and Tauranga already have parking controls that reduce the availability of free parking within the CBD to a minimum. Employees can still choose to drive and park in the privately operated car parks in the CBD. There is a risk that people will continue to drive and park especially if employers absorb the tax. For the IRD the problem of an untaxed benefit would be solved, but transport behaviour may not change as much as might be expected.

Arguments against applying FBT to employer-provided parking are usually based on the difficulties of calculation and administrative costs that would be added to employers. By using a standard urban parking value of \$10 per day per space in cities (adjusted for consumer price index changes) this would reduce the administration costs and provide a standard parking rate. While this might represent an under-charge in some cases and an over-charge in others, it would correctly identify that parking provided by an employer has value and is being 'paid' to employees instead of PAYE income. Even if this charge was only applied in Auckland, Wellington, Christchurch, Hamilton and Tauranga, a significant transport price inequity would have been addressed and a loss of tax revenue resolved for the majority of the population. There is little point in instituting a parking charge in small towns where there are no parking charges on suburban streets.

The Australian system of using the parking price in nearby parking buildings above a minimum threshold is also a viable policy. Aligning New Zealand FBT policy regarding company cars and car parking to policy in Australia could make it easier for trans-Tasman businesses to manage their FBT obligations.

7 Conclusions

This chapter presents a summary of the key findings of the review.

7.1 Overview of key findings

This analysis implies that 22% of all cars used in the commuter peak are company cars, ie more than one in five cars on the road. Despite the significant proportion of company car use by the commuting public, the impact of this is largely unstudied.

This research reviewed New Zealand's FBT policy against taxation and transport policy principals. Taxes should have horizontal equity; people with equal incomes should pay an equal amount of tax. Current FBT law causes those who do not receive the benefit of a company car and an employer car park to pay more tax. The principal of tax neutrality means tax policy should not alter individual or company investment decisions. The salary sacrificed is less than the benefits gained from subsidised (free) parking, running costs and the type of vehicle provided; hence, FBT does not have a neutral effect.

Those commuters with the highest parking cost and longest commutes (consuming more) also gain the largest fringe benefit (untaxed) from current tax policy. There is not the same financial incentive for drivers to choose smaller cars if a third party is paying the fuel bills. The distortion towards cars with larger engines is a classic 'principal-agent' problem where the individual who chooses and uses the vehicle does not pay for its costs. Current FBT is not effectively aligned with land-use efficiency as it creates the wrong incentives in regard to home and work locations with a reduced incentive to live close to work when a company car is provided compared with when one is not. New Zealand's FBT is focused on the purchase price and depreciated value of the vehicle but ignores the variances in fuel subsidy and parking benefits. As such it subsidises long-distance driving over other modes and shorter commutes.

Current tax policy favours resource intensive modes, such as driving, instead of resource efficient modes, such as walking, cycling and public transport. This occurs by ignoring car parking as a taxable benefit, exempting work vehicles and taxing public transport fares.

The additional impacts related to driving: traffic congestion, road and parking facility costs, crashes, energy consumption, pollution emissions, sedentary living/obesity, and sprawl are not considered in the development of FBT policy. The result is an economic policy failure whereby the broader community pays (through congestion and other factors including reduced economic productivity) for the financial benefits received by those with company cars.

Current FBT policy encourages employees to choose larger vehicles, drive more kilometres, reduce use of alternative modes and choose more dispersed, automobile-dependent locations than would otherwise occur. These tend to increase traffic problems, including congestion, road and parking facility costs, crashes, energy consumption, pollution emissions and land-use sprawl. The exemption of employer-provided parking is a widespread benefit that has a significant impact on transport choices. The value of employer-provided car parking in the cities of Auckland, Wellington and Christchurch is around \$2700 per employee. There are over 250,000 company cars in New Zealand. The untaxed benefits total at least \$675 million annually.

Taxing employer-provided car parks is a viable option as practised in Australia. Many Australian cities also have parking levies and taxes on all parking spaces in their central areas.

Company cars make up the majority of new vehicles introduced into the New Zealand fleet. New vehicles tend to have better safety and efficiency measures and if FBT policy encouraged safety and efficiency the

tendency of company cars to be less efficient could be reversed. Calculating a value of private use based on the daily commute distance can more accurately apportion the fringe benefit that individuals gain by using company cars.

The research also looked at barriers to policy changes. An emissions-based reform of FBT without addressing emissions of second-hand imported vehicles may create a switch to older second-hand cars and employee reimbursement of travel costs instead of the provision of company cars. IRD is reluctant to add further tax exemptions such as a public transport subsidy by employers. The failure to address existing distortions such as tax-free employer-provided parking at the same time as refusing to allow FBT subsidy of public transport perpetuates the bias towards the existing car-based subsidy.

Employee parking subsidies undermine attempts to encourage more efficient commuting behaviour. FBT reform can create more neutral (and therefore more efficient and equitable) commuting incentives.

8 Recommendations

This chapter presents a summary of the key findings of the review and presents a series of preferred policy alternatives to address the issues identified.

8.1 Policy alternatives for New Zealand

It is recommended the IRD either address the parking subsidy by taxing the value of employer-provided parking or adopt another strategy to reduce the market distortion and economic policy failure.

The following options are suggested to address the issues identified in this research.

8.1.1 Mitigating the externality impacts of company cars

The larger engines, longer journeys and higher crash rates of company cars can be addressed by modifying the current FBT.

FBT is a broad-based measure while the major problems associated with company cars can be geographically concentrated on the CBD. Any measures applied to employer-provided car parks will also have an impact on company cars, especially cars for upper management.

The company car is captured by any emissions regulations applied to the entire vehicle fleet; as European and Japanese standards are tightened company cars will by default have lower emissions if not smaller engines. The types of company cars used by fleet leasing companies have changed rapidly over the last three years in response to employers' changing environmental responsibilities, increased oil prices, and the impact of the recession on both cost control and labour market conditions. Oil price increases are likely in future. Fuel efficiency is therefore an increasingly important objective. While the UK has used FBT to target emissions, a broader-based policy is required in New Zealand given the large numbers of imported Japanese second-hand cars. Recent tightening of emissions regulations should be updated to reflect changing technological advances. The safety features of cars could be better marketed by a compulsory display of ANCAP ratings and by banning the importation of one and two star vehicles. These measures are best applied to all cars rather than targeting company cars.

If company cars become the safest and most fuel-efficient cars on the road the benefits of having company cars may outweigh the negative influences. The recent trend away from large, heavy and inefficient vehicles can improve the long-term safety and efficiency of the fleet. This change has only occurred due to pricing mechanisms of high fuel prices and lower residual values for large cars. Employer's policies and attitudes towards emissions and efficiency have changed.

It is therefore recommended that the Irish FBT allowances (related to vehicle emissions) be investigated as a potential basis for improving the New Zealand FBT regime.

Around 70% of New Zealand's new vehicle fleet are company cars and 90% of company cars are less than five years old (Graus Worrell 2008). In order to continue the importation of new vehicles with the latest safety, emissions and efficiency advances, company cars must remain an important part of the market. The types of vehicle purchased could be better directed towards the safe and efficient model ranges with support from FBT legislation or through more stringent importing regulations.

Taxation policies that subsidise company car travel create transport users who are not sensitive to the marginal cost of car use and make excessive use of the car. As a result a

significant portion of Travel Demand Management (TDM) measures cannot affect this group.
(Cohen-Blankshtain 2007)

Commuters who bike, walk and use public transport reduce the costs borne by the community and employers by not causing congestion or requiring car parking, yet they receive no financial benefit (other than travel cost savings) or government subsidy.

An isolated charge or tax, however well designed, cannot successfully influence travel behaviour if the rest of the fiscal and regulatory system is operating contrary to it. (Potter et al 2006)

The desire to reform FBT stems from the frustrations that the inequitable tax causes in implementing TDM policy. Currently travel demand policies such as travel plans are being implemented in an environment where transport policy is not aligned.

The transport field is affected by non-transport policy makers with non-transport policy goals that have unintended effects on the transport field. (Cohen-Blankshtain 2008)

It is therefore recommended that FBT policies be aligned to meet economic and transport policy objectives, specifically to reduce market distortion and traffic congestion.

8.1.2 Income tax thresholds and company cars

Company cars are used as a way to avoid high tax rates. There is a reduced incentive to earn PAYE income when taxes rise to 38% over \$65,000 (as was the case in New Zealand prior to October 2010). Employers find ways to increase the total employment package (using non-taxable and taxable fringe benefits) for employees who earn over this tax threshold. Parking and company cars are two ways of doing this. If tax rates were lower, there would be less of a distortion and rewards would be more likely to be cash based rather than in-kind benefits. The problem of parking and single occupant travel go beyond employees who receive these benefits and a wider parking and congestion pricing system has been an effective instrument in other cities.

8.1.3 Alternatives to FBT reform

FBT reform is one aspect of a wider transport policy. Consistent policy is lacking with FBT creating incentives to commute longer distances in large powerful vehicles and to park at work. This generates a significant inefficiency in the economy and reduces productivity.

A range of measures can remedy the problems of high crash rates, long commute distances and distortions towards single occupant car use. Employer-provided parking in the CBD is only a subset of the total parking provided in the CBD and a holistic approach to parking in the CBD can be achieved without an FBT focus as long as employer-provided car parks are included along with levies. Congestion is a wider issue and congestion charges that apply to all traffic address the congestion externality more effectively. Company cars are only a small part of the total car fleet (although a large proportion of the peak hour fleet) and emissions-based taxes or regulations can be applied more broadly to capture all vehicles. Company cars, however, need special consideration due to their principal agent-related problems.

Employers can choose to pay employees to travel by public transport and pay the associated FBT. This is an underutilised option and can be a much cheaper alternative to paying for company car use. The lack of annual passes or specific products aimed at the employer subsidy market does not assist in this option. In the USA, there are well established employer public transport subsidies and a simple administrative process.

An annual pass could be an attractive option for many especially if the public transport trip is faster. The rail systems in Wellington and Auckland can provide a faster trip. The Northern Busway and other bus lanes ensure the bus is time competitive with the car so an employer-subsidised public transport annual pass could become a viable option. While the IRD would prefer not to make public transport a tax-exempt benefit, a tax-free subsidy of public transport is no worse than a tax-free subsidy of employer-provided parking and an employee could only gain either a car park or public transport subsidy (as they can only travel to work one way or the other on any given day).

8.1.4 Regulation as an effective policy instrument

One of the most effective emissions-based regulations has been the requirement to have catalytic converters and unleaded petrol. In Europe, the emissions standards have been very effective at reducing emissions. The mandatory wearing of safety belts was another effective regulatory approach. In the State of Victoria in Australia, electronic stability control is mandatory on new vehicles registered after January 2011. The UK FBT reform targeted emissions to cause a shift toward low emissions vehicles. Parking in urban CBD areas in Sydney, Perth and Melbourne has been managed by regulation and parking levies that are often called congestion levies.

Almost all externality-based problems can also be addressed by regulatory measures. Crash externalities can be addressed by safety regulations, emissions can be controlled by air quality regulations. Car parking can be regulated by planning regulations, which lower the minimum requirements or alternatively place parking maximums on development. In fact, some of the parking issues are caused by the over generous parking requirements of local building codes. As cities reduce the parking provided by councils, and reduce the number of spaces required in new buildings, consistent tax policy becomes increasingly important so that employer-provided parking does not undermine other policy objectives.

Regulation has the advantage of compulsion and has been effective in motor vehicle emissions. A wider-based carbon price will also reduce emissions by providing an incentive for industry to use more efficient low-polluting energy. The advantage of these measures is that they target not just company cars but all new vehicles. In New Zealand this would need to include imported second-hand Japanese vehicles. Many of the measures that are introduced do not directly influence company car drivers, especially measures aimed at fuel prices, parking measures and even congestion charges.

Regulation has some disadvantages as once the minimum standard is met there is no longer any incentive to improve beyond the standard. Regular adjustments to regulations are required to ensure emissions or safety is continuously improved rather than reaching a plateau. The Euro standards are a good example of regulations that are being increasingly tightened. Technology is continually improving and this enables stricter emissions standards to be achieved. Consumers have also been attracted to the fuel efficiency and green credentials of cars independently of the regulations so those vehicles with better environmental performance have sold well.

An environmental-based tax once paid allows the polluter to keep polluting as long as they pay the tax. Carbon pricing will add cost to the burning of carbon-based fuels but the price is low to avoid inflation and suppression of economic growth. Large variations in petrol and diesel costs have already been experienced during 2006 to 2011 with many of the changes in travel demand and vehicle purchase decisions being driven from fuel prices rather than any minor increase linked to a carbon price. Transport emissions have been effectively controlled by regulatory measures especially where they are systematically tightened such as the Euro standards and the Japanese regulations. Failure to address imbalances between New Zealand's emissions regulations and those of Japan (in particular) would result in vehicles that are no

longer road worthy in Japan being dumped on the New Zealand market (along with the externalities avoided by Japanese regulators).

Prices that affect petrol consumption have minimal impact on company car drivers who have their petrol paid for by the employer. While employees will have noticed increased costs of paying for company car running costs the experience in the UK suggests that varying the FBT rate based on emissions has been very effective at changing employers' policies in regard to the type of cars on offer as company cars.

Linking annual registration fees to both fuel economy and emissions can enable the fleet to be differentiated by coloured registration labels. When combined with electronic tolling, emissions-based tolls can be introduced into CBD areas where smog issues can be a problem. While government agencies concerned with energy efficiency, emissions and transport have been coordinating their policy the tax system has remained outside this collaborative effort. Fringe benefits and in particular the treatment of company cars and car parking in comparison with public transport undermine the workplace travel plans and TDM efforts of other government agencies.

The journey to work involves a choice of mode over a fixed distance. This modal choice has different energy requirements and emissions outputs. The distance between home and work can be covered by using public transport, in some cases walking and cycling, or by car. Each car also has its own energy and emissions profile.

A flat petrol tax has no impact on reducing the external costs of congestion. Countries with even double the tax on petrol still have congestion problems. Those that have introduced a congestion charge have been much more successful at reducing congestion problems.

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Appendix A: Glossary

Company car	A vehicle and associated expenses (for insurance, fuel, tolls and parking) provided for employees (includes private use) as part of their employment package subject to FBT.
Horizontal equity	The theory that people with the same income should pay the same amount of tax.
Residual value	The value of a previously leased company car on the second-hand market.
Tax neutrality	Tax policy that does not alter individual or company investment decisions.
Travel demand management	A body of actions that seek to manage the demand for travel by drive-alone private car, rather than cater for that demand or managing the road system. (Ison and Rye 2008)
Work-related vehicle	<p>A vehicle and associated expenses (for insurance, fuel, tolls and parking) provided for employees (includes private use) as part of their employment package exempt from FBT. Under IRD guidelines, work vehicles are exempt for FBT if they meet all four of the following criteria:</p> <ol style="list-style-type: none"> 1. <i>The principal design of the vehicle cannot be for carrying passengers. Vehicles that can qualify include: utes (including extra cabs and double cabs), light pick-up trucks, vehicles with rear doors, which are permanently without rear seats such as vans, station-wagons, hatchbacks, panel vans and four wheel drives. This also applies if the rear seats have been welded down or made unusable because of a permanent fixture, such as shelving, covering the entire rear seat area.</i> 2. <i>The employer's name, logo, acronym or other business identification must be permanently and prominently displayed on the exterior of the vehicle.</i> 3. <i>The employer must notify employees in writing that the only private use the vehicle is available for is: travel between home and work and travel incidental to business travel.</i> 4. <i>The employer must record checks carried out at least quarterly on each vehicle the exemption is claimed for, to ensure the restriction is being followed.</i> <p>Inland Revenue (2009) Fringe benefit tax guide</p>

