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Finland's fine example

How to fix the regressive nature of traffic fines in Australia

Traffic fines in Australia hit low-income earners disproportionately hard. One solution to this problem is to learn from Finland. Their traffic fines are proportional to the income of the offender. This discussion paper outlines one way of applying the Finnish model to Australia, including a breakdown for states.

Discussion paper
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Summary

From an economic perspective, traffic fines serve to provide an incentive to drivers to obey road rules. But the incentives provided are different for different people. For a driver earning a million dollars per year a \$150 traffic fine is of little consequence. For a low income earner it can be a serious setback. It can lead to financial stress for those at the margin, resulting in unpaid bills, loss of insurance and other financial problems. In 2014 a 22-year old Aboriginal woman died after she was held in custody because she was unable to pay \$1000 in fines in Western Australia.¹

A better approach is to fine people in accordance with their income. Such systems are in place in many countries in Northern Europe. This is an effective way to make sure that the incentive-structure is the same for everyone and also makes the system fairer.

This paper assesses how Australian traffic fines would change if we adopted a system based on the one operating in Finland. Under the Finnish system each offence incurs a number of 'day fines'. The monetary value of each driver's day fine is derived from their income.

In Table 1 below we see that exceeding the speed limit by less than 10 km/h over the speed limit incurs three day fines under the Finnish system. Australia's current system imposes a fine of around \$130 for such an offence, depending on the state. Under the Finnish system the lowest income earners would pay around (depending on exact income) just \$33, while the highest income would pay a fine of (around) \$295. Table 1 shows new fines per mean income of each quintile. These fines are only examples as each individual income corresponds to an individual fine amount.

The fines in Table 1 are based on Australian 'quintiles' of mean disposable income²:

- Q1 (lowest income) - \$271 per week, or \$14,092 per year.
- Q2 - \$445 per week, or \$23,140 per year.
- Q3 - \$610 per week, or \$31,720 per year.
- Q4 - \$810 per week, or 42,120 per year.
- Q5 (highest income) - \$1,474 per week, or \$76,684 per year.

¹ SBS, "Aboriginal woman who died in WA jail was there for an unpaid fine," accessed December 11, 2015, <http://www.sbs.com.au/news/article/2014/08/26/aboriginal-woman-who-dies-wa-jail-was-there-unpaid-fine-0>.

² Calculated based on ABS income statistics, explained on page 22.

Table 1: New traffic fines in Australia with Finnish model, per mean quintile income

Traffic Offence	Existing median fine	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by less than 10 km/h	\$130	\$33	\$71	\$107	\$150	\$295
Exceed speed limit by 10 to 19 km/h	\$236	\$78	\$166	\$249	\$351	\$687
Fail to stop at red traffic light	\$361	\$155	\$332	\$499	\$701	\$1,375
Using mobile phone while driving	\$361	\$67	\$142	\$214	\$301	\$589
Fail to wear seat belt	\$373	\$44	\$95	\$143	\$200	\$393

Source: TAI’s calculations based on official documents provided by Finland and Victoria, official state rules for other states.

Under this approach, lower income earners would pay a lower portion of the value of fines in each state, while higher income earners paid a greater portion. Overall most states would see a modest increase in value of fines issued, an average of 12 percent, approximately \$57.39 million, across these states:

Table 2: Finnish model in Australia, change to face value of issued fines³

State	Q1 (\$M)	Q2 (\$M)	Q3 (\$M)	Q4 (\$M)	Q5 (\$M)	Overall (\$M)	Overall % change
NSW	-\$53.91	-\$29.38	-\$4.69	\$22.02	\$124.61	\$58.66	15%
QLD	-\$39.41	-\$18.01	-\$1.80	\$18.82	\$78.75	\$38.35	14%
SA	-\$25.43	-\$18.27	-\$12.65	-\$4.81	\$15.92	-\$45.23	-26%
TAS	-\$0.58	-\$0.04	\$0.38	\$0.89	\$2.26	\$2.92	57%
NT	-\$1.51	-\$0.40	\$0.30	\$1.26	\$3.02	\$2.67	23%
Total	-\$120.86	-\$66.16	-\$18.45	\$38.18	\$224.55	\$57.39	12%

Source: TAI’s calculations, unpublished statistics provided to TAI by each state except for South Australia.⁴

³ Other states did not provide sufficient data for these calculations.

⁴ “Expiation Notice System Data,” Data SA, accessed December 11, 2015, <https://data.sa.gov.au/data/dataset/expiation-notice-system-data>.

South Australia would see a reduction in value of fines issued of 26 percent, as its existing fines are relatively high and the state's disposable incomes are relatively low. Tasmania would see a 57 percent increase in value of fines issued as its existing fines are some of the lowest in the country.

It is unclear whether this approach would have a material effect on road safety – academic research is inconclusive about whether changes to fines affect overall road safety. What is certain is that the system would be fairer, providing similar incentives to drivers to obey the law and reducing the burden of the fine system on the lowest income earners.

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Introduction

In Australia, traffic fines are issued for offences such as speeding, negligent driving, or driving an unregistered vehicle. In general fines are determined by the offence: the further over the speed limit or other regulation you are, the greater the price of the infringement.

The value of the fine does not take into account the capacity of the driver to pay it. A wealthy driver can pay a \$500 fine more easily than a driver on a low income. To this extent, the penalty for the infringement is equal in dollar cost, but not in the impact it has on drivers' lives.

The impact of a fine on low-income earners can be very hard, leading to financial stress or even to jail time. In 2014 a 22-year old Aboriginal woman died after she was held in custody because she was unable to pay \$1000 in fines in Western Australia.^{5, 6} At the other end of the income scale, for wealthy drivers the financial impact of a fine is minimal and, according to economic theory at least, provides little incentive to drive within the rules. Australia has one way of combatting this incentive-structure – through the demerit point system. This ensures that no affluent individual is able to constantly speed without suffering at all. The loss of too many demerit points can lead to the loss of one's driver's licence. While the fine may not serve as a great deterrent, the loss of demerit points will.⁷

An approach to enforcement that considers the economic impact on different drivers is fairer. Some nations have addressed this issue by reforming the way fines are administered. Many countries in Northern Europe have implemented fines proportional to income, to ensure equal punishment for equal infringement. Finland and Switzerland have taken this a step further and implemented it for traffic fines as well.

This paper examines how the Finnish model could work in Australia, and estimates the effect on individuals at different income levels.

⁵ <http://www.sbs.com.au/news/article/2014/08/26/aboriginal-woman-who-dies-wa-jail-was-there-unpaid-fine-0>.

⁶ It is unclear what type of fine that Ms Dhu was issued. The point however remains the same as a couple of traffic fines can easily amount to \$1,000.

⁷ Finland does not have a demerit point system as they have a working incentive-structure through their income-based traffic fines.

Finnish traffic fine system

Finland uses a 'day fine' system, which calculates fines relative to the driver's income. Although referred to as 'day' fines, it does not actually relate to a day's income, but to a more complicated formula, shown below:

$$\text{Day fine} = \frac{(\text{net monthly income} - \text{€255})}{60} - (\text{€3} \cdot \text{dependents})$$

The Finnish model takes into consideration the monthly income of the driver, as well as the number of dependents for whom the offender provides. Here net monthly income is defined as income after taxes and transfers.

The numerator sets the scheme into half-days, rather than single whole day-equivalent units, but the principle remains the same. Dependents are defined as spouses, anyone below the age of 15 and children 15 – 24 that are studying.⁸

The number of day fines imposed for an offence is fixed (for example, disobeying a red-light results in 14 day fines in Finland). The number of day fines for each offence is listed in Table 3 below:

⁸ Australian Bureau of Statistics, "2901.0 - Census Dictionary, 2011," Commonwealth of Australia, last updated May 23, 2011, accessed December 11, 2015, <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Chapter25702011>.

Table 3: Amount of day fines for typical traffic infringements

Traffic infringement	Usual amount of day fines⁹
Fail to stop at red light	14
Fail to wear seat belt	4
Use mobile phone while driving	6
1-10 km/h exceedance above speed limit (applies to speed limits up to 60 km/h)	3
11 – 15	6
16 – 20	9
21 – 23	12
24 – 26	14
27 – 29	16
30 – 32	18
33 – 35	20
36 – 38	22
39 – 41	24
42 – 44	26
45 – 47	28
48 -	Crime reported to authorities
1-10 km/h exceedance above speed limit (applies to speed limits above 60 km/h)	3
11 – 15	5
16 – 20	8
21 – 23	10
24 – 26	12
27 – 29	14
30 – 32	16
33 – 35	18
36 – 38	20
39 – 41	22
42 - 44	24
45 - 47	26
48 - 50	28
51 -	Crime reported to authorities

Source: Official documentation provided to TAI by Finnish government official.

The Finnish system also has a fine ‘floor’, a minimum fine level. This ensures the cost of infringement does not fall too close to zero, which would otherwise risk reducing the cost of violation to a point where penalty no longer effectively applies.

⁹ Police will typically enforce the common day fine amount but the legal system has room to increase and decrease the amount of day fines depending on circumstances and other factors.

In the Finnish system, it is possible to receive flat-rate fines when speeding less than 20 km/h. These flat-rate fines have not been included in this study. The traffic infringements have corresponding amount of day fines in the official documentation The Australia Institute received and the day-fines have been implemented for all infringements even though they might not always be used in the Finnish system.

The implementation of this system relies on the ability of the authorities to access information about the offender's income. Finland relied for a long time on the honesty of the offender until technical devices made it possible for police to access information from the tax office within seconds. One issue in Australia is that while traffic fines is a state issue, it is the federal government that collects income tax. It would be preferable if the federal government shared the information with states that wish to implement this type of income-based fine system. The other option is to rely on people to self-report their income and criminalize the act of lying about it.

National results

Traffic offences and the resulting fines vary from state to state. To give an overall picture of how fines would change under the Finnish system for different income earners, we have taken the median fine level of the states and territories for similar infringements. Table 4 below also shows a possible fine floor and the fine levels for each income group in Australia. Income groups are split into five 'quintiles', from the lowest income 20 percent of the population to the highest 20 percent. Table 4 shows examples of new fines for the average income of that quintile. However, each individual income corresponds to an individual fine amount. This means that there are as many different fine amounts as there are different incomes.

The fine levels for each income group in Table 4 are based on the mean income of each income quintile. These mean per week disposable incomes are:

- Q1: \$271
- Q2: \$445
- Q3: \$610
- Q4: \$810
- Q5: \$1,474

Table 4: Finnish model in Australia, new fine per mean quintile income

Traffic Offence	Number of day fines	Median fine currently	Fine Floor	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by less than 10 km/h	3	\$130	\$30	\$33	\$71	\$107	\$150	\$295
Exceed speed limit by 10 to 19 km/h	7	\$236	\$70	\$78	\$166	\$249	\$351	\$687
Exceed speed limit by 20 to 29km/h	13	\$396	\$130	\$144	\$308	\$463	\$651	\$1,276
Exceed speed limit by 30 to 39 km/h	21	\$637	\$210	\$233	\$497	\$748	\$1,052	\$2,062
Exceed speed limit by 40 km/h or more	27	\$868	\$270	\$300	\$639	\$962	\$1,352	\$2,651
Fail to stop at red traffic light	14	\$361	\$140	\$155	\$332	\$499	\$701	\$1,375
Using mobile phone while driving	6	\$361	\$60	\$67	\$142	\$214	\$301	\$589
Fail to wear seat belt	4	\$373	\$40	\$44	\$95	\$143	\$200	\$393

Source: TAI’s calculations, official documents provided by Finland and Victoria, official state rules.^{10,11, 12, 13, 14, 15, 16}

¹⁰ “Demerit points schedule,” Queensland government, accessed December 11, 2015, <https://www.qld.gov.au/transport/safety/fines/demerit/points/>.

¹¹ “Traffic Regulations,” Department of Transport, accessed December 11, 2015, <http://notes.nt.gov.au/dcm/legislat/legislat.nsf/linkreference/TRAFFIC%20REGULATIONS?opendocument>.

¹² “Road Traffic (Miscellaneous) Regulations 1999,” South Australia government, accessed December 11, 2015, [http://www.legislation.sa.gov.au/LZ/C/R/ROAD%20TRAFFIC%20\(MISCELLANEOUS\)%20REGULATIONS%201999/2014.08.31/1999.236.UN.PDF](http://www.legislation.sa.gov.au/LZ/C/R/ROAD%20TRAFFIC%20(MISCELLANEOUS)%20REGULATIONS%201999/2014.08.31/1999.236.UN.PDF).

¹³ “New Offences Table,” Department of State Growth, accessed December 11, 2015, <http://www.transport.tas.gov.au/licensing/publications/tas>.

Applying the Finnish system to Australia in this way would have different effects on different states. New South Wales and Queensland would see modest increases in face value of fines issued, while South Australia would collect less revenue. This is because South Australia currently has the highest traffic fines of all states. Tasmania’s existing fines are very low, so the Finnish system would lead to a substantial increase in face value. The Northern Territory would also see an increase, of 23 percent, as shown in Table 5 below:

Table 5: Change per quintile, Finnish Model in Australia

State	Lowest income earners	Q2	Q3	Q4	Highest income earners	Overall
New South Wales	-68%	-37%	-6%	28%	158%	15%
Queensland	-72%	-33%	-3%	34%	143%	14%
South Australia	-73%	-53%	-36%	-14%	46%	-26%
Tasmania	-56%	-3%	37%	86%	219%	57%
Northern Territory	-66%	-18%	13%	55%	131%	23%
Average	-67%	-29%	1%	38%	140%	17%

Source: Unpublished statistics from five Australian states provided to TAI. Author’s calculations.

Table 5 shows that lower income earners would pay less in fines in all states under the Finnish system, as would many middle income earners. Higher income earners would pay more in all states, aside from some in South Australia.

For these five states, a total increase of approximately \$57 million in face value of fines could be issued, as shown in Table 6 below:

¹³ “Offences and Penalties,” Roads and Maritime, accessed December 11, 2015, [manian_road_rules/road_safety_rules/new_offences_table](http://www.rms.nsw.gov.au/roads/safety-rules/new_offences_table).

¹⁴ “Offences and Penalties,” Roads and Maritime, accessed December 11, 2015, <http://www.rms.nsw.gov.au/roads/safety-rules/offences-penalties/index.html>.

¹⁵ “Speeding,” Road and Safety Commission, accessed December 11, 2015, <http://www.ors.wa.gov.au/Road-Rules-Penalties/Speeding>.

¹⁶ “Road Transport (Offences) Regulation 2005,” ACT government, accessed December 11, 2015, <http://www.legislation.act.gov.au/sl/2005-11/current/pdf/2005-11.pdf>.

Table 6: Change to face value, Finnish Model in Australia

State	Lowest income earners	Q2	Q3	Q4	Highest income earners	Overall
NSW	-\$53.91 M	-\$29.38 M	-\$4.69 M	\$22.02 M	\$124.61 M	\$58.66 M
QLD	-\$39.41 M	-\$18.01 M	-\$1.80 M	\$18.82 M	\$78.75 M	\$38.35 M
SA	-\$25.41 M	-\$18.26 M	-\$12.65 M	-\$4.81 M	\$15.92 M	-\$45.21 M
TAS	-\$0.58 M	-\$0.04 M	\$0.38 M	\$0.89 M	\$2.26 M	\$2.92 M
NT	-\$1.51 M	-\$0.40 M	\$0.30 M	\$1.26 M	\$3.02 M	\$2.67 M
Total	-\$120.82 M	-\$66.08 M	-\$18.45 M	\$38.18 M	\$224.55 M	\$57.39 M

Source: Unpublished statistics from five Australian states provided to TAI. Author's calculations.

From these results we can make projections for the remaining states. These should be considered as broad estimates, as insufficient data was provided by Victorian, ACT and Western Australian governments to make more precise calculations.

Table 7: Projected change to face value for Finnish Model implemented in all Australian states

	Q1	Q2	Q3	Q4	Q5	Overall
Weighted average¹⁷	-70%	-36%	-7%	28%	141%	11%

The overall change to face value of traffic fines is projected to be modest at 11 percent. However, the burden is shifted from lower income earners to higher income earners. The new distribution can be seen in the following table:

Table 8: Finnish Model, projected share of total fines issued for Australia

	Q1	Q2	Q3	Q4	Q5
Weighted average	6%	12%	17%	23%	43%

QUEENSLAND

Queensland issued more than 1.3 million traffic fines in 2014. As the state has about 3.8 million registered vehicles,¹⁸ that translates to 0.36 traffic fines per registered vehicle. This is the highest of all five examined states. This is, as earlier mentioned,

¹⁷ Weighted by amount of registered vehicles in each state (definition of vehicle according to ABS).

¹⁸ Australian Bureau of Statistics, "Motor Vehicle Census, Australia, 31 Jan 2015," Commonwealth of Australia, Last updated January 31, 2015, Accessed December 11, 2015, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/9309.031%20Jan%202015?OpenDocument>.

excluding court-issued traffic fines as they are not included in this study. The fines issued had a face value of almost 275 million dollars.

Applying the Finnish system to Queensland’s most common traffic offenses and Queensland residents’ average income levels would result in changes to fines as shown below:

Table 9: Queensland, new fines per quintile mean income

Traffic offence	Number of day fines	Current Fine	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by less than 13km/h	4	\$157	\$45	\$95	\$141	\$200	\$371
Exceed speed limit by 13km/h to 20 km/h	6	\$235	\$67	\$142	\$211	\$300	\$557
Exceed speed limit by 20 km/h to 30km/h	13	\$392	\$145	\$308	\$458	\$650	\$1,206
Exceed speed limit by 30 km/h to 40km/h	21	\$549	\$224	\$473	\$705	\$999	\$1,855
Fail to stop at red traffic light	14	\$353	\$157	\$331	\$493	\$700	\$1,299
Using mobile phone while driving	6	\$353	\$67	\$142	\$211	\$300	\$557
Fail to wear seat belt	4	\$353	\$45	\$95	\$141	\$200	\$371

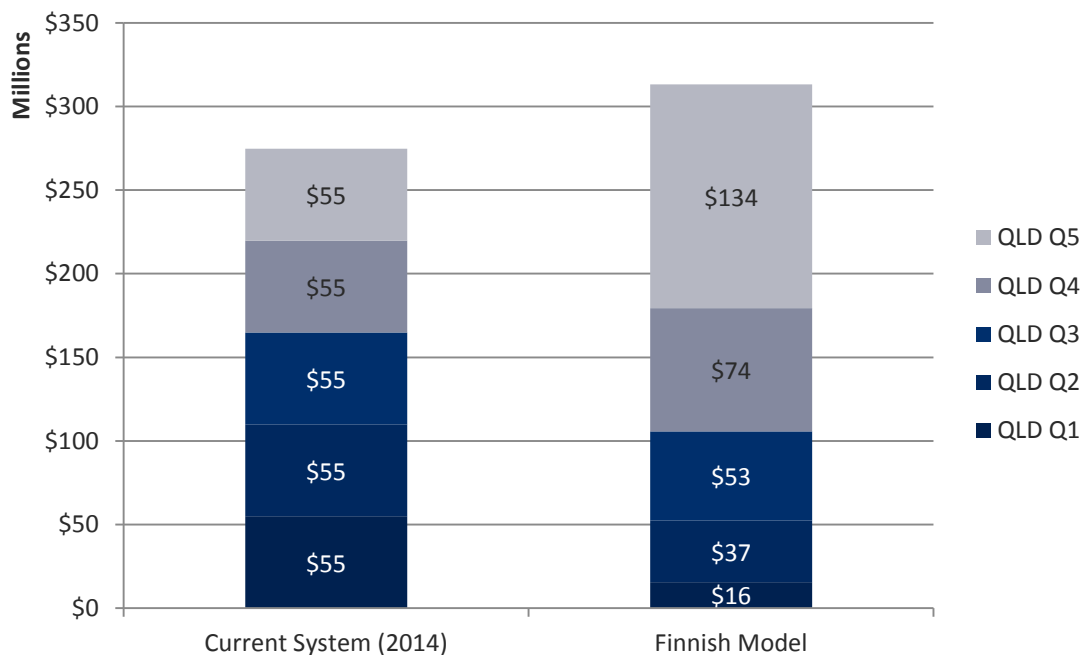
Source: Author’s calculations and unpublished statistics provided by Queensland’s government and official information from the Queensland government’s website.¹⁹

Fines for other infringements vary. This depends on the amount of day fines for each crime. Exceeding the speed limit by 35 km/h in Finland attracts 20 day fines. Based on the mean income of Queensland’s lowest quintile of income earners, \$263 per week, this will result in a fine of \$224, while the mean weekly income of quintile 5 (\$1,389) will receive a fine of \$1,855.

¹⁹ “Demerit Points schedule.”

Queensland issued approximately 1.35 million traffic fines in 2014. If we assume that all income groups are equally likely to commit traffic offences, then applying the system above would increase face value by \$38 million dollars, an increase of 14 percent. The lowest quintile of income earners would pay \$16 million, which is less than they currently do (\$55 million), while the highest income earners would contribute with \$134 million.

Figure 1: Face value traffic fines Queensland



Source: Author’s calculations and unpublished statistics from Queensland’s government. Statistics from ABS on age and income in Queensland.

This means that quintile 1 would pay 5% of all fines, Q2; 12%, Q3; 17%, Q4; 24% and Q5; 43%. Quintile 1 would pay 25% of the share of what they pay today while the richest quintile would pay almost 150% more than they do today.

NORTHERN TERRITORY

Northern Territory issued 46,037 traffic fines in 2014. There are 155,035 registered vehicles which mean that there is an average of 0.30 traffic fines per registered vehicle.²⁰

Applying the Finnish system to Northern Territory’s most common traffic offenses and the state’s income levels would result in changes to fines as shown below:²¹

²⁰ “Motor Vehicle Census, Australia, 31 Jan 2015.”

Table 10: Northern Territory, new fines per quintile mean income

Traffic Offence	Current fine	Amount of day fines	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit up to 15km/h	\$150	4	\$72	\$129	\$180	\$251	\$378
Exceed speed limit by 16 to 30km/h	\$300	11	\$199	\$355	\$496	\$689	\$1,041
Exceed speed limit by 31 to 45km/h	\$600	21	\$397	\$711	\$992	\$1,378	\$2,081
Fail to stop at red traffic light	\$240	14	\$253	\$452	\$631	\$877	\$1,324
Using mobile phone while driving	\$250	6	\$108	\$194	\$271	\$376	\$568
Fail to wear seat belt	\$500	4	\$72	\$129	\$180	\$251	\$378

Source: Author’s calculations and unpublished statistics provided by Northern Territory’s government and official information from the Northern Territory government’s website.²²

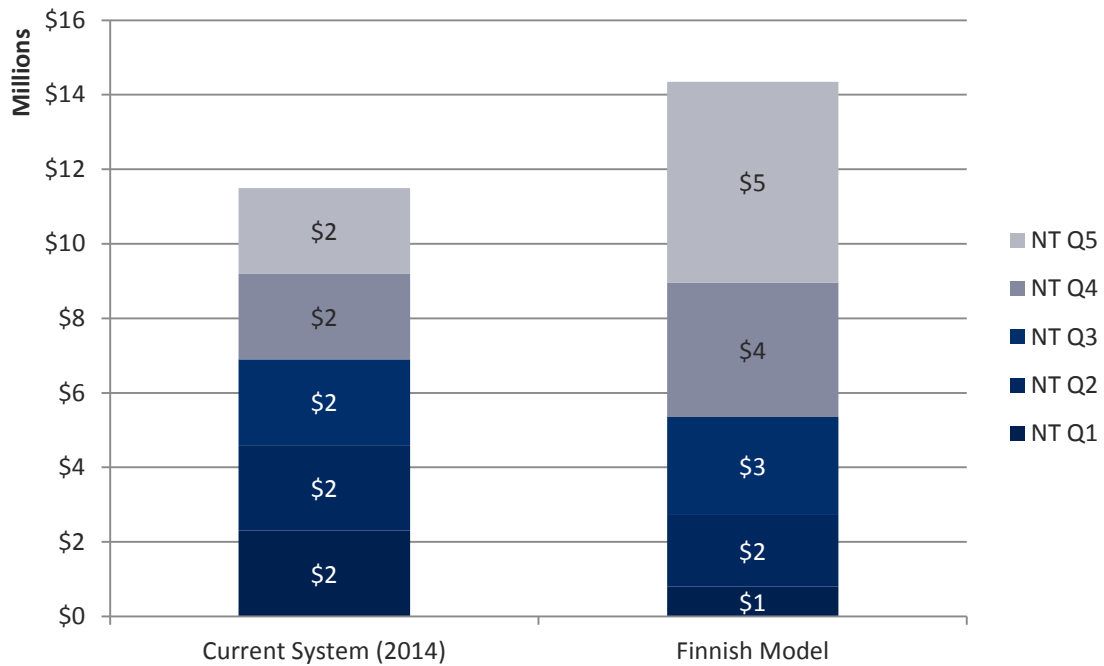
Table 10 shows how fines would vary between different income groups. A notable change is that most people will pay a lower fine than they do today if they don’t wear their seat belt. This is because this offence only attracts 4 day fines in the Finnish system.

Northern Territory issued 46,037 traffic fines in 2014. If we assume that all income groups are equally likely to commit traffic offences, then applying the system above would increase the face value of traffic fines by \$2.67 million, or 23 percent. The lowest quintile of income earners would pay less than a million, which is less than they currently do, while the highest income earners would contribute more than 5 million. That is an increase of 131% for the richest 20% of income earners.

²¹ The income statistics from Northern Territory has a serious flaw. Anyone that was considered to be living “very remote” was excluded from the income study. Unfortunately, this accounts for 23% of the population in Northern Territory. This leads to many issues that we unfortunately cannot correct in this study.

²² “Traffic Regulations.”

Figure 2: Face value Northern Territory traffic fines



Source: Author’s calculations and unpublished statistics from Northern Territory’s government. Statistics from ABS on age and income in Northern Territory.

SOUTH AUSTRALIA

South Australia issued 423,683 traffic fines in the financial year of 2014-15. That is an average of 0.31 fines per registered vehicle in the state.²³ This is only second to Queensland. However, this in combination with some of the highest traffic fines in the country make South Australia the state with the highest face value of traffic fines compared to the amount of registered vehicle in the state, at \$129 per registered vehicle. Compared to Tasmania, the most extreme example at the other end of the scale - face value of traffic fines compared to the amount of registered vehicles is more than ten times higher. \$129 compared to \$11.5.

As can be seen in Table 11, traffic fines in South Australia would be lowered for many people in this kind of system.

²³ “Motor Vehicle Census, Australia, 31 Jan 2015.”

Table 11: South Australia, new fines per quintile mean income

Traffic Offence	Number of day fines	Current fine	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by 1 to 9 km/h	3	\$219	\$37	\$69	\$96	\$135	\$237
Exceed speed limit by 10 to 19 km/h	7	\$409	\$87	\$160	\$225	\$315	\$554
Exceed speed limit by 20 to 29 km/h	13	\$769	\$161	\$298	\$418	\$585	\$1,028
Exceed speed limit by 30 to 44 km/h	22	\$906	\$272	\$504	\$707	\$991	\$1,740
Fail to stop at red traffic light	14	\$487	\$173	\$321	\$450	\$630	\$1,107
Using mobile phone while driving	6	\$368	\$74	\$137	\$193	\$270	\$474
Fail to wear seat belt	4	\$393	\$50	\$92	\$129	\$180	\$316

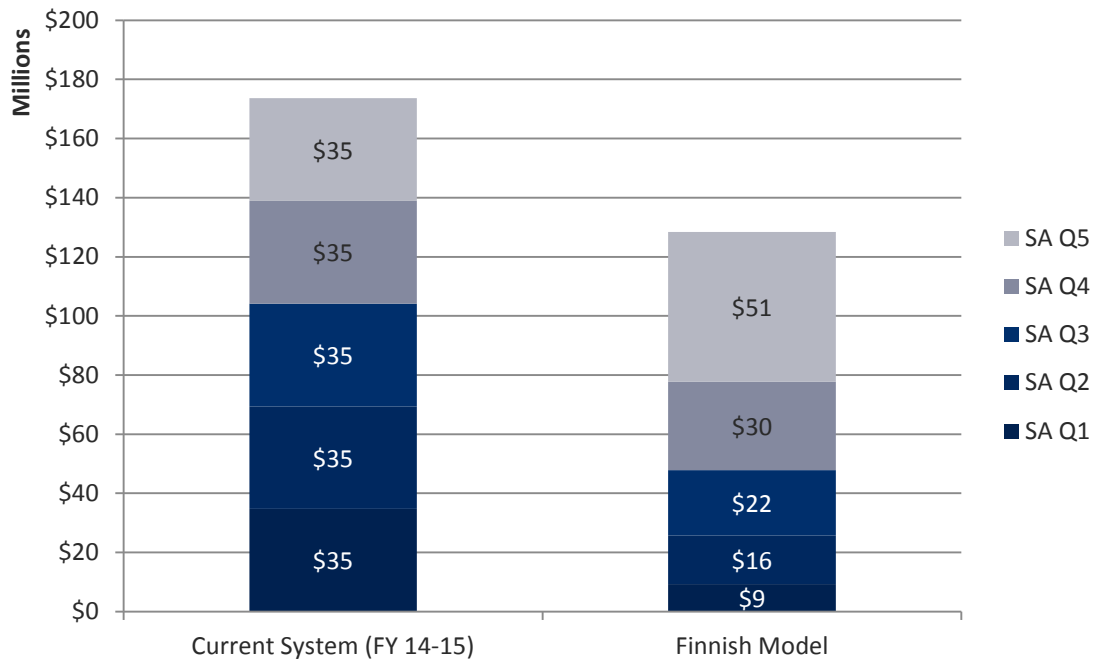
Source: Author’s calculations and official statistics from South Australia.^{24,25}

The lowered change is also visible in Figure 3. The lowest income quintile in South Australia would pay much less in this kind of system, 73% less. Every quintile except for the highest income earners would pay less as fines in South Australia today are relatively high. The total face value would actually go down by 25%, the only state that would see a negative change.

²⁴ “Expiation Notice System Data,” Data SA, accessed December 11, 2015, <https://data.sa.gov.au/data/dataset/expiation-notice-system-data>.

²⁵ “Road Traffic (Miscellaneous) Regulations 1999.”

Figure 3: Face value South Australia traffic fines



Source: Author’s calculations and official statistics from South Australia.²⁶

TASMANIA

Tasmania issued 33,991 traffic fines in 2014. The state had 450,403 registered vehicles,²⁷ which translates to 0.07 fines per vehicle. Tasmania also has some of the lowest traffic fines in the whole country and this combination leads to a lesser burden of traffic fines on Tasmanians in total - only \$11.50 per registered vehicle. The other four examined states are all above \$70 per registered vehicle.

Applying the Finnish system to some of Tasmania’s most common traffic offenses and the state’s income levels would result in changes to fines as shown below. Notable is that the Finnish fine floor comes into place in Tasmania more often than in other states. The fine floor is \$10 per day fine. If your income correlates with a fine lower than that – you will automatically be paying the fine amount of the fine floor (10 times the amount of day fines). This is to ensure that the fines do not become too low.

²⁶ “Expiation Notice System Data.”

²⁷ “Motor Vehicle Census, Australia, 31 Jan 2015.”

Table 12: Tasmania, new fines per quintile mean income

Traffic Offence	Number of day fines	Current fine	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by less than 10 km/h	3	\$80	\$80	\$80	\$91	\$125	\$217
Exceed speed limit by 10 to 14 km/h	5	\$110	\$110	\$110	\$152	\$209	\$362
Exceed speed limit by 23 to 29 km/h	10	\$250	\$121	\$211	\$305	\$417	\$724
Exceed speed limit by 30 to 37 km/h	19	\$450	\$230	\$401	\$579	\$793	\$1,375
Exceed speed limit by 38 to 44 km/h	24	\$650	\$291	\$506	\$731	\$1,002	\$1,737
Exceed speed limit by 45km/h or more	28	\$900	\$340	\$590	\$853	\$1,168	\$2,027
Fail to stop at red traffic light	14	\$140	\$170	\$295	\$427	\$584	\$1,013
Using mobile phone while driving	6	\$300	\$73	\$127	\$183	\$250	\$434
Fail to wear seat belt	4	\$300	\$49	\$84	\$122	\$167	\$290

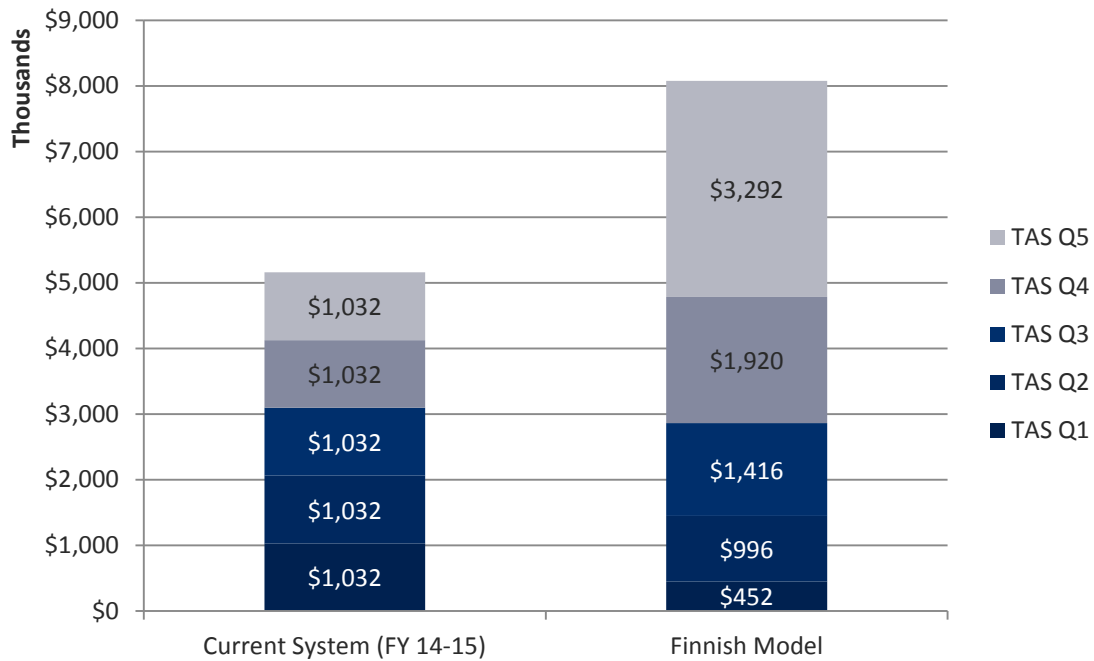
Source: Author’s calculations and official information from Tasmania.²⁸

Exceeding the speed limit by 34 km/h in Finland attracts 19 day fines. Based on the mean income of Tasmania’s lowest quintile of income earners (\$274 a week), that income will lead to a \$230 fine. Meanwhile, a high income earner in quintile 5, with a mean income of \$1,106, will receive a fine of \$1375.

Tasmania issued 33,991 traffic infringement notices in the financial year of 2014-15. If we assume that all income groups are equally likely to commit traffic offences, then applying the system above would increase the face value of issued traffic fines by \$2.9 million. The lowest quintile of income earners would pay 56% less than today while the highest income earners would contribute with 219% more. Numbers below are presented in thousands, different from the other graphs, because not all of them are large enough to be expressed in millions.

²⁸ “New Offences Table,” Department of State Growth, accessed December 11, 2015, http://www.transport.tas.gov.au/licensing/publications/tasmanian_road_rules/road_safety_rules/new_offences_table.

Figure 4: Face value Tasmania traffic fines



Source: Author’s calculations and unpublished statistics provided by Tasmania’s government. Statistics from ABS on age and income in Tasmania.

NEW SOUTH WALES

New South Wales issued approximately 1,292,000 traffic fines in 2014. The state had 5,247,199 registered vehicles, which translates to 0.25 fines per driver, close to the national average. Average face value of traffic fines per registered vehicle is also close to the average of the five examined states; \$75.

Applying the Finnish system to some of New South Wales’s most common traffic offenses and the state’s income levels would result in changes to fines as shown below:

Table 13: New South Wales, new fine per quintile mean income

Traffic offence	Number of day fines	Current fine	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by less than 10km/h	3	\$109	\$36	\$72	\$110	\$152	\$312
Exceed speed limit by 10 to 20 km/h	7	\$254	\$83	\$167	\$257	\$354	\$727
Exceed speed limit by 20 to 30 km/h	13	\$436	\$154	\$310	\$477	\$657	\$1,351
Exceed speed limit by 30 to 45 km/h	21	\$835	\$249	\$501	\$770	\$1,062	\$2,182
Exceed speed limit by more than 45 km/h	28	\$2,252	\$331	\$667	\$1,027	\$1,416	\$2,909
Fail to stop at red traffic light	14	\$415	\$166	\$334	\$513	\$708	\$1,455
Using mobile phone while driving	6	\$311	\$71	\$143	\$220	\$303	\$623
Fail to wear seat belt	4	\$311	\$47	\$95	\$147	\$202	\$416

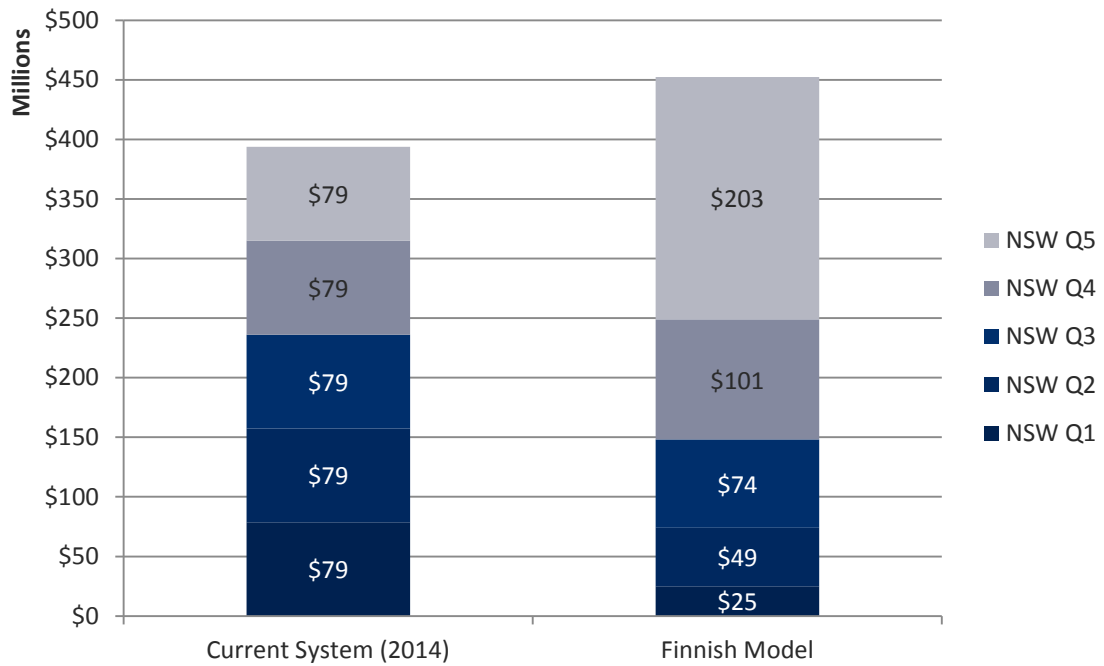
Source: Author’s calculations and unpublished statistics provided by NSW’s government and official information from RMS.²⁹

Exceeding the speed limit by 37 km/h in Finland attracts 21 day fines. Based on the mean income of New South Wales’s lowest quintile of income earners, \$271 a week, this will result in a fine of \$249, while a high income earner in quintile 5, with a mean income of \$1,542 a week, will receive a fine of \$2,182.

If we assume that all income groups are equally likely to commit traffic offences, then applying the system above would increase the face value by approximately \$59 million. The lowest quintile of income earners would pay 68% less (\$54 million less), while the highest income earners would contribute 158% more.

²⁹ “Offences and Penalties.”

Figure 5: Face value New South Wales traffic fines



Source: Author’s calculations and unpublished statistics provided by NSWs government. Statistics from ABS on age and income in NSW.

WESTERN AUSTRALIA

Applying the Finnish system to some of Western Australia’s most common offenses and income distribution would result in the fine levels shown in the table below:

Table 14: Western Australia, new fine per quintile mean income

Traffic offence	Current Fine	Number of day Fines	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by 9 km/h	\$100	3	\$40	\$85	\$125	\$177	\$383
Exceed speed limit by 9km/h to 19 km/h	\$200	7	\$93	\$199	\$292	\$412	\$894
Exceed speed limit by 19 km/h to 29 km/h	\$400	13	\$173	\$370	\$543	\$765	\$1,660
Exceed speed limit by 29 km/h to 40 km/h	\$800	20	\$266	\$570	\$835	\$1,177	\$2,554
Exceed speed limit by more than 40 km/h	\$1,000	26	\$345	\$740	\$1,085	\$1,531	\$3,321
Fail to stop at red light	\$300	14	\$186	\$399	\$584	\$824	\$1,788
Using a mobile phone whilst driving	\$400	6	\$80	\$171	\$250	\$353	\$766
Fail to wear seat belt	\$550	4	\$53	\$114	\$167	\$235	\$511

Source: Author’s calculations and official figures.³⁰

We were unable to obtain statistics regarding the face value of issued fines from Western Australia, so estimates of changes to face value of traffic fines are not possible. As in most other states, it is likely to increase, with the total amount paid by the lowest income earners decreasing, but increased value of fines issued to highest income earners.

³⁰ “Speeding,” Road and Safety Commission, accessed December 11, 2015, <http://www.ors.wa.gov.au/Road-Rules-Penalties/Speeding>.

AUSTRALIAN CAPITAL TERRITORY

Applying the Finnish system to some of Australian Capital Territory's most common offenses and income distribution would result in the fine levels shown in the table below:

Table 15: Australian Capital Territory, new fines per quintile mean income

Traffic offence	Current Fine	Number of day Fines	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by less than 15km/h	\$236	5	\$94	\$182	\$252	\$337	\$519
Exceed speed limit by 30 to 45km/h	\$674	22	\$413	\$801	\$1,110	\$1,485	\$2,282
Exceed speed limit by more than 45km/h	\$1,821	28	\$525	\$1,019	\$1,413	\$1,889	\$2,905
Fail to stop at red light	\$389	14	\$263	\$510	\$706	\$945	\$1,452
Using mobile phone while driving	\$386	6	\$113	\$218	\$303	\$405	\$622
Fail to wear seat belt	\$404	4	\$75	\$146	\$202	\$270	\$415

Source: Author's calculations and official figures.³¹

We were unable to obtain statistics regarding the face value of issued fines from Australian Capital Territory so estimates of changes to face value are not possible. As in most other states, overall face value of traffic fines is likely to increase, with the total amount paid by the lowest income earners decreasing, but increased value of fines issued to highest income earners.

³¹ "Road Transport (Offences) Regulation 2005," ACT government, accessed December 11, 2015, <http://www.legislation.act.gov.au/sl/2005-11/current/pdf/2005-11.pdf>.

VICTORIA

Applying the Finnish system to Victoria's most common offenses and income distribution would result in the fine levels shown in the table below:

Table 16: Victoria, new fine per quintile mean income

Traffic offence	Current Fine	Number of day Fines	New Fine – lowest income earners	Q2 New Fine	Q3 New Fine	Q4 New Fine	New Fine – highest income earners
Exceed speed limit by less than 10km/h	\$185	3	\$35	\$74	\$108	\$149	\$272
Exceed speed limit by 25 to 30km/h	\$406	14	\$162	\$344	\$503	\$697	\$1,272
Exceed speed limit by 35 to 40km/h	\$554	25	\$289	\$615	\$898	\$1,245	\$2,271
Exceed speed limit by more than 45km/h	\$738	28	\$324	\$689	\$1,006	\$1,395	\$2,543
Fail to obey traffic lights	\$369	14	\$162	\$344	\$503	\$697	\$1,272
Using mobile phone while driving	\$443	6	\$69	\$148	\$216	\$299	\$545
Fail to wear seat belt	\$295	4	\$46	\$98	\$144	\$199	\$363

Source: Author's calculations and official documents provided to TAI from Victoria Police.

We were unable to obtain statistics regarding the face value of issued fines from Victoria so estimates of changes to face value are not possible. As in other states, overall face value of traffic fines is likely to increase, with the total amount paid by the lowest income earners decreasing, but increased value of fines issued to highest income earners.

Methodology: Applying Finnish day fine system to Australia

To examine how Finland's system of proportional traffic fines would work in Australia, we have transferred the number of day fines for infringements in Finland to similar infringements in Australia. We have then applied the Finnish formula to different income levels in each state. We have assumed that the new traffic fines will not change driver behaviour (read the *Effect on infringement frequency* for a more detailed discussion).

Each state's population has been divided into 5 income groups, or 'quintiles', according to Australian Bureau of Statistics estimates for equivalised disposable household income.³² Simply, this refers to income after taxation and transfers. The statistic has been made individual by removing the equivalisation method and dividing each household by the average amount of people in a household. Some assumptions have to be made, for example that different sorts of households are equally distributed in all quintiles. This is probably not the case but will not skew the results too much for this estimate.

Children, defined as 0 – 14, are included in our income statistics even though they earn very little and cannot be issued with traffic fines. We have regarded them as earning no income and receiving no traffic fines and therefore divided household income by the average amount of people above 14 per household.

While Finland's proportional system of day fines is a useful model through which to analyse Australia's, the comparison is not perfectly analogous. For example as shown above; the Finnish system differentiates between speeding offences in zones with speed limits above and below 60 kilometres an hour. No such differentiation exists in the states examined in this paper. Similarly, while Finland has five different categories for speeding offences between 20 km/h and 30 km/h above the regulated limit, Queensland has only one.

Some Australian infringements have no equivalent in Finland. For example, the official Finnish documentation provided to The Australia Institute listed no penalty for running a yellow light, even though Australia treats the action as an offense if it is dangerous. Dependents have been factored in to our calculations by assuming each driver has the

³² Australian Bureau of Statistics, "Household Income and Wealth, Australia, 2013-14," (Commonwealth of Australia, September 4, 2015), <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6523.0>.

average number of dependents. That is 0.23 children under 14 per individual above 14 in Australia. This is based on the age distribution according to ABS population statistics. However, we have used the specific number per state, which varies. No consideration has been given to dependent spouses or other forms of dependents due to lack of access to data.

For the 255 euros that are deducted from drivers' net monthly income we have converted the amount to \$403 Australian dollars, at the exchange rate at time of writing.³³

Unlike Australia, Finland has no system for fining corporations for traffic infringements. Finland has no demerit point program for traffic infringements, so there is no need to encourage corporations to reveal the identity of drivers. Because corporate fines are levied at rates significantly higher than individual penalties, their presence could skew the results of the analysis. We have therefore excluded corporate fines from consideration.

Generally, this exclusion will have a negligible effect on the study's results. New South Wales' 2014-15 traffic violations reveal 124,000 corporate fines were issued for the financial year, of which 113,000 were reissued as individual fines after the corporation nominated the driver's identity. Corporate fines represent less than one percent of total fine value for the year.

The Australia Institute has obtained statistics from five states regarding issued traffic fines from cameras and police. However, this does not include court-issued fines, which is a negligible part of the total amount of traffic fines issued. The statistics also exclude parking fines and tolling. The statistics are based on issued fines and their face value. This is not the same thing as revenue which would be lower as some fines are not paid. Data was not available on final revenue collected. Important to note as well is that there has been no consideration for caution/warnings. Tasmania for example issues written cautions almost as much as they issue penalty notices. In other states you have request a review to turn the fine into a warning. There is a possibility that a larger proportion of issued fines in other states than Tasmania are therefore not collected. Unfortunately, we do not have the data to examine this.

³³ ECB, "Euro foreign exchange reference rates," accessed December 11, 2015, <https://www.ecb.europa.eu/stats/exchange/eurofxref/html/index.en.html>.

DRAWBACKS OF FINNISH SYSTEM

Income focus

Some drivers may have high degrees of wealth yet very little disposable income. Pensioners may have their wealth locked in illiquid asset classes such as property, making their 'net income' for the purposes of the day-fine value calculation very low. These 'asset-rich, income-poor' drivers would pay low fines relative to their overall wealth, yet proportionate fines relative to their income. Some argue that this distorts the proportional fine system's conditions of fairness.³⁴

Some of the wealthiest and highest income-earning Australians are able to reduce their taxable income to very low levels to avoid tax.³⁵ This could also result in them being issued with low fines that do not serve as an incentive to change their behaviour.

Revenue raising

Any increase in traffic fines will inevitably face claims of 'revenue raising', although our analysis above shows that changes in some states are modest and in high-fine states like South Australia, less revenue may be collected.

While any increase may be politically difficult, from an economic perspective the Finnish system has several advantages. The disincentives to breach the road laws are increased and revenue is raised from those that can better afford it and lowered for those who cannot. The fines can be returned to the population in other ways, if need be, or spent on road safety as it often is.³⁶ The goal is simply to address the inequity of the current system, rather than raise additional income (though this will be the effect in most states). The model can be altered to make it revenue neutral if that is a goal.

³⁴ Ugur Nedim, "Should Traffic Fines Be Based on Your Income?," *Sydney Criminal Lawyers*, March 11, 2015, <http://www.sydneycriminallawyers.com.au/blog/should-traffic-fines-be-based-on-your-income/>.

³⁵ Peter Martin, "Tax Office statistics reveal the 55 millionaires who paid no tax", *Sydney Morning Herald*, April 30 2015. <http://www.smh.com.au/federal-politics/political-news/tax-office-statistics-reveal-the-55-millionaires-who-paid-no-tax-20150429-1mw2zp.html>

³⁶ Australasian College of Road Safety, "Hypothecation of Fines," *Australasian College of Road Safety*, accessed December 13, 2015, <http://acrs.org.au/about-us/policies/safe-speeds/hypothecation-of-fines/>.

Effect on infringement frequency

Despite decades of academic study, there remains no consensus over whether fine increases result in a reduction in traffic violations. One Australian study of the effect of a fine rise on Victoria's levels of traffic infringement found a 12 percent decrease in number of fines issued following the increase in fine value. Nonetheless, after controlling for other variables such as driving patterns, the result was not statistically significant.³⁷ While other Australian studies have found a small negative correlation between fine levels and speeding incidents, some international studies have suggested the increase of fines could induce *more* speeding.^{38, 39} However, academic studies as a whole, show a moderate, marginal or negligible deterrent effect of traffic fines.

All the criticisms above miss the point of the proportional fine system. The purpose is rather to improve the current scheme for reducing traffic infringements by reforming its regressive effects. Even if there is no effect on behaviour whatsoever – a presumption which may or may not be pessimistic – restoring proportionality to the traffic penalty system will improve its design.

³⁷ Ingrid Portans, *The Perceived Severity of Traffic Offences: Implications for Owner-Onus*, Road Safety Group Publications (Melbourne: Road Traffic Authority, 1989).

³⁸ Hans-Åke Cedersund and Sonja Forward, "Hur Värderar Bilisterna Böter För Olika Trafikförseelser?: En Litteraturstudie," 2007.

³⁹ Uri Gneezy and Aldo Rustichini, "A Fine Is A Price," *Journal of Legal Studies* 29 (2000): 1.

Conclusion

Australia's traffic system has much to learn from that of Finland. The regressive nature of the flat fine structure gives the lowest income drivers a more burdensome financial penalty than wealthy drivers, even if both commit the same offence. This violates the notion of proportionality of justice, which requires the punishment for a crime be scaled consistently relative to the degree of the offence. Because a billionaire can more easily pay a \$200 fine than can a pensioner, the two face different effective punishments for the same crime.

Borrowing Finland's proportional traffic fine model would improve the current system by making it more fair and effective. The incentive-structure would be improved because reality is that people earn different amounts of income. This is a reality that the current system does not reflect.

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