

ARTC Submission

Productivity Commission Draft Report

National Transport Regulatory Reform

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ARTC



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• Executive Summary

ARTC appreciates the opportunity to comment on the Productivity Commission's (PC) draft report on National Transport Regulatory Reform (the report).

ARTC notes a key statement in the terms of reference for the report;

to make recommendations for further reforms towards a more integrated national market for transport services

Whilst there are specific recommendations in the report with which ARTC agrees, ARTC believes that the report fails to address this aspect of the terms of reference. That is, by separately analysing road, rail and sea reforms, the report failed to address the key objective of recommending reforms towards a more integrated national freight market and achieving the optimal balance between transport modes to maximise productivity within the economy. Therefore, the report should provide a much stronger focus on the critical areas for such further reform.

• ARTC Support

In respect of specific matters raised in the report, ARTC strongly supports the following findings:

- TIC seek Office of National Rail Safety Regulator (ONRSR) to review the state-based derogations in rail safety law to further reduce regulatory inconsistency; with fatigue management a critical focus;
 - ARTC further recommends that the consistency of access regulatory frameworks for rail be part of any such review
- The importance of data and the benefits of using telematic data to improve incentive-based safety regulation combined with the need for improved data collection and analysis across the freight supply chain;
- The substantial safety benefits that rail has over road and that there would be, at a high level, safety benefits from shifting freight from road to rail; and
- Government regulation should be neutral between transport modes.

• Report's Limitations

The assumption that road and rail are complements and not substitutes is a critical failing of the report. This error ensures that the pervasive market failure that arises from the distortionary regulatory and policy treatment of road and rail remains unaddressed and ensures that the report does not meet its terms of reference by not proposing reforms to deliver a more integrated national market for freight services and higher levels of productivity.

By focusing the report on the costs of non-harmonization of rules within each sector based on the defined roles of that sector's regulator, the report fails to assess the impact of regulatory distortions between modes. This appears to be a function of the scope of the

report of reviewing the roles of the national regulators, as well as a direct consequence of the generalizing assumption that rail and road are complements not substitutes.

The National Heavy Vehicle Regulator (NHVRR) has a far broader scope of regulation than ONRSR. ONRSR's remit is limited to safety whereas the NHVRR covers issues beyond safety, including the productivity of the road sector. This differential therefore impacts on the scope of the report, such that it looks into road-based productivity matters but only focuses on rail safety.

The report infers this distinction is warranted given the size of the net benefits arising from the reforms was \$12.4 billion for roads and a maximum of \$70 million for rail. However, the overwhelming majority of those benefits relate to road productivity and access; which are excluded from the rail analysis. The comparison that road benefits overwhelm rail is therefore unfair, as the basis for comparison is inconsistent given rail is excluded from accessing the productivity benefits of an improved integrated freight market. Further, the overwhelming difference in safety benefits highlights the substantial externalities that exist in road freight, which value is also excluded from the analysis due to the road-rail non-substitutability assumption.

ARTC is especially disappointed that, notwithstanding the analysis in the report that highlights the extent of differences between road and rail regulations, the PC failed to identify these distortions. In fact, the PC addressed the rail industry's submissions seeking such neutrality as instead seeking a benefit over road.

The recommendations of the report therefore appear grounded in an analytical bias based on a broader scope for road analysis and assumptions that exclude assessment of the impact of intermodal regulatory distortions between road and rail. The recommendations are therefore broader for road and include a focus on improving road productivity, further increasing the regulatory distortions with rail. This ensures that the PC's stated goal of policy and regulatory neutrality is ever more distant, and the market failure impacts exacerbated. It also ensures that the terms of reference are not met by failing to recommend reforms that would deliver a more integrated national freight market.

- **Further Reform**

ARTC therefore recommends that the PC address the following issues in the Final report:

- Correct the analysis on the substitutability of road and rail; especially in the inter-capital, intermodal freight market;
- Provide a clear statement that, due to this substitutability, safety returns can be significantly improved through modal shift compared to road only measures;
- Acknowledge that government and regulatory policy is not neutral and confers a significant advantage on the road sector in areas such as access and economic regulatory frameworks, cost recovery and fatigue management.
- That the failure to commercially manage heavy vehicle access to road capacity ensures the treatment of road capacity as a public good creates extensive market failure across the integrated freight market;

- Provide a true consideration, or at the very least recommends a detailed study be undertaken, which assesses the true impact of the externality costs imposed on the economy through excessive and inefficient consumption of roads; particularly in the areas of safety, congestion and emissions;
- Make the development of a policy neutral approach across the integrated freight market a priority for COAG policy reform which includes;
 - A commercial access framework, including network management principles be developed for access to, and use of, the road network capacity by heavy vehicles to ensure road capacity is no longer treated as a public good by heavy vehicles and the impact of the pervasive market failure in the transport market is reduced.
 - This should be in-line with the development of a nationally consistent regulatory model for rail infrastructure and other aspects of the freight supply chain.
- That the productivity of the entire freight supply chain should be assessed based on a policy imperative of modal neutrality and a new independent body be formed with responsibility for the productivity of the integrated national freight market.
 - If a single modal body for each mode is required, combining safety and productivity in that body is reasonable. However, if productivity was to be added to ONRSR's charter, ONRSR's existing organizational and governance structure would need to be reformed.

1. Introduction

ARTC welcomes the opportunity to provide a submission on the Productivity Commission's draft report (PC) Transport Report (the Report).

ARTC is a member of several industry organizations that will also provide submissions to this process. These organizations include the Australasian Railway Association (ARA), the Freight on Rail Group (FORG) and the Australian Logistics Council (ALC). This submission, however should be considered as ARTC's primary submission and reflects the matters of most importance to it.

1.1. Initial Submission

ARTC provided a submission on the original Issues Paper released by the PC which focussed on three main themes of:

- The Office of National Rail Safety Regulator (ONRSR);
- Productivity of the Rail Sector; and
- Freight Industry structural disparities.

In respect of ONRSR, ARTC identified areas of further development for ONRSR to focus on:

- Developing full alignment and consistency across all states; and
- Realigning its focus from enforcement and investigation to assisting industry proactively address safety issues.

In respect of Rail Productivity and competition between road and rail, ARTC stated its strong belief that a renewed focus on rail productivity, and the alignment of commercial and regulatory frameworks, are critical to maximizing the benefits of the freight transport industry in Australia. The submission further highlighted the structural disparities that embed a competitive and regulatory advantage for Road over Rail thereby imposing a significant cost on the Australian economy.

ARTC therefore recommended:

- The development of a Productivity focus for the rail sector which may be through the creation of an oversight body noting the productivity focus of the HVRR but not ONRSR. Given the interrelationships between the road and rail sectors this could be an overarching body responsible for the Productivity of all freight; and
- The development of a commercial regulatory framework for Road that clearly allocates risks between participants and creates a market for road freight.

1.2. The Report

The report was commissioned to assess the impact of the national freight reforms focused on the national harmonization of operating rules, especially in respect of safety. The terms of reference for the Report also included a key focus on the integration of the national freight market;

to make recommendations for further reforms towards a more integrated national market for transport services

ARTC considers that the Report addresses its position in respect of ONRSR and supports the conclusions and recommendations made in this regard.

ARTC also supports the conclusions of the Report that a renewed focus on Productivity of Rail is required (in the context of a review of the overall freight supply chain productivity) and that ONRSR, at least in its current guise and governance structure, is not the appropriate body to undertake this function. ARTC does, however, believe that this recommendation should be broadened, consistent with the terms of reference, to reflect the Productivity of an integrated, national freight market.

Finally, ARTC supports the statement in the Report that recommends policy neutrality between road and rail. However, ARTC refutes the context within which this statement was made; namely that it Rail was seeking a policy advantage over road. Further, ARTC strongly rejects the generalizing assumption made by the PC that rail does not compete with road such that policies which focus on shifting freight from road to rail will result in inefficient investment. This assumption ensures the report does not analyze an integrated freight market and therefore fails to meet the terms of reference in this essential regard.

The Report provides extensive detail on the breadth of regulatory coverage that exists within each of the road, sea and rail sectors. Extensive effort is made to assess the extent of consistency between states within each sector; however, the PC has provided no assessment of the disparities which exist between sectors; and the regulatory and competitive advantages this confers on sectors in the highly competitive, integrated national freight market. ARTC considers this to be a major shortcoming the report, driven by the simplifying assumption of no intermodal competition between road and rail; especially given this was one of the key issues raised by ARTC in its initial submission.

2. Key Findings of the Report

In a number of areas, the findings of the report support the position advocated by ARTC:

- The reforms have resulted in more consistent regulation across jurisdictions, but there is more work to do in addressing those areas where consistency has not been achieved. A key recommendation is that TIC seek ONRSR to review the state-based derogations in rail safety law to further reduce regulatory inconsistency; with fatigue management a critical focus. **ARTC strongly supports these findings;**
- The report highlights the importance of data and the benefits of using telematic data to improve incentive-based safety regulation. The need for improved data collection and analysis across the freight supply chain, especially in roads, has been a key issue pushed by ARTC. This finding is therefore a positive development and is **strongly supported by ARTC;**

- The PC has sought further information on the safety implications of commercial contracts. ARTC strongly emphasised the safety benefits which arose from the development of access frameworks and contracts in rail in its initial submission.
 - Reforms recommended by the Heavy Vehicle Road Reform (HVRR) to COAG which tie road funding to the maintenance of defined road performance standards which approaches a commercial access agreement. However, until capacity access to roads is defined and managed, the failure to manage road capacity further embeds a critical advantage for road over rail.
- The report seeks more information on rail related productivity issues and whether ONRSR should have a role in rail productivity. Consistent with the terms of reference focused on an integrated freight market, ARTC considers that there should be a body that is responsible for integrated freight productivity rather than separate road and rail bodies. However, if there is a single rail body, there is no reason this body cannot cover safety and Productivity, however ONRSR in its current governance and organizational structure could not adequately perform this function. **ARTC therefore supports a body responsible for the productivity of an integrated national freight market. If a single modal body is required, combining safety and productivity in that body is reasonable. However, if productivity was to be added to ONRSR's charter, ONRSR's existing organizational and governance structure would need to be reformed.**
- The report finds that the reforms have improved road productivity and delivered efficiency gains for heavy vehicle operators; although not as great as forecast and recommends a new COAG agenda based on:
 - Accelerated reforms in infrastructure planning and management;
 - Accelerate the HVRR agenda and road user charging trials; and
 - Removal of regulatory barriers (in a road context) to adoption of new technologies.**ARTC recommends this COAG agenda be implemented in a manner which ensures consistency between road and rail as competing modes of freight transport to ensure modal neutrality between road and rail is achieved.**
- The report highlights the substantial safety benefits that rail has over road and therefore agrees that there would be, at a high level, safety benefits from shifting freight from road to rail. However, because the report assumes that road and rail (in aggregate) are complements rather than substitutes, it concludes policies that focus on modal shift to rail would drive inefficient investment. **ARTC strongly refutes this conclusion and recommends COAG develop and drive a policy agenda focused on modal neutrality which would ensure the most efficient outcome for national freight task.**
- The report further concludes that government regulation should be neutral between transport modes. **ARTC strongly supports this conclusion and the Review provides extensive analysis that demonstrates this neutrality does not exist.**
 - Whilst the report analyses the inconsistencies arising from state based derogations that exist within each sector, it does not assess the

inconsistencies which exist between each sector (such as the substantial differences in fatigue management rules between truck and train drivers);

2.1. Road v Rail Analysis – a critical failing

The critical failing of the report is its assumption that road and rail, in aggregate, do not compete. This assumption is based on a review of the entirety of the freight task (including Iron Ore and Coal) and finding contestable freight is less than 10% of the total task and so generalizes the conclusion that this amount is inconsequential and so is therefore assumed away.

This has the further impact of assuming the road freight task is given (constant), so therefore improvements to road productivity will reduce the level of trucks required for that given freight task which will have positive externality benefits. This drives the conclusion that reducing accidents on roads is better achieved by focussing on more efficient trucks than modal shift to rail. The impact of this is to assume away the commercial issues of the Interstate Rail Network; which exists solely in the contestable portion of the supply chain.

ARTC therefore strongly refutes this generalizing assumption and believes it contributes to substantial policy errors by assuming increased road productivity drives increased externality benefits (reduced externality costs). However, because of intermodal competition, increased road productivity results in increased road freight (by extending road's competitive advantage over rail) which drives increased externality costs to the economy; the reverse of what the PC assumes.

2.2. Expected net benefits

The expected net benefits from the COAG reforms were stated in the report at Table 6.1 on p175, the size of which highlight the quantum of the policy error of excluding the benefits of improved productivity from the rail sector:

Table 6.1 Expected benefits from the COAG reforms
Net present values (\$billion)

Heavy vehicles (over 20 years)	
Access for restricted access vehicles	7.0
Access for Higher Mass Limits vehicles	1.8
Intelligent Access Program	1.2
Fatigue – Chain of Responsibility	1.0
Other	1.4
Total heavy vehicles (over 20 years)^a	12.4
Rail safety (over 10 years)	0.028 to 0.071
Domestic commercial vessels (over 20 years)	0.102 to 0.126

^a Top down analysis, best bet scenario.

Sources: NAMSRS (2009, p. 10); NTC (2011a, p. 15, 2011b, p. v).

ARTC understands that the quantum in the difference of the benefits is used to justify the heavy modal bias in the report by focusing purely on road productivity. ARTC believes that such an approach is misleading as the value of the benefits arising in road are overwhelmingly road access and productivity based. Rail was excluded from access to such benefits by virtue of the generalizing assumption that road and rail do not compete, so using this value differential as a basis to continue a road focus is inappropriate.

The differential in the safety benefits arising from the reforms is consistent with other data in the report highlighting the overwhelming advantage from a safety perspective that rail has over road. That is, because of rail's excellent safety record (both definitively and comparatively to road), the marginal benefits from improved safety performance in rail alone are much lower. Focus on investments to, in isolation, improve road safety will therefore always provide substantially greater value. However, significant value would accrue from delivering regulatory and policy neutrality (at minimal investment) driving greater utilization of the rail network, better safety outcomes and reduced externality costs. These benefits are uncoded and assumed away in the report; but are likely to be far greater than the value of ONRSR specific changes identified above.

Relaxation of the constraining assumption that rail and road do not compete would therefore have a significant impact on this analysis by allowing:

- Rail to capture economic benefits from an improvement in freight productivity;
- Road's benefits to be reduced by assessing the negative impact on rail's capital efficiency from lower rail utilization arising from greater road use; and
- The substantial road-based safety value to be achieved through greater use of the rail network (and lower use of roads); highlighting the quantum of the externality saving.

Table 6.1 is therefore evidence of the need to conduct a review of freight productivity from a whole of supply chain basis, not just roads; rather than endorsement of continuing modal

bias to roads. This would be consistent with the terms of reference of looking at reforms to better integrate the national freight market.

2.3. Rail Regulatory Consistency

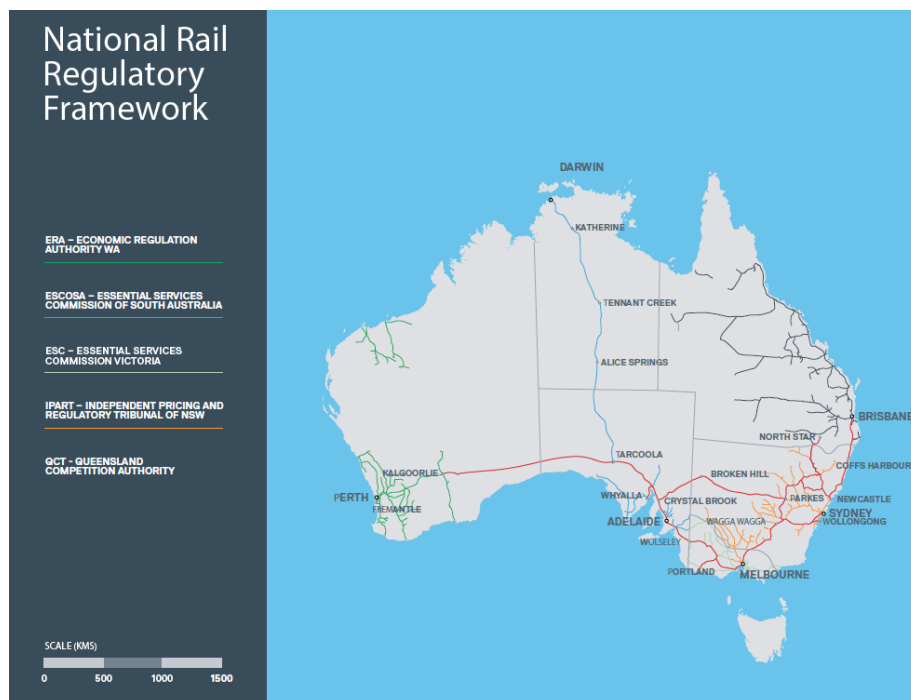
ARTC agrees with the conclusions that the rail safety reforms have created benefits for the industry but that there is more work to do.

ARTC strongly supports the removal of state-based derogations and the further harmonization of drug and alcohol regulations and fatigue requirements (noting consistency of fatigue management should be extended to cover road and rail regulatory frameworks which is addressed below). The harmonization of rules, standards and guidelines, etc is also strongly supported by ARTC; noting these are issues which have also been addressed through the inter-jurisdictional Rail Action Plan process being coordinated by the National Transport Commission (NTC). ARTC therefore will not address these issues further in this submission.

ARTC understands specific issues in respect of the ONRSR recommendations are addressed in the ARA submission particularly and will therefore not address these issues further in this response.

2.4. Inconsistent Rail Regulatory Frameworks

Although not raised in ARTC's original submission, the inconsistencies which exist in economic regulation across rail networks is a significant impediment to national economic efficiency. The extent of this inconsistency is highlighted in the figure below:



The access regulatory framework is therefore a mix of compulsory state regulation (which exists in every state) and voluntary regulation for ARTC's nationally operated networks under the provisions of Part IIIA of the Commonwealth's Competition and Consumer Act. Although the Part IIIA and state frameworks promote commercially negotiated outcomes, they do so in different ways. These differences distort the incentives to achieve negotiated outcomes which impacts on the efficiency of investment and operations across all rail networks. This distortion is magnified when the role of rail in the freight supply chain is considered; and the fact that all connecting infrastructure (terminals, ports, mines, etc) and all competing freight infrastructure (eg roads) are unregulated from an access perspective.

ARTC therefore recommends that the consistency of access regulatory frameworks for rail, and connecting infrastructure, be part of any review into policy options to improve freight productivity.

3. Importance of Commercial Frameworks

The PC has sought further information on the importance of commercial agreements in the safety performance of the rail sector. This reflects statements made by ARTC in its original submission that

"The contractual and access framework that was created had the further benefit of clearly defining and allocating the safety risks and liabilities of network access; contributing to a much-improved safety focus and outcomes."

The importance of commercially negotiated outcomes is that they promote the efficient allocation of property rights. The transacting for contractual rights to own and use assets has been identified by Ronald Coase and other economists as the key to efficiency as the system of property rights and contractual arrangements which emerge will ensure the cost of transacting is low. This reflects Coase's position (as stated in his 1991 Nobel prize acceptance speech) that "what is traded in the market are not physical entities but the rights to perform certain actions ... (and) rights should be assigned to those who can use them most productively".

The indemnity and warranty clauses which underpin ARTC's access agreements, allocate property rights to parties in respect of incidents on the network. This ensures all parties are aware of their obligations in respect of operations of and on the network; maximizing its safe performance. Further, this allows all parties to adopt the necessary insurance coverage to meet network requirements. As this insurance reflects commercially allocated risks, this ensures that the network insurance transaction costs are minimized; thereby delivering an efficient outcome to the industry as a whole.

The other critical function that the rail commercial access frameworks provide for is the definition and allocation of available network capacity. That is, rail access contracts are based on the apportionment of available network capacity and define the priority rights of users when access is constrained; including ensuring the risk of over contracting a

network's capacity sits with the network owner. Rail networks therefore define the available capacity, and contract that capacity based on the appropriate profiles of the usage of the network.

This efficient allocation of property rights is absent from the road network; both in respect of safety indemnities and, more importantly, capacity access. This is an oversight which will become increasingly important; the impact of which is expanded on below in when assessing the pervasive market failure underpinning the integrated national freight market.

4. Intermodal Freight Efficiency

The report highlights, at p28, that the choice of freight mode is a *“commercial decision, and government regulation should be neutral between modes”*. It then proceeds to raise the issue that road is complementary to rail and the agile nature of road transport means rail is unsuitable for all freight tasks, particularly over shorter distances. The report does note some road and rail competition occurs over longer distances, but that the degree of substitutability is difficult to assess and appears to have been assumed away.

The analysis undertaken by the PC throughout the report looks at the total freight task and does not differentiate between the various classes of freight – ie intermodal, resources, etc. By undertaking this aggregate approach, the PC effectively assumes away the issue of substitutability between road and rail. This assumption then leads to the conclusion that policies focused on increasing the rail freight market share (ie that trigger a shift of freight from road to rail) is inefficient and government policy would be better aimed at specific sectors to deliver reductions in externality costs. As discussed above, this assumption is justified via a comparison of the benefits arising from reforms; which reasoning is circular and embeds the modal bias to roads in freight policy.

ARTC strongly rejects the logic of this argument and believes that the substitutability of road for rail services is widespread.

4.1. Freight Market Definition

The concept of competitive rivalry was well defined by French, J in the recent case of *Australian Competition and Consumer Commission v Pacific National Pty Limited (No 2)* [2019] FCA 669 at para 87:

The rivalry is not in the ether. The space where it occurs is usually given the label of “market”. Its dimensions are also geographic (the geographic area of supply and acquisition), functional (the level of the distribution chain at which the supply and acquisition occurs) and temporal.

On this definition, there is no rail service which is not subject to rivalry from road. This can be demonstrated by looking at the railing of resources from mine to Port. This service is currently provided by rail in key resource areas such as the Pilbara, Central Queensland and Hunter Valley due to the economies of scale available. However, the examples

provided by the PC on technological disruption, highlight that the temporal rivalry from road in these areas could be significant.

At p261, the report defines a process of heavy vehicle platooning which the report (at p279) highlights this has been successfully trialled in European freight routes, as:

Heavy vehicle platooning involves a number of trucks closely following one another, connected using vehicle-to-vehicle communication. The lead truck is typically controlled by a human driver, while the following trucks operate autonomously

Looking at this definition in another manner, a heavy vehicle platoon is a lead engine controlled by a human driver with autonomously connected trailers. This is effectively a virtual train. As the technology develops, there is no reason why such technology would not compete for resource transport. Therefore, even rail transport of resources is subject to temporal rivalry from road. The competitive impact is made greater by the fact that platooning trucks, unlike trains, would not have to contract for network access capacity nor even pay the cost they incur on the network; let alone the value of capacity.

There is therefore no freight which travels by rail which is not subject to competition by road; especially when the threat of temporal (and technological) disruption is considered.

The freight market, however, which satisfies all the relevant dimensions is that for intermodal freight which was defined by French, J at para 148 as:

“Intermodal freight” is freight that is packed in containers or pallets, which allow the freight to be transferred between modes of transport such as road, rail and/or sea without the freight itself being handled. A wide variety of products can be transported as intermodal freight, including food, beverages, finished steel products and household and personal effects.

Now for each of rail, road and sea transport, the long-distance leg of the freight task, that is, the leg between terminals in the case of rail or sea, or if road services are used the transport leg which does not involve PUD services, is referred to as the “linehaul” component of the freight task

4.2. Road v Rail Competition

The French, J decision highlighted the key issues which impact on the competition between road and rail and which also details the externality benefits to rail in safety and environmental concerns, at para 233:

These include the following factors:

- a) Overall cost: rail linehaul services are more cost effective than road services over longer distances. Customer evidence tends to support the importance of cost as a main factor in choice of services.*
- b) Volume: rail linehaul services may better accommodate the transportation of larger volumes than road services, and may be scaled up without as much investment.*

- c) *Safety: rail linehaul services have a lower interaction with the public, given that they run on a fixed line. Heavy vehicles on the road may pose a particular danger to the public particularly, for example, in far north Queensland where road access is limited.*
- d) *Environmental concerns: rail linehaul services create less road traffic and air pollution than do road services.*
- e) *Time: rail linehaul services may be quicker over longer distances than road services, although this may not be true for shorter and medium distances.*

Expert evidence was quoted in the decision in respect of the cross-price elasticities between road and rail based on referencing of a paper by Mr David Mitchell (Mitchell, D (2010), Australian intercapital freight demand: An econometric analysis, Proceedings of the 10th Australasian Transport Research Forum, Canberra, 29 Sept-1 Oct 2010).

This paper states (at p1) that “*Intercapital freight is one of the few freight markets where there is significant modal competition between road, rail and sea*” and concludes (at p17) that “*long-run road-rail cross price elasticities are statistically significant*”. The appropriate levels of these elasticities that were used in the ACCC-PN case was the matter of some conjecture, however, even the alternatives suggested by French, J demonstrate that road and rail have significant cross-price elasticity and therefore compete (such that rail pricing is constrained by road pricing).

The Mitchell paper does raise the problem of data access to undertake appropriate analysis. This is an issue raised in the report and ARTC strongly supports the recommendations in the paper to improve access to data to allow more informed analysis to be undertaken.

It is clear, however, that competition between road and rail is strongest, and real, in the intercapital intermodal freight market. This is a significant market, and should not be assumed away, as the PC has done, by taking an aggregated view of the total freight task and dismissing this rivalrous element.

4.3. Policy Neutrality

As stated above, ARTC thoroughly endorses the PC’s statement that government regulation should be neutral between transport modes. However, it is in this context that the magnitude of the PC’s error, explained above, in assuming away road v rail competition is highlighted. The value of this error is also highlighted in the quantum of benefits available from improved road productivity and safety highlighted in table 6.1 of the report.

The report views the requests of the rail industry as seeking a form of comparative advantage over road from a policy perspective; and concludes that this would drive inefficiencies by shifting freight from its most efficient mode, being road.

This misstates the rail position as, rather than seeking a competitive advantage, the rail position is only that recommended by the PC itself; seeking policy and regulatory neutrality.

The most significant shortfall in the report is that the PC has not undertaken any comparative analysis of the regulatory frameworks that apply between road and rail; despite the report containing substantial evidence of inconsistencies which apply between road and rail.

The report highlights the far greater safety risk of road transport compared to rail transport. At p134 the report states:

that the absolute number of recorded fatalities is highest in the heavy vehicle sector. This is unsurprising, given that heavy vehicles share roads with the general public and the number of heavy vehicles is steadily rising, whereas rail and maritime transport typically operate in more self-contained environments.

4.3.1. Road v Rail Safety Benefits

At p67, the report states the following (emphasis added):

*In aggregate, some safety outcomes are equivocal from a policy perspective. For example, as a thought experiment, one could consider a technological change that meant a **particular amount of freight could be moved in one trip instead of four, but with twice the probability of a safety incident occurring during each trip.** Assuming all the freight were moved, this would mean that:*

- *the total expected number of safety incidents would reduce by half — a desirable outcome from society's perspective*
- *each person involved in those freight trips would have twice the probability of being involved in a safety incident — an undesirable outcome from their perspective.*

*This inquiry takes the approach that both perspectives must be considered. **Policy should aim to improve economy-wide safety outcomes, with consideration given to the scale of the freight task.** For example, as the freight task increases over time, policy should aim to reduce the rate and number of safety incidents associated with the entire freight task.*

Rail can move more freight, more safely. Therefore, the PC's own conclusion that "Policy should aim to improve economy wide safety outcomes, with consideration given to the scale of the freight task", supports a focus on ensuring the freight task of rail is maximized to the extent it does not incur inefficient investment. Given the PC's other statement that policy and regulation should be neutral, a clear recommendation of the report should be for COAG to aim to deliver policy and regulatory neutrality across road and rail and, in particular, to address the public good nature of road capacity to help reduce the resultant pervasive market failure in the freight supply chain addressed below.

4.3.2. Fatigue Management

Although the report does not undertake any formal comparative analysis of the different regulatory requirements between road and rail, analysis of the intra-modal regulatory

descriptions highlights that road is subject to substantially less intrusive regulation in areas which include, inter alia, fatigue management and licensing and accreditation requirements.

Fatigue management provides an interesting case study. The report states at p144 that fatigue is a significant safety issue and associated with approximately 10% vehicle crashes and is the main cause of fatal single-vehicle crashes. Notwithstanding this significant risk, the report recommends (Draft Recommendation 5.2) that the NHVR be provided “*greater scope to provide concessions from prescribed aspects of fatigue management regulation*”. Contrast this with Draft Recommendation 5.3 on fatigue management in rail which merely calls for greater harmonization and removal of derogations.

Table 4.4 (p 111) provides a concise summary of the variability in outer work limits for train drivers. This table shows that for driver only freight trains, the maximum shift length for a train driver is 9 hours. Unfortunately, the report provides no similar table for road to allow for easy comparison. However, an article in the Sydney Morning Herald (“Truck drivers on the road too long to stay safe”, by Ann Williamson, January 2, 2018) provides some insight for comparative purposes (emphasis added):

*Our long haul truck drivers are allowed to do longer hours of work (including driving) than any other work group in Australia, and far longer than truck drivers in virtually any other country in the world. Currently, long haul truck drivers are allowed to drive for 72 hours in a week. They can do 84 hours in a week if they have done some "fatigue training". **Drivers are required to have a break of only seven continuous hours in any 24.***

This implies, that despite operating in a shared corridor, with substantially worse safety outcomes, a single driver is permitted to operate 17-hour shifts – compared to 9 for a single train driver. Yet the recommendations are for relaxation of road fatigue constraints and merely better harmonization for rail.

The impact of trucks on general road users is addressed by the PC in Draft Recommendation 5.1, which recommends that general users be educated on how to drive with trucks; shifting the safety onus from truck drivers to general drivers:

State and Territory governments should seek to improve general road users' understanding of driving safely in the vicinity of heavy vehicles through education and enforcement measures.

Fatigue management is one example of where the regulatory and policy framework that applies to road and rail is far from neutral; and where the PC recommendations are for general road users to change their awareness rather than for truck drivers change their behaviour; imposing an implied access priority for heavy vehicles.

4.3.3. Access Management

Another critical difference is in respect of access management principles. As discussed above, access to the rail network is the subject of contractual arrangements.

The report states at p330 that the most substantial gain expected from the reform process was greater access to the road network but that:

“local government must balance the productivity gains from greater access with other factors such as public safety, amenity and infrastructure costs.”

This greater access, however, is provided in the absence of any method for managing, let alone, pricing this increased access. This, again, is a substantial regulatory benefit to road over rail and confers significant costs on the general users of the road network in the form of increased congestion and worse safety outcomes.

Rail network owners must, very precisely, define available capacity and train paths and allocate these to single users (by contract) based on defined network management principles and priorities in the event of constraints (which go to passenger trains on the interstate freight network). Road capacity, however, is undefined, unallocated and uncontrolled. Given Draft Recommendation 5.1 implies general users defer to heavy vehicles, the PC appears to advocating for an implied priority of access be provided to heavy vehicles (despite their failure to pay their cost of use).

4.4. Integrated Freight Market Failure

ARTC believes that the failure to commercially control access to the road network imposes substantial costs on the Australian economy through increased accidents, increased congestion and increased emissions. In fact, ARTC considers this, based upon the PC's own definitions in Box 2.1 (p66), to be a source of market failure for the national, integrated, freight transport market (emphasis added).

Box 2.1 Sources of market failure

- *Information failures — individuals are not always able to make fully informed decisions in their best interest, because they do not have access to all relevant information, or do not have the technical expertise to interpret it. For example, passengers on a ferry will generally be unable to (cheaply) obtain and understand information about the maintenance history of the vessel, or the ferry operator's qualifications (information asymmetry).*
- **Negative spill over effects or 'externalities'** — *the costs and benefits incurred by those using a good or service do not always fully reflect the impacts their use has on others. For example, a fatigued heavy vehicle driver may cause injury or damage to pedestrians or other road users.*

- *Public goods — goods or services that may be underprovided by the private sector because **'free riders' cannot be excluded from enjoying the benefits**. Examples of public goods include street lighting and traffic lights.*

The issue of externalities are discussed elsewhere, but the concept of market failure due to public goods is also relevant and requires greater discussion. The failure to commercially manage road access and the lack of network management principles make road capacity effectively a public good and incurs substantial externalities based on the poor safety record of heavy vehicles. Whilst the PAYGO system provides for some form of payment for the use of the road system through licensing and fuel excise, there is no practical method to control the use by trucks of road capacity at any time. That is, if an extra truck enters a highway, the consumption of capacity is uncontrolled.

Whereas in rail, the consumption of network capacity is contracted and rigorously controlled; no such contract and no such control exists for heavy vehicles on roads.

The tragedy of the commons is an expression that explains the market failure issue of public goods and has come to symbolize the degradation of the environment to be expected when many individuals use a scarce resource in common ... where each user is motivated to increase their use of the resource without limit – in a world that is limited.

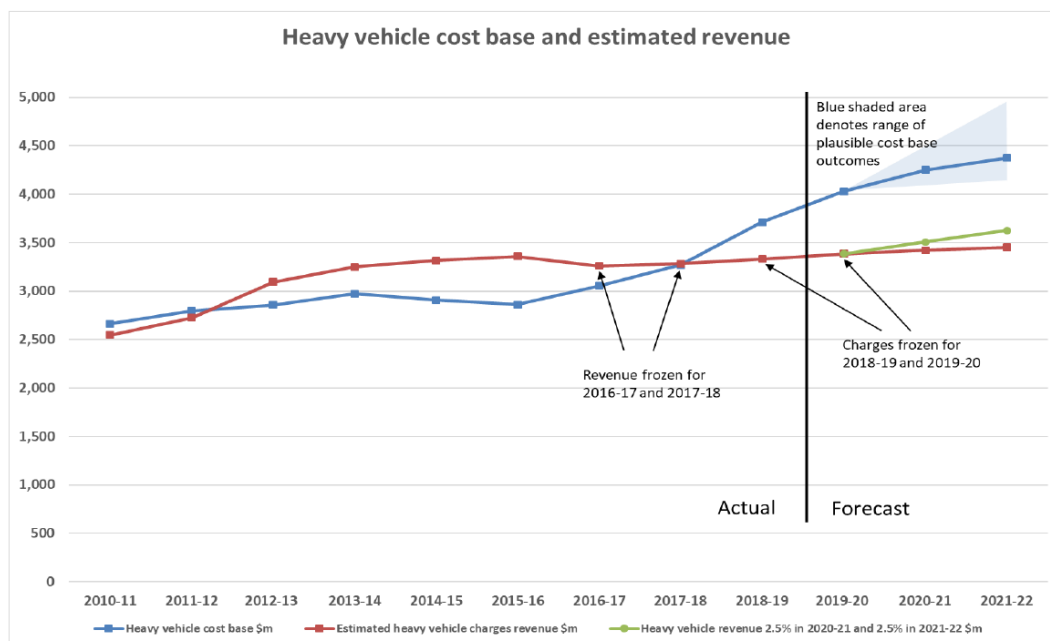
That is, the tragedy arises when each individual is able to treat access as unlimited, when in fact it is limited. This is precisely the problem with roads and heavy vehicles; where the capacity is unmanaged and uncontrolled, so heavy vehicles can increase their marginal consumption of road capacity without limit – but that capacity is limited, resulting in increased congestion for other users, increased accidents and increased emissions.

Therefore, the continued treatment of access to road capacity as a public good, with neither commercial access nor network management principles (but implied priority based on the PC recommendations), leads to excess consumption of the capacity; incurring substantial costs on the Australian economy. This therefore highlights the pervasive market failure that exists in the integrated freight market; made greater when the externality costs arising from excessive road consumption are accounted for.

4.5. Cost Under Recovery

The costs of market failure are exacerbated when the failure of heavy vehicles to fully pay for their costs on the road network (let alone the externalities incurred through inefficient and excess consumption) is taken into account (as highlighted in the NTC December 2019 Heavy Vehicle Charges Consultation report at figure 5 reproduced below):

Figure 5. Comparison of heavy vehicle cost base and estimated revenue



4.6. Road Reform

ARTC notes and supports the direction of recommendations to CoAG, supported by the PC in the report, by the Heavy Vehicle Road Reform group (HVRP), which require the development and delivery of consistent service levels for all road users. However, in the absence of a commercial access system and network management principles, this will continue to allow the treatment of road capacity as public good conferring a substantial regulatory advantage on heavy vehicles. The HVRP process addresses this from the supply side, but with no change on the demand side, the market failure inherent in the integrated freight market will continue to incur substantial efficiency costs and externalities to the detriment of the Australian economy.

4.7. Intermodal Freight Efficiency Summary

The above highlights that:

- Rail does compete with road, especially for intercapital, intermodal freight;
- The government regulatory policy is not neutral and, in fact, confers a substantial advantage on road;
- That the failure to commercially manage heavy vehicle access to road capacity ensures the treatment of road capacity as a public good;
- This leads to excessive and inefficient consumption of road capacity by heavy vehicles; imposing significant externality costs on the Australian economy – the tragedy of the roads;
- This creates extensive market failure across the freight market;

- Which failure is exacerbated by the under recovery of the costs which heavy vehicles impose on the road network; and
- This failure could be avoided by ensuring policy and regulatory neutrality between road and rail; a principle stated by the PC as desirable;

ARTC therefore supports recommendations that ensure rail competes on that desired level playing field with road and specifically looks for policy changes which harmonize the policy and regulatory treatment of road and rail, removing the market failure that arises from the public good treatment of road capacity.

5. Conclusion

The report provides a reasonable, but isolated, synopsis of the reform journey of the individual modes that make up the integrated national freight market over the last 10 years. However, because of the fundamental error of assuming road and rail are not substitutes, the report does not analyse the issues, and pervasive market failure, that arise in the integrated national freight transport market. By failing to review these issues, the report does not meet its terms of reference.

ARTC therefore recommends that the PC address the following issues in the Final report:

- Correct the analysis on the substitutability of road and rail; especially in the inter-capital, intermodal freight market;
- Provide a clear statement that, due to this substitutability, safety returns can be significantly improved through modal shift compared to road only measures;
- Acknowledge that government and regulatory policy is not neutral and confers a significant advantage on the road sector in areas such as access and economic regulatory frameworks, cost recovery and fatigue management.
- That the failure to commercially manage heavy vehicle access to road capacity ensures the treatment of road capacity as a public good creates extensive market failure across the integrated freight market;
- Provide a true consideration, or at the very least recommends a detailed study be undertaken, which assesses the true impact of the externality costs imposed on the economy through excessive and inefficient consumption of roads; particularly in the areas of safety, congestion and emissions;
- Make the development of a policy neutral approach across the integrated freight market a priority for COAG policy reform which includes;
 - A commercial access framework, including network management principles be developed for access to, and use of, the road network capacity by heavy vehicles to ensure road capacity is no longer treated as a public good by heavy vehicles and the impact of the pervasive market failure in the transport market is reduced.
 - This should be in-line with the development of a nationally consistent regulatory model for rail infrastructure and other aspects of the freight supply chain.

- That the productivity of the entire freight supply chain should be assessed based on a policy imperative of modal neutrality and a new independent body be formed with responsibility for the productivity of the integrated national freight market.
 - If a single modal body for each mode is required, combining safety and productivity in that body is reasonable. However, if productivity was to be added to ONRSR's charter, ONRSR's existing organizational and governance structure would need to be reformed.

ARTC therefore urges the PC to recommend a reform agenda that balances the policy and regulatory frameworks that apply to road and rail; ensuring the most efficient economic outcome is achieved for Australia.