

Reforming the Petroleum Resource Rent Tax: A proposal to change its structure

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INTRODUCTION

There have been a number of calls for a windfall profits tax especially on foreign-owned mining and petroleum companies that have been the beneficiaries of massive price increases, especially following Russia's invasion of Ukraine. Recently these calls were joined by Nobel Prize in economics winner, Joseph Stiglitz who made the point that "it's not as if the energy companies did anything to deserve it [the windfall profit]."¹ A number of European countries have announced new tax mechanisms to capture windfall profits in fossil fuel extraction and electricity generation.²

Australia already has a tax, the Petroleum Resource Rent Tax (PRRT), that is supposed to share in the super profits that are generated in the oil and gas industries. However, that tax has not generated anything like the super profits generated in the sector. The 2022-23 budget estimated that PRRT payments would increase from \$1.65 billion in 2021-22 to \$2.4 billion in 2022-23 and stay at that level through to 2025-26. That seems a relatively modest lift in the PRRT given the surge in hydrocarbon prices. Gas export values, for example, increased by almost \$3 billion a month or around 65 per cent in July 2022 compared with the same month a year ago while volumes have remained stable.³ Most of the increase would be additional profit for the gas exporters/producers. Another estimate by Mark Ogge puts the windfall gain to LNG companies in 2021-22 at between \$26 billion and \$40 billion.⁴ Those profit figures raise

¹ Foster A (2022) "Top economist calls for introduction of new Australian tax", *News.com.au*, 19 July.

² Baungsgaard T and Nate V (2022) "Taxing windfall profits in the energy sector" *IMF Note 2022/002*.

³ ABS (2022) *International Trade in Goods and Services, Australia, July 2022*, 8 September. The increase was even higher at around \$5 billion or over 200 per cent compared with July 2020.

⁴ Ogge M (2022) *War gains: LNG windfall profits 2022*, at [P1289 War gains - LNG windfall profits 2022 Web.pdf](#). Ogge also puts the case for a windfall profits tax.

the question of whether Australia is well served by the PRRT as it is presently structured. If not, then perhaps an option is to reformulate the tax, so it does work as intended. That is the purpose of the present paper, to suggest some tweaking of the PRRT so it does indeed allow Australia to share in the windfall energy profits.

The surge in the price of hydrocarbons as well as other resources also raises the issue of extending a new resource rent tax (RRT) to other minerals. The important thing about mining is that it can be incredibly profitable especially in times such as now with the current surge in commodity prices. The latest figures show total value added in mining in 2019-20 at \$206 billion and of that, \$156 billion or a bit over three quarters, was the EBITDA.⁵ For the rest of the private Australian economy, EBITDA is just 38 per cent of value added.

The high profitability in mining means it is earning a return on capital well above the normal rates of return being generated in the rest of the economy. These monopoly profits, or economic rents,⁶ mean that customers are forced to pay well over the costs of production.⁷ The arbitrarily high incomes that result offend notions of economic justice, especially given that the mining industry is heavily foreign-owned.

In most of the economy, economic policy relies on competition to reduce monopoly profits. But excessive mining profits cannot be addressed in a similar manner. The level of mining profits for a particular company depends, in large part, on the quality of the resource to which the company has access. Each mining company has monopoly control over their particular mineral deposit. To overcome this problem we could imagine an institutional framework whereby mining companies would have to bid perhaps annually to operate a particular mineral deposit. For example, the Henry tax review proposed an auction system to distribute mining permits.⁸ Short of some such

⁵ EBITDA is best thought of as raw profits. It is more than just profits since it includes the claims of others, such as interest commitments to lenders, who can be considered as sharing in the surplus generated by the corporate sector. Also depreciation and amortisation are not treated as deductions.

⁶ The concept of economic rent in economics is an old idea. It expresses the insight that some super profits cannot be competed away as a result of the entry of new suppliers. In our context we can think of middle eastern oil producers who are able to extract oil for as little as a few dollars a barrel. The market price may be up to a hundred times that but new entrants into the oil mining industry are forced to explore in undersea reserves, tar sands and other very expensive propositions. The middle eastern profits on oil are therefore protected by their superior deposits and so can be thought of as the “economic rents” due to access to superior resources. The word “rent” is important because it makes one think of the huge difference in similar office accommodation in the main street of a CBD compared with something out in the suburbs.

⁷ “Costs of production” are assumed to include a reasonable return on capital on the funds employed

⁸ *Australia’s future tax system: Report to the Treasurer, Part Two, Detailed analysis* (Ken Henry Chair), December 2009.

arrangement, the profit of a mining company depends on the viability of the deposit they operate rather than the skill of the mining company concerned.

If competition cannot reduce profits to reasonable levels, especially when commodity prices are high, then there is a strong case for governments to intervene and capture some of the excess profit. A chief consideration here is that Australia's mineral resources are not something that should be appropriated by private interests. These resources are owned communally, and any super profits produced from them should be returned to the community rather than be privately appropriated. The resource rent tax is supposed to be a vehicle for doing just that.

RESOURCE RENT TAX (RRT)

The RRT is a particular type of profit-sharing arrangement. As its name suggests, the RRT is a tax on the economic rent generated from a particular project that exploits natural resources. "Economic rent" is that part of the profit that is safe from competition. The idea is that when mineral prices are high, less attractive deposits are worked so long as they cover their costs and make a reasonable return for their owners. At high enough prices those much less attractive deposits will be worked, and we can refer to them as the marginal operations. Infra marginal projects that were being worked at lower prices will of course also receive the benefit of high prices. But the important point is that their owners were happy to work those deposits at lower prices and they will remain in production when and if prices subsequently fall. In the meantime, the profit produced by those projects is above the amount needed to keep them in production (together with a reasonable profit) and the excess we refer to as the "economic rent". Rent taxes aim to transfer a substantial part of the rent to government while preserving the incentive to keep producing much the same as the companies would have without the tax. In Australia the only example at the moment is the PRRT.

The International Monetary Fund (IMF) makes the point that alternative forms of rent tax differ in important ways, not least in the timing of the government's receipts as is demonstrated below.⁹ That suggests the timing of tax payments can be varied so as to increase the taxes actually paid when prices are high.

⁹ Cottarelli C (2012) Fiscal Regimes for Extractive Industries: Design and Implementation", *IMF Paper*, 15 August. <https://www.imf.org/external/np/pp/eng/2012/081512.pdf>

THE AUSTRALIAN MODEL

The Australian PRRT now applies only to the petroleum and gas sector and applies at the project level. The PRRT is a 40 per cent tax on the calculated economic rents. That boosts the total tax take on super profits (or economic rents) to 58 per cent. That includes the 40 per cent PRRT itself plus the company tax on the remaining profit being 18 per cent (30% by 60% of the remaining profit).¹⁰

Unlike the company tax, all capital spending and other expenses are deducted, and any un-deducted capital spending can be carried forward into the next period often with an escalation (or uplift) factor which compounds capital deductions if they are carried forward from year to year. The applicable uplift factors are discussed below. So, by the time any PRRT may be payable, the capital cost deductions can be compounded forward to many times their original value. Only when the cumulative revenue has exceeded both the operating expenses and the compounded capital outlays is there deemed to be a taxable economic rent.

The PRRT ignores financing arrangements and notional expenses such as depreciation and amortisation. These are important differences from company tax arrangements and mean the PRRT is much easier to administer, at least on those counts. Under the PRRT the project has to do more than make a profit. Making a profit would attract the company tax (unless there are carry forward losses etc) but interest expenses are deductible. However, the compounding factor or uplift under the PRRT ensures that there is plenty of room for the project to pay interest expenses before any PRRT is payable. Likewise, there is no need to deduct depreciation and amortisation. For company tax purposes, depreciation expenses, for example, are a certain proportion of capital each year which is allowed as an expense. Over time the whole of the original capital outlay is recouped. However, under the PRRT there is no liability at all until all capital expenses have been recouped together with the uplift factor. Hence there is no need to separately deduct depreciation and amortisation expenses which are effectively built in to the PRRT.

The critical issue is that, under present arrangements, no taxable economic rent exists until profit (revenue after expenses) exceeds compounded capital outlays. This of course works against taxing rents early in the life of a project. Hence, if a commodity is expected to be very profitable over the next six to eight years and can be brought on in two to three years then it might be expected to earn very large profits in three to six years after coming on stream. But of course, that is precisely the period when capital

¹⁰ Note that the PRRT can be deducted against company tax, not the other way around. While the PRRT applies at the project level, company tax applies at the company level.

costs are much higher than revenue so that super profits are unlikely to be taxed. If the prices then fall to some normal levels the government may have missed out on sharing in an important part of the economic rent.

UPLIFT FACTORS

The IMF has said that in some jurisdictions risk-adjusted uplifts have sometimes been set at very high levels (in Ghana and Papua New Guinea) so that no RRT was ever paid.¹¹ But the IMF pointed to other regimes that have collected significant revenue, such as Angola, Australia,¹² Timor-Leste, and Zimbabwe. Accordingly, the IMF generally advises the use of low rates of uplift and to consider time-limiting them. Recent reforms to Australia's PRRT included reductions in some of the uplift factors.

In 2019 Australia reduced the exploration uplift factor from long-term-bond-rate (LTBR) plus 15, for spending on exploration, to LTBR plus 5 which was the general rate for uplifting capital spending. This was important. The previous arrangement meant the deductible expenditure could increase at 15 per cent for 10 years which meant the expenditure was eventually carried forward at almost five times its original value.¹³ That calculation shows how a generous uplift factor compounds into a massive amount relatively quickly. By contrast the 5 per cent uplift factor would have the effect of magnifying the value of the exploration expenditure by a more modest two times over 10 years.¹⁴

PREVIOUS REVIEWS

The previous review into the operation of the PRRT, the Callaghan review, made a number of recommendations that were put into effect and included some reductions in so called escalation factors, essentially the multiple that could be added to the carried forward value of losses and deductions in calculating PRRT liabilities. However, this review did not go to the structure of the PRRT. As the Treasury website says, this was "a review into the design and operation of the Petroleum Resource Rent Tax... to

¹¹ Cottarelli C (2012) Fiscal Regimes for Extractive Industries: Design and Implementation", *IMF Paper*, 15 August. <https://www.imf.org/external/np/pp/eng/2012/081512.pdf>

¹² We mentioned above that the estimate is the PRRT will raise \$2.4 billion in 2022-23. While the IMF describes that as significant our submission in this paper is that the PRRT should be raising significantly more in revenue.

¹³ That also assumes an average bond rate of 2 per cent. If the government's assumption of a long term 5 per cent bond rate is used, then relevant spending could be uplifted by a factor of up to 6.2 times.

¹⁴ Actually 1.97 times with an assumed 2 per cent bond rate. A 5 per cent bond rate would increase that to up to 2.6 times.

provide advice on the extent to which they are operating as intended.” But apart from some tweaking of the rates, the review found the tax was “operating as intended” with an architecture designed to capture economic rent when the latter is defined to include only super-profit after the uplifted value of the project costs had been recouped by the project sponsors. Super profits are ignored until that condition is met. The result according to Chris Richardson is that “Australia is not getting much at all from a pretty key national resource”.¹⁵

The Callaghan review left open the question of splitting revenue between the gas producer which is liable for the PRRT and the plant that liquifies the natural gas but is not liable for the PRRT.¹⁶ In an integrated operation there is no arm’s length price paid for the gas itself. The more of the final price that is attributable the liquefier, the smaller is the PRRT collection. Callaghan thought the present arrangements undervalued the gas itself and so results in PRRT collections lower than what they should be. The previous government published a consultation paper¹⁷ but never released the results of the review or announced any changes. There are lots of nuts and bolts that have to be addressed and the revenue consequences are significant. For example, Callaghan had put a figure of \$89 billion on the future revenue difference between the current split of the revenue and a full attribution of the economic rent to the upstream activities. The delay in addressing that on the part of the previous government is a big concern.

Despite the activities to date, the basic framework of the PRRT was never questioned. In particular, the notion that no PRRT should be levied until the project in question has recovered all of the capital outlay plus the escalation factors mentioned above. That framework needs to be challenged.

A NEW PROPOSAL

It would be possible to recast the PRRT so that whenever the rate of return on the funds employed exceeds a certain threshold the liability would be triggered. So, for example, if the project generates a rate of return 20 per cent above the “trigger return” then the amount of profit so calculated would be taxed at the PRRT rate.

¹⁵ Kehoe J (2022) “Gas tax leaks billions as energy prices soar”, *Australian Financial Review*, 20 June.

¹⁶ These may well be the same company, but the PRRT is levied at the project level. Other details were still to be addressed such as whether the same uplift factors might apply to the gas production and liquefaction stages.

¹⁷ Treasury (2019) *Review of the PRRT Gas Transfer Pricing arrangements: Consultation paper*.

Collecting the PRRT would not depend on the project sponsor getting all their investment back plus uplift factors before any tax is paid.

If it is decided that the exploration expenditure is more risky than the rest of the investment in the project then it could be catered for by blending the trigger return as a simple arithmetic combination of the return allowed for risky investment and the return on the rest of the project. Indeed, if the PRRT is extended to other minerals there could even be a number of risk rates of return given that some exploration is more uncertain and early exploration is more uncertain than later “exploration” which is more like defining the boundary of the operation than assessing whether it is viable or not.

Example

We can illustrate the principles of our proposal here with an example. Suppose we use the existing thresholds of

- LTBR + 5 for most expenditure for 10 years and
- LTBR + 15 for 10 years for exploration expenditure incurred before July 2019, when recent changes were applied, and
- LTBR for all other expenditure.

The difference is that these interest rates are not used to calculate escalation factors but are used as the target thresholds for applying the PRRT. Take a project that involved exploration worth \$10 million in the year before 2019, and \$90 million in other capital expenses since then. Assuming a LTBR of two per cent then, on these figures the blended trigger return would be the LTBR plus six per cent¹⁸ or a total of eight per cent. Suppose in the first year of operation the profit is \$20 million and remains steady at that level. The first eight per cent on the capital outlay (\$100 million) is exempt. Hence the PRRT base is then \$12 million, which, at the present tax rate of 40 per cent would generate revenue of \$4.8 million.¹⁹ The PRRT is deductible for income tax purposes so that a company that normally paid 30 cents in the dollar²⁰ on additional revenue would normally pay less company tax by the amount of \$1.44 million. Note that without the RRT our project would pay company tax of \$6 million on the \$20 million profit. With PRRT the total tax increases to \$9.36 million.

¹⁸ 6 = 90% of 5 and 10% of 15.

¹⁹ The effect of this may be to reduce company tax collections

²⁰ Smaller companies with a turnover less than \$50 million would pay tax of 25 per cent.

The proposal discussed here is illustrated in Table 1 which shows the first 11 years of operation.

Table 1: Hypothetical mining tax revenue under proposed changes to PRRT (\$m)

	Exploration spending	Cumulative capital total	Profit	Existing PRRT	Proposed PRRT with 8% threshold	Company tax	Total tax
2018	10	10	0	0	0	0	0
2019	90	100	0	0	0	0	0
2020	0	100	20	0	4.8	4.56	9.36
2021	0	100	20	0	4.8	4.56	9.36
2022	0	100	20	0	4.8	4.56	9.36
2023	0	100	20	0	4.8	4.56	9.36
2024	0	100	20	0	4.8	4.56	9.36
2025	0	100	20	0	4.8	4.56	9.36
2026	0	100	20	0	4.8	4.56	9.36
2027	0	100	20	0	4.8	4.56	9.36
2028	0	100	20	0	4.8	4.56	9.36

Source: Authors calculations

Under the above assumptions our project pays PRRT in year 3. However, under the present arrangement there would be no PRRT collected until 2031 as shown in the column headed “Existing PRRT”. This illustrates an important point that we made earlier. Under existing arrangements, we may well have a mine that is quickly developed to take advantage of high commodity prices. It significant profits in the first couple of years of production and then settles down to a more modest normal-rate-of-return. There is a very good chance it never has a PRRT liability whereas the early years of large economic rents would be taxable under the proposal put here.

For convenience, the example has assumed a PRRT rate of 40 per cent. An important feature of the PRRT is that it should not affect behaviour of those investing in mining projects. That means, in principle, the PRRT can be set at high levels without affecting how the mining industry operates. The implication is we could well consider going higher, perhaps up to the 90 per cent effective tax that has applied in Norway.

CONCLUSION

The present PRRT generates no revenue until the project sponsor gets back all their capital together with the permitted uplift factors. The problem with this approach is

that no PRRT revenue is generated until many years later which might exceed the life of the project and/or outlast the high returns—the economic rent that should be taxed. We suggest the PRRT be reformed so that any high return on funds employed will generate revenue irrespective of whether or not the project sponsor has recovered the investment, augmented by generous uplift factors. In the worked example above PRRT collection of \$4.8 million per annum were provided for. These would add up to \$48 million over a decade. However, in this specific example no PRRT would have been collected under present arrangements. This example used a relatively small project with a modest profit. But it can be appreciated that the amounts could be very significant for the many projects operating in Australia at the present time.