

Summary statement to the Senate Committee on New Taxes.

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29 March 2011

I understand that Professor Ergas and I have been asked here to comment particularly on the paper that we co-authored with Mark Harrison, entitled 'Some Economics of Mining Taxation', which was published in December 2010.¹ With your agreement, we would like to make a single opening statement.

Our objective there was to achieve a better understanding of five important economic issues:

1: Taxes on pure rents

First, we argue that it is not feasible to tax mining in a neutral way such that the industry is unaltered, other than that the owners obtain less profits.

If such a neutral tax existed, then it would be a tax on *pure rents* and on pure rents only.

Even though the concept of a frictionless machine is useful in theory, in practice there can be no such machine; similarly, even though the concept of a tax on pure rent is useful in theory, in practice there can no such tax.

The definition of pure rent is a payment made to the owner of a productive input which is in excess of that *necessary to bring the productive input into being*.

Nature put the minerals in the ground, and got no payment. Thus by definition, any payment for ownership rights over them is a pure rent. Therefore, in theory any tax on those pure rents—even a one-hundred percent tax—would not alter the amount in the ground.

In contrast, almost nothing else would come into existence in a market economy unless someone is paid for the effort, knowledge or risk necessary to bring things into being. If a tax reduces these rewards, then the tax will discourage production.

The gap between economic theory and practice arise because the mining companies have information about their activities that is not available to government. Therefore, the taxing authority cannot, with perfect accuracy, divide mining profits into that which is due to the value of the minerals in the ground, and that which is due to the efforts and talents and risk-taking of the owners, workers and suppliers. The tax will inevitably fall on some revenues that are not pure rents.

¹ Henry Ergas, Mark Harrison and Jonathan Pincus, 'Some economics of mining taxation,' *Economic Papers*, Vol. 29, No. 4, December 2010, 369 – 383. (The journal is published by Wiley-Blackwell for The Economic Society of Australia.)

The abandoned Super Profits tax is not like a knife that you can take to a magic pudding (the mining industry), and cut out a slice without leaving the pudding smaller. Neither is the MRRT.

State government royalties are deferred payment for the right to mine. If they were negotiated in advance, they are not taxes. Nonetheless, royalties do discourage some economically-valuable activity. For example, for a mine nearing the end of its useful life, the sales proceeds may cover the costs of extraction and marketing, but not cover the royalty payment, so the ore remains unmined.

Therefore, the task of mining tax design is to find the best compromise between a desire to gather in pure rent, and the desire not to discourage effort, talent and risk-taking.

2: Taxes on quasi-rents

Our second question related to the essential difference between a super-profits tax on existing mines and one on prospective mines.

For prospective mines, the theoretically ideal scheme is called ‘the Brown tax’, after an American economist. Before any mining activity starts, the government claims for itself, say, forty percent of the future revenues of mine, in return for agreeing to recompense the miner for forty percent of all future outlays, both capital and recurrent. The miner ends up with sixty percent of the profit, in exchange for bearing sixty percent of the costs.

This assumes the government can indeed accurately determine the cost share for which it is responsible and reimburse those costs. If some costs are not reimbursed, say because they are allocated to aspects of the operation other than the resource, then obviously the proportionate sharing will not hold. For instance, so as to maximise the return on a resource, the miner may need to invest in costly R&D; unless it can claim those outlays as a cost the government must contribute to, it will pay a higher share of the costs than it gets of the rewards. Under those circumstances, if one hundred percent of the profit is just worth the miner’s effort and risk, then sixty percent may well not be worth it; and so effort and capital will be directed at other prospects or other countries.

Paradoxically, however, an unexpected imposition of a Brown tax or other profits tax on existing mines would yield huge tax revenues—in the tens of billions of dollars—without causing much immediate change in the operations of existing mines.

In explanation: Once a mine has been brought into operation, a sudden tax will not make the mine disappear: it will remain operating, at least for a time. Continued operation is better than shutting down if operation ‘cash-flow positive’; if the revenues so received exceed the tax plus the costs of operation.

In economic jargon, the tax would fall on *quasi-rents*, which are payments in excess of what is strictly necessary to make it worthwhile for the owners to *keep the existing mine in operation*.

Eventually, however, the tax will have its economic effects: the tax reduces the incentives to develop the mine further, to reduce the costs of mining or handling of the ore, and so on. Even the incentive to maintain the mine may eventually vanish because of the tax.

3: A persuasive economic case for a profits tax on existing mines has yet to be made. I will omit discussion of this section, in the interests of time.

4: What new economic inefficiencies will the MRRT cause?

The successor to the RSPT – the Minerals Resource Rent Tax (MRRT) – has many of the inefficiencies of the RSPT but adds some further serious inefficiencies of its own.

Like the RSPT, it discourages cost reductions and revenue expansions by miners. Like royalties, it discourages production from mines near the end of their lives.

But, in addition, it distorts the distribution of rates of return, and thus differentially discourages higher-risk projects. The MRRT reduces the expected rate of return of risky projects by more than it reduces those of the less risky. In other words, the realised tax rate on risky projects is higher, maybe far higher, than those on the less risky.

The MRRT also encourages low-risk projects (those with low costs of capital) to increase their capital-intensity, and to postpone production.

Overall, the MRRT will make investing in Australian coal and iron ore projects less attractive than those overseas; less attractive than investing in resources not subject to the tax; and will penalise high risk projects.

Moreover, the MRRT falls less heavily on mature projects that are included in a portfolio of Australian mining assets; that have high market values; and on miners who have ready-access to overseas alternatives. The three mining companies that negotiated the MRRT with the Gillard government have these very characteristics.

5: Rivers of gold

Lastly, the value of revenues from taxes such as the RSPT and the MRRT is usually over-stated, as those revenues are highly risky. The failure to take account of the risky character of those income streams amounts to fiscal illusion and makes it more likely that unwise spending commitments will be made.

The government is planning to spend the forecast revenues from the mining taxes. Without the mining tax revenues, the government would have to cut its spending if it is to meet its fiscal targets.

Treasury has made various forecasts of the expected revenues from the proposed mining taxes, some of them tens of billions larger than others. To note this variation is not to criticise Treasury

forecasters: no one can accurately and consistently predict the future. If Warren Buffett could make better guesses, then he would make even more money.

Our point is that the market value of wealth transferred to Treasury, as agent for the Australia citizens, is far less than the Treasury's best estimates of the size of the revenues of the mining taxes.

This line of reasoning is simple: the flow of mining tax revenues is uncertain; Treasury estimates the expected value of that flow; the market value of an uncertain flow of money is less than its expected value, because of the uncertain variability. The difference between the expected value and the market value is called the 'risk premium'. We do not attempt to make an estimate of the value of the transfer of wealth, but illustrate that it is likely to be far lower than Treasury estimates of the expected revenues.

Thus, it may be wise to bank some of the revenue 'for a rainy day', in case pessimists (like Professor Warwick McKibbin) turn out to be correct, and a sharp fall in mineral prices occurs within a few years. If that happens, then the planned course of federal budgets may well prove to be unsustainable.

6: Conclusions

Although it was beyond our short paper to be definitive about the best forms of mineral taxation, we did offer the following suggestions and comments.

1. Any new Commonwealth mining tax should
 - a. apply to new ventures only;
 - b. be levied at a modest (internationally-competitive) rate;
2. To reduce the problems of vertical fiscal competition, and to encourage States to use efficient imposts:
 - a. The Commonwealth Grants Commission should treat the States' mining revenues as capital receipts with zero net effect on the jurisdiction's balance sheet.
 - b. Further, all payments mining companies make to State governments should be deductible against any Commonwealth tax, to give priority to State government imposts.