

PETROLEUM AND MINERAL RESOURCE RENT TAXES: COULD THESE TAXATION PRINCIPLES HAVE A WIDER APPLICATION?

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The Australian Government introduced a Petroleum Resource Rent Tax (PRRT) on offshore oil and gas deposits in 1984 and since then it has raised in excess of an additional \$1 billion a year in revenue over and above the normal company tax on income. The Australian Government has introduced a Mineral Resource Rent Tax (MRRT) on iron ore, coal and gas from coal seams effective from 1 July 2012. The MRRT has been met with criticism from certain mining companies and noted economists. However, Australia currently has a budget deficit and an MRRT is being viewed by the government as a possible solution to balancing the budget. A Resource Rent Tax (RRT) has been used by a number of countries such as the United Kingdom and Norway to increase government revenue from their 'North Sea' oil reserves. It would appear that this type of tax has a number of desirable attributes, especially in relation to efficiency. Is it now time for governments to consider a wider application of a rent tax to other industries and resources? A 'rent tax' being a tax on land is now an accepted form of taxation in many western economies such as Australia, New Zealand and the United Kingdom. There are a number of businesses such as the airline industry, the fishing industry, the Australian funeral industry and the timber industry that generate an economic rent due to their dominance in a particular business sector. This paper examines a number of those industries and contends that, due to the super profits being generated by these businesses, governments should consider the imposition of a rent tax.

I INTRODUCTION

The purpose of this paper is to explore the potential for governments throughout the world to raise revenue through the imposition of a 'rent tax' not only on land and non-renewable mineral resources but also other resources such as timber, water, fish, hydro-electricity, geothermal electricity and industries such as airports, toll-roads and airlines. Part III of this paper will briefly describe the way in which the MRRT and the PRRT work in imposing a tax on the 'super' profit from mining. However, prior to this examination, Part II of the paper will discuss the general concept of a 'rent tax'

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and 'economic rent'. The terms 'rent tax', 'economic rent' and 'resource rent tax' are used in this paper to describe the surplus value derived from land, resources or other business activity that is then subject to a separate 'rent' tax. The original concept of taxing 'rent' was developed by classical economists such as David Ricardo¹ and Adam Smith.² The concept was subsequently adopted by Henry George in the late nineteenth century and led the way for land tax to be levied on the unimproved value of land in the Australian colonies.³ This section of the paper will discuss the original philosophical basis for the taxation of the rent from land.

The use of a rent tax by governments to collect revenue has been in existence for many years. Henry George advocated a rent tax as the main source of revenue.⁴ Land tax is a form of rent tax imposed on the unimproved value of land. However, the same system of taxation could be applied to assets devolved to beneficiaries on the death of the owner as a form of inheritance tax. This application of the tax will be discussed later in the paper. Could a rent tax be imposed on businesses that have a monopoly or dominant market position together with the imposition of the income tax on companies' taxable income? This paper will examine the possibility of an economic rent tax being imposed on finite resources such as geothermal electricity generation as well as businesses that have a strong market presence in Australia and other countries.

Part IV of the paper will examine the various applications of a rent tax to the surplus generated by the exploitation of non-renewable resources and the super profits generated by various industries. Part V will provide concluding remarks about the potential for governments to raise additional revenue through a rent tax and then pass on the benefits to society by possibly reducing personal and company rates of income tax as a direct consequence of embracing this form of taxation.

II THE CONCEPT OF A RENT TAX

The Henry Tax Review advanced arguments for cash flow business taxes as a replacement for business income tax and for bequest duties, both of which are arguably further examples of the taxation of economic rents or, in the latter case at least, of the taxation of unearned gain. This is an important part of the thinking underpinning economic rent. Indeed, it has been argued that the Henry Tax Review has, as one cornerstone of its vision for the Australian tax system, the taxation of economic rents rather than income and capital. The Federal Government has adopted one small part of such a tax, namely a minerals resource rent tax, and to date has rejected two other aspects of such a tax – a land tax and a bequest duty. However, it has accepted that at some time in the future it may be appropriate to look at a business level expenditure tax or cash flow tax, i.e. a tax on the economic rents of business.

Economic rent is the return over and above the return necessary for the activity to take place.⁵ For example, what does it take to get a super model to work? Linda

¹ David Ricardo, *Principles of Political Economy and Taxation* (London: John Murray, 3rd ed, 1821).

² Adam Smith, *An Inquiry into the Nature and Cause of the Wealth of Nations* (London: Methuen, 6th ed, 1950).

³ Henry George, *Social Problems* (New York: Doubleday Page & Co, 1904).

⁴ *Ibid* 179.

⁵ W.H. Wessel, 'A Note on Economic Rent' (1967) 57(4) *American Economic Review* 873, 885.

Evangelista told *Vogue* that ‘we don’t wake up for less than \$10,000 a day.’ While the example is hardly scientific, for the purposes of exposition it is appropriate. If a supermodel were paid anything more than that (and they are) it is economic rent. So a Government could tax almost all of that excess without affecting a supermodel’s work decisions at all. They would still go to work even if the economic rent tax reduced the return to ‘just’ \$10,000 a day.

The following comment from Robin Broadway and Michael Keen is a good description of economic rent, and an argument in favour of taxing it:

Economic rent is the amount by which the payment received in return for some action – bringing to market a barrel of oil, for instance – exceeds the minimum required for it to be undertaken. The attraction of such rents for tax design is clear: they can be taxed at up to (just less than) 100 percent without causing any change of behaviour, providing the economist’s ideal of a non-distorting tax.⁶

The Henry Tax Review echoes this and applies the general logic of economic rent to the specifics of minerals. The following passage provides an excellent explanation:

The finite supply of non-renewable resources allows their owners to earn above-normal profits (economic rents) from exploitation. Rents exist where the proceeds from the sale of resources exceed the cost of exploration and extraction, including a required rate of return to compensate factors of production (labour and capital). In most other sectors of the economy, the existence of economic rents would attract new firms, increasing supply and decreasing prices and reducing the value of the rent. However, economic rents can persist in the resource sector because of the finite supply of non-renewable resources. These rents are referred to as resource rent.⁷

However, as the Henry Tax Review recognises,⁸ it is not just the minerals sector which profits from economic rents. There appears no reason in logic to limit the economic rent analysis to resources since the overriding consideration is above normal profits. As Garnaut and Clunies Ross put it, the term ‘rent’ can be applied to any profits of any kind of enterprise that exceed those whose prospect the investor would have required to induce him or her to invest in the enterprise.⁹ For resources, the reason for that above normal rate of return is, according to the Henry Tax Review, the finite supply of non-renewable resources.¹⁰ Yet monopoly or oligopoly can create the same above average rates of return¹¹ and arguably they should be taxed in a similar fashion. Indeed, these conditions might actually reflect something even deeper. Economic rent arguably arises not from monopoly per se but from monopolised property relations, i.e. private property. Thus Garnaut and Clunies Ross say that most discussion of economic rent is about windfall profits, barriers to entry

6 Robin Broadway and Michael Keen, ‘Theoretical Perspectives on Resource Design’ in Philip Dean, Michael Broadway and Charles McPherson (eds), *The Taxation of Petroleum and Minerals: Principles, Problems and Practice* (2010), 9.

7 Henry Final Report Detailed Analysis Chapter C: Land and resources taxes C1. Charging for non-renewable resources C1–1. The community’s return from the exploitation of its resources. Viewed 3 December 2010.

8 Ibid.

9 Ross Garnaut and Anthony Clunies Ross *Taxation of Mineral Rents* (New York: Clarendon Press, 1983) 33.

10 Ibid 76.

11 This is at the expense of other business since what is happening is actually a reallocation of value from all sectors of capital to the monopoly and/or resource sectors.

and transfer rents, but that these terms are inadequate. For them windfall profits do not necessarily come as a surprise.¹²

The ‘barrier to entry’ that gives rise to what might appear to be transfer rent is the institution of property rights itself. Exclusive property rights are necessary for the emergence of mineral rent in the same way as they are to land rent. This is true also of business monopolies or oligopolies. Exclusive property rights are the ultimate legal expression of monopoly either expressly, through for example ownership of particular property, or indirectly through the lack of competition, which elevates the particular property rights to a level of exclusivity or near exclusivity for as long as the monopoly exists. Thus Henry’s proposal to tax land rent is based on the idea that luck or position increases the unimproved value of land.

The taxation of land is the taxation of rent because rent is the increment of market gain that accrues to choice land parcels.¹³ The Henry Tax Review proposed a land tax¹⁴ as part of its vision for the taxation of economic rent, in conjunction with a raft of other taxes mainly on economic rent. It sees the unimproved capital value of land as the surplus over and above the costs of production and adequate returns on those costs. So at the heart of Dr Henry’s ideas about land tax is the concept of economic rent. An unimproved land value tax does not seemingly tax the labour and capital input into land because it arguably removes from the calculation process those inputs into the value of land itself.

A very succinct explanation of the concept of ‘economic rent’ is contained in the following definition provided by Professors’ Garnaut and Clunies Ross:

Economic rent is the excess of total revenue derived from some activity over the sum of the supply prices of all capital, labour, and other ‘sacrificial’ inputs necessary to undertake the activity... In essence, it referred to the reward that a landowner could derive by virtue simply of being a landowner and without exerting any effort or making any sacrifice.¹⁵

Garnaut and Clunies Ross acknowledge that this definition is based on the work of Ricardo.¹⁶ Adam Smith also examined the concept of economic rent in his treatise ‘*The Inquiry into the Wealth of Nations*’ and contended that rent is an unearned surplus, which is appropriated by the landlords through the exercise of their monopoly power.¹⁷ Smith and Ricardo considered rent to be the unearned income obtained from renting land to entrepreneurs who then grew crops or livestock. The entrepreneur took the risk in buying seeds, planting the crop, harvesting the crop and finally selling the product. The fact that the owner of the land had a monopoly and was able to extract a rent without undertaking any activity or risk, caused political economists such as

¹² Garnaut and Clunies Ross, above n 9, 34.

¹³ H William Batt, *The Compatibility of Georgist Economics and Ecological Economics*, 2003 Wealth and Want in 21st Century America <http://www.wealthandwant.com/docs/Batt_GEE.html>.

¹⁴ AFTS Chapter C: *Land and resources taxes C2. Land tax and conveyance stamp duty C2-1 Land is (potentially) an efficient tax base*, 6 December 2010.

¹⁵ Garnaut and Clunies Ross, above n 9, 26.

¹⁶ Ibid 27.

¹⁷ Joseph Keiper, Ernest Kurnow, Clifford Clark et al, *Theory and Measurement of Rent* (Philadelphia: Chilton, 1961) 14.

Smith to develop the theoretical concept of taxing the economic rent of the landowner.

Similarly, a mine owner obtained a rent after capital and labour costs were deducted from the price of the minerals that had been sold. It is also acknowledged that a tax on the economic rent has a neutral effect on the landowner or mine owner.¹⁸ A landowner or a mine owner would continue with their activity even though their excess profit or economic rent was subject to tax. The costs of capital and labour are already a factor in arriving at the economic rent.

A simple way of demonstrating the way in which economic rent is calculated is found in the following formulation:

$$\text{Economic rent} = \text{total revenue} - \text{total economic cost}^{19}$$

A tax is then imposed on the amount of economic rent derived from the resource at a specific rate. It is in effect a tax on the free cash flow from a resource project. In determining the costs of a project, it also takes into account the 'opportunity costs of capital' by incorporating an uplift factor such as a long term bond rate plus a further component.²⁰ For example, with the PRRT in Australia the carry forward rate for undeducted general project costs is the long term bond rate plus 5 per cent.

It must be noted that economic rents would not persist under standard competitive conditions.²¹ In other words, if other mining companies entered the market because of the attraction of the size of the economic rent, then the rates of return and supply of minerals would drive the commodity price down or bid up the cost of fixed assets until economic rents were eliminated.²² The economic rent is eliminated when commodity prices fall or the extraction costs are too high. In order to overcome this type of problem, many of the oil producing countries formed a cartel, namely the Organisation of the Petroleum Exporting Countries (OPEC)²³ as a means of controlling the price of crude oil.

¹⁸ Ibid.

¹⁹ G. C. Watkins, 'Atlantic Petroleum Royalties: Fair Deal or Raw Deal?' (2001) *Atlantic Institute for Market Studies*, The AIMS Oil and Gas Papers (2), 5.

²⁰ Martin Van Brauman and Clifford Mangano, 'Resource Rent Taxation as a Basis for Petroleum Tax Policy by Foreign Governments and its Relationship to US Foreign Tax Credit Policy and Tax Law' (2000) 18(1) *Journal of Energy & Natural Resources Law* 19, 20.

²¹ Michael Hinchy, Brian Fisher and Nancy Wallace, 'Mineral Taxation and Risk in Australia, Discussion Paper 89.8', *Australian Bureau of Agricultural and Resource Economics* (1989) 6.

²² Ibid.

²³ The Organization of the Petroleum Exporting Countries (OPEC) was founded in Baghdad, Iraq with the signing of an agreement in September 1960 by five countries namely Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. They were to become the Founder Members of the Organization. These countries were later joined by Qatar (1961), Indonesia (1962), Socialist People's Libyan Arab Jamahiriya (1962), the United Arab Emirates (1967), Algeria (1969), Nigeria (1971), Ecuador (1973), Gabon (1975) and Angola (2007). From December 1992 until October 2007, Ecuador suspended its membership. Gabon terminated its membership in 1995. Indonesia suspended its membership effective January 2009. www.opec.org 7 January 2011.

The rent of land, therefore, considered as the price paid for the use of the land, is naturally a monopoly price.²⁴ As will be seen from the following analysis, the imposition of a rent tax is only feasible when an industry has a monopoly over certain resources such as land or minerals, or a dominant position in a market such as an airport corporation in a major regional location such as Sydney or Melbourne.

The private revenue of individuals arises from three sources: rent, profit and wages.²⁵ Smith contends that a tax upon rent of land may either be imposed according to the location of the land or on the real rent of the land which is determined by the improvements on the land. Land tax that was imposed in Great Britain at that time was seen by Smith as being tax neutral and the following statement aptly summaries this fact:

It does not reduce productivity and does not raise the price of what is produced. It does not obstruct the industry of the people. It subjects the landlord to no other inconvenience besides the unavoidable one of paying the tax.²⁶

Henry George takes the concept of rent a step further by advocating that a tax on the unimproved value of land could replace all other forms of taxation, including taxes on labour and capital.²⁷ However, under the Henry George model all land is owned by the state and the land tax, based on the unimproved value, is paid to the state.²⁸ Henry George also recognises that a rent tax on the value of land is efficient in that it does not lessen the incentive to produce and prevents restrictions on production.²⁹

The land tax that was introduced in Australia in 1910 had, as its main effect, the redistribution of large land holdings to other farmers who at that stage were precluded from obtaining land. The rate of tax was such that it became prohibitive for absent landholders to merely occupy land without producing income.³⁰ In effect the introduction of the rent tax in the classic form of a land tax achieved, to some extent, the redistributive function of land as proposed by Henry George.³¹

The Commonwealth of Australia introduced a land tax with the enactment of the *Land Tax Act 1910* (Cth) and the *Land Tax Assessment Act 1910* (Cth). It was contended that the main purpose of the legislation was to control the ownership of land in Australia and to penalise land owners who were not resident in Australia by imposing a progressive rate of land tax on the unimproved value of land in excess of five thousand pounds. The High Court of Australia in the case of *Osborne v The Commonwealth and George Alexander McKay*³² examined the legality of the legislation on the basis that it was not concerned with raising tax but with breaking up large land holdings in order to promote greater agricultural pursuits and reward

²⁴ Adam Smith, *An Inquiry into the Nature and Cause of The Wealth of Nations* (London: Strahan and Cadell, in the Strand, 6th Ed 1961) 162.

²⁵ Ibid 350.

²⁶ Ibid 353.

²⁷ George, above n 3, 179.

²⁸ Ibid.

²⁹ Ibid 186.

³⁰ A.M. Woodruff and L.L.Ecker-Racz, 'Property Taxes and Land Use Patterns in Australia and New Zealand' (1965-66) 18 *Tax Executive* 16, 31.

³¹ Ibid.

³² (1910-11) 12 CLR 321.

returning soldiers from the First World War.³³ Griffith CJ acknowledged that a consequence of the Act may have been to prevent large holdings of land but that this did not affect the competence of the Act to impose a land tax.³⁴

III THE MRRT, THE PRRT AND RENT TAXES IN OTHER COUNTRIES

The Henry Tax Review examined the various options for taxing mineral and petroleum resources. There are two versions of an RRT that are referred to in Chapter C of the report as well as in the literature on this area of taxation. The first version is a 'Brown Tax', which is based on the work of the American economist, E Cary Brown and published in 1948.³⁵ The second version is what is known as the Garnaut and Clunies Ross rent tax. Both versions of the rent tax are similar except the 'Brown Tax' requires the state to recompense the mining company for expenses incurred in the exploration and early production phases when there are negative cash flows. The payment required by the state is equal to the product of the tax rate and the amount of the negative cash flow. In other words, the mining project is paid compensation by the state based on the losses incurred in the project up to that point. This would mean that governments bear some of the risk of the project and this may be substantial with very large projects that are non-productive. In some instances it may create sovereign risk for the state. The second version, the Garnaut and Clunies Ross model, is similar except negative cash flows are carried forward until such time as the project becomes cash positive. In order to compensate the project, the losses are carried forward with an uplift factor such as the long term bond rate plus a percentage. For example, under the PRRT in Australia, the uplift factor is the long term bond rate plus 15 percent for exploration expenditure or 5 percent for project development and operating expenditure. The Garnaut and Clunies Ross model has been accepted by the Australian Government and this is acknowledged in the MRRT Explanatory Memorandum.³⁶

The final raft of legislation creating the MRRT and amending the PRRT was introduced into Parliament on 2 November 2011.³⁷ The object of the *Minerals Resource Rent Tax Act 2012* (Cth) is stated in section 1-10 as follows:

The object of this Act is to ensure that the Australian community receives an adequate return for its taxable resources, having regard to:

- (a) the inherent value of the resources; and
- (b) the non-renewable nature of the resources; and
- (c) the extent to which the resources are subject to Commonwealth, State and Territory royalties.³⁸

³³ Woodruff and Ecker-Racz, above n 30.

³⁴ *Osborne v The Commonwealth and George Alexander McKay* (1910-11) 12 CLR 321, 335.

³⁵ E. C. Brown, 'Business-income taxation and investment incentives' in *Income, Employment and Public Policy: Essay in honour of Alvin H. Hansen* (1948), 300. (Also referred to in Ross Garnaut, 'The New Australian resource Rent Tax', 20 May 2010, University of Melbourne.)

³⁶ Explanatory Memorandum, MRRT Bill (2011) 8.

³⁷ Minerals Resource Rent Tax Bill 2011, Minerals Resource Rent Tax (consequential amendments and transitional provisions) Bill 2011, Minerals Resource Rent Tax (imposition–customs) Bill 2011, Minerals Resource Rent Tax (imposition–excise) Bill 2011, and Minerals Resource Rent Tax (imposition–general) Bill 2011 <www.aph.gov.au> at 3 November 2011.

³⁸ Explanatory Memorandum, above n 36.

The Act does this by taxing above normal profits made by miners (also known as economic rents) that are reasonably attributable to the resources in the form and place they were in when extracted.

A 'taxable resource' is defined in Division 20 of the Act as coal, iron ore and coal seam gas. The MRRT is based on taxing projects, similar to the PRRT. Mining projects that do not generate resource profits of more than AUD 50 million in a given year will not be subject to the MRRT. This is designed to reduce the compliance costs for small mining companies.³⁹ The MRRT is imposed at a rate of 30 percent and not 40 percent which is the current rate of tax under the PRRT. The profit or loss calculation is based on the assessable receipts less deductible expenditure less the uplift carry forward losses. The uplift factor is the long term bond rate plus 7 percent.⁴⁰

The MRRT is a deductible expense when calculating taxable income for income tax purposes. This is the current situation under the PRRT where the PRRT is a deduction against assessable income pursuant to s 44-750 of the *Income Tax Assessment Act 1997* (Cth). Royalties paid to the states and the Northern Territory are credited against any MRRT liability and any excess royalty payments will be uplifted and applied against future MRRT liabilities. Any excess royalty payments will not be refundable.⁴¹ The MRRT only applies to iron ore, coal and coal seam gas projects. It does not apply to other minerals.⁴² The MRRT applies from 1 July 2012 but the market value of assets acquired for projects after 1 May 2010 will be included in the expenditure calculation for the MRRT.⁴³

The Explanatory Memorandum provides the following outline and financial impact summary of how the tax will operate:

The Minerals Resource Rent Tax (MRRT) is a tax on the economic rents miners make from the taxable resources (iron ore, coal and some gases) after they are extracted from the ground but before they undergo any significant processing or value add. 'Economic rent' is the return in excess of what is needed to attract and retain factors of production in the production process.

The MRRT is a project-based tax, so a liability is worked out separately for each project the miner has at the end of each MRRT year. The miner's liability for that year is the sum of those project liabilities. The tax is imposed on a miner's mining profit, less its MRRT allowances, at a rate of 22.5 per cent (that is, at a nominal rate of 30 per cent, less a one-quarter extraction allowance to recognise the miner's employment of specialist skills).

A project's mining profit is its mining revenue less its mining expenditure. If the expenditure exceeds the revenue, the project has a mining loss. Mining revenue is, in general, the part of what the miner sells its taxable resources for that is attributable to the resources in the condition and location they were in just after extraction (the 'valuation point'). Mining revenue also includes recoupments of some amounts that have previously been allowed as mining expenditure.

³⁹ Ibid 67.

⁴⁰ Ibid 8.

⁴¹ Ibid 8.

⁴² Ibid 11.

⁴³ Ibid 95.

Mining expenditure is the cost a miner incurs in bringing the taxable resources to the valuation point. Mining allowances reduce each project's mining profit. The most significant of the allowances is for mining royalties the miner pays to the States and Territories. It ensures that the royalties and the MRRT do not double tax the mining profit. In the early years of the MRRT, the project's starting base provides another important allowance. The starting base is an amount to recognise the value of investments the miner has made before the MRRT.

Other allowances include losses the project made in earlier years and losses transferred from the miner's other projects (or from the projects of some associated entities). If a miner's total mining profit from all its projects comes to less than \$50 million in a year, there is a low-profit offset that reduces the miner's liability for MRRT to nil. The offset phases out for mining profits totalling more than \$50 million.⁴⁴

The MRRT is expected to generate revenue of \$3.7 billion in 2012-13; \$4 billion in 2013-14; and \$3.4 billion in 2014-15.⁴⁵ However, this is starting to look unlikely due to the drop in the price of coal and iron ore.

A *The Australian PRRT*

In 1984 the Federal Government announced the introduction of an RRT for new offshore petroleum projects and their exemption from the imposition of royalties and the crude oil levy.⁴⁶ It was a further three years before the legislation was finally passed by parliament. The government was not able to extend the rent tax to onshore petroleum production in lieu of state royalties because the state governments of Western Australian and Queensland objected.⁴⁷ In 1990, Bass Strait petroleum projects became subject to the PRRT.⁴⁸ The North West Shelf projects are subject to a federal royalty and the crude oil levy.⁴⁹

The Act was effective from 15 January 1984, even though the legislation was not passed by Parliament until 1987. The Act applied retrospectively to exploration permits awarded on or after 1 July 1984 and recognised expenditure incurred on or after 1 July 1979. It was originally imposed on offshore petroleum projects other than Bass Strait and the North West Shelf. However, oil and gas production in Bass Strait moved from a royalty and excise regime to the PRRT regime in the fiscal year 1990-1991. The PRRT was imposed on oil companies with the enactment of the *Petroleum Resource Rent Tax Act 1987* (Cth) and the *Petroleum Resource Rent Tax Assessment Act 1987* (Cth). The resource rent tax is imposed on the taxable profit of a petroleum project that is located 'offshore' in Australia. The Hawke Labor Government of 1984 introduced a resource rent tax, based on the Garnaut and Clunies Ross model, in order to remedy the state-based taxation system of imposing royalties on resource production output.⁵⁰ The *Petroleum Resource Rent Tax Act 1987* (Cth) is imposed on the profit at the rate of 40 percent. The *Petroleum Resource Rent Tax Assessment Act*

⁴⁴ Explanatory Memorandum, Mineral Resource Rent Tax Bill 2011 (Cth).

⁴⁵ Ibid 3.

⁴⁶ Michael Crommelin, 'Governance of Oil and Gas Resources in the Australian Federation' (2009) *University of Melbourne Law School*, Research Series 8, 12.

⁴⁷ Ibid 13.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Rob Fraser, 'The state of resource taxation in Australia: "An inexcusable folly for the nation"?' (1999) *The Australian Journal of Agricultural and Resources Economics* 259, 260.

1987 (Cth) contains the provisions relating to the calculation of the profit subject to the rent tax. The PRRT raised in excess of an additional \$1 billion a year in revenue over and above the normal company tax on income⁵¹

B *Resource Rent Taxes in Other Countries*

Many countries impose additional taxes on mining companies selling petroleum and mineral resources that have been extracted from their land. Given this situation, why then should there be reluctance on the part of mining companies to accept an MRRT in Australia which will only apply to coal, iron ore and coal seam gas? The following examination is very limited in its scope of the resource rent regimes adopted in other countries but it does show that this form of taxation of mineral resources has been used elsewhere – thus supporting the argument that it perhaps should not be subject to criticism in Australia.

Many countries have imposed a resource rent tax on petroleum and mineral extraction projects. Australia was one of the first countries to introduce an RRT in 1984, but Papua New Guinea (PNG) had already introduced an RRT in 1977 on petroleum projects and then in 1978, on mining projects. PNG subsequently removed the RRT in 2002 on mining and introduced a progressive profits tax.⁵² In 1984, Ghana and Tanzania also introduced an RRT.⁵³ Since then, many countries have either contracted with mining companies to impose an RRT on profit or legislated to impose the RRT. Russia introduced an RRT in 1994; Kazakhstan in the mid-1990s; Angola in 1996; British Columbia in Canada in 1990; Namibia in 1993; and Timor-Leste in 2006, to name just a few.⁵⁴

Both the United Kingdom (UK) and Norway impose a resource rent tax on petroleum profits derived from the North Sea on the ‘Continental Shelf’. The UK introduced a petroleum resource tax when the North Shelf was first developed in 1975. Since then it has been amended and altered a number of times.⁵⁵ The UK and Norway abolished royalties based on the value of oil and gas extracted in 2002 and 1986 respectively.⁵⁶ The reason given for abolishing royalties was that it was a regressive tax as it applied to gross revenue and acted as a disincentive to exploration and production.⁵⁷ The UK applies a petroleum rent tax (PRT) at the rate of 50 percent as well as the normal company income tax. Norway applies a special petroleum tax (SPT) at 50 percent and the normal company tax on income.⁵⁸ The UK government imposed a supplementary charge of a further 10 percent in 2002 and in 2005 increased the rate to 20 percent on the company income. However, the PRT is deductible for income tax purposes.

⁵¹ Australian Taxation Office statistics – 2002-03 = \$1.2 billion; 2003-04 = \$1.5 billion; 2004-05 = \$2.0 billion; 2005-06 = \$1.8 billion; 2006-07 = \$1.9 billion and 2007-08 = \$ 1.6 billion.

⁵² J. Sarma and G Naresh, ‘Mineral Taxation around the World: Trends and Issues’ (2001) *Asia-Pacific Tax Bulletin* January 2, 7.

⁵³ Bryan Land, ‘Resources rent taxes Chapter 8’, in *The Taxation of Petroleum and Minerals: Principles, Problems and Practice*, Ed. Philip Daniel, Michael Keen and Charles McPherson (2010).

⁵⁴ *Ibid* 243.

⁵⁵ Carole Nakhle, ‘Can the North Sea still save Europe?’ (2008) *OPEC Energy Review* 123, 134.

⁵⁶ *Ibid* 133.

⁵⁷ *Ibid*.

⁵⁸ *Ibid*.

Norway does not allow the SPT to be deductible for income tax purposes and the effective marginal tax rate on the income of the company is 78 percent.⁵⁹

The UK system is complicated by the fact that the PRT is based on the development of the oil fields given development consent before 1993 as distinct from those given consent after 1993. In the former case, the fields are taxed on their income at a company tax rate of 50 percent and a PRT at the rate of 50 percent whereas the later fields are subject only to a company tax rate of 50 percent.⁶⁰ In 2002 the UK government introduced a 10 percent supplementary charge on the same basis as company tax but there was no deduction for financing costs against the supplementary charge.⁶¹ The royalty was abolished on older fields that had received development consent before 1993 in an attempt to encourage fuller exploitation of reserves from those fields.⁶² In 2005 in light of an increase in oil prices the UK government doubled the supplementary charge to 20 percent.⁶³ This means that in the UK oil and gas is taxed at the highest rate of any industry: for fields given approval after 1993, a company tax rate of 30 percent and the supplementary charge of 20 percent. For those fields given approval prior to 1993, the marginal rate of tax is 75 percent and they are also liable to company tax at the rate of 50 percent.⁶⁴

Zambia nationalised its copper industry in 1964 but this was later repealed in 1985. Since then the government has imposed a royalty rate of 3 percent, a variable income tax rate and a windfall tax applied to the value of production. However, in 2009 the windfall tax was repealed.⁶⁵ A similar situation occurred in Chile, Bolivia, Peru, Democratic Republic of the Congo, Ghana and Jamaica where the mining industry was nationalized.⁶⁶ Some countries have subsequently privatized part of the mining industry but the sovereign risk still remains. Chile now has a mixture of state participation and private investment in the mining industry and has imposed a sliding scale of rates of royalties based on the value of sales.⁶⁷ Kazakhstan and Liberia have introduced a rent based tax on the exploitation of their mineral resources.⁶⁸

IV APPLICATIONS OF A RENT TAX

In 2009 the Australian Government commenced a review of Australia's future tax system under the Chairmanship of the Secretary of the Treasury, Dr Ken Henry. The *Review of Australia's Future Tax System* (The Henry Tax Review)⁶⁹ states that the future Australian tax system should increasingly rely on land values as a tax base. The

⁵⁹ Ibid 134.

⁶⁰ Ibid.

⁶¹ Carole Nakhle, 'Chapter 4- Petroleum fiscal regimes: evolution and challenges,' in *The Taxation of Petroleum and Minerals: Principles, Problems and Practice*, Ed. Philip Daniel, Michael Keen and Charles McPherson (2010)

⁶² Ibid 111.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Lindsay Hogan and Brenton Goldsworthy, 'Chapter 5: International mineral taxation', in *The Taxation of Petroleum and Minerals: Principles, Problems and Practice*, Ed. Philip Daniel, Michael Keen and Charles McPherson (2010) 122, 126.

⁶⁶ Ibid 127.

⁶⁷ Ibid 125.

⁶⁸ Nakhle, above n 52, 149.

⁶⁹ Henry, above n 7.

Review recommended that a rent tax should be applied to land either at a flat rate or at marginal rates on all land including owner-occupied housing.⁷⁰ The review also recommended the introduction of a mineral resource rent tax at the rate of 40 per cent on the free cash flow profit. As discussed earlier in this paper, the free cash flow profit is the profit that is left after allowing for the mining company to obtain a return on labour and capital at, for example, the long term bond rate plus an uplift factor, which is then deducted from the value of the sale of the minerals. As a result of this review and the examination of the imposition of an economic rent tax on minerals in Australia and the reform of the current land tax, the idea of applying this system of taxation to other resources and industries may evolve over time. A rent tax could be imposed on a range of resources and a range of industries and not just land and mineral resources. This part of the paper will now examine instances where a rent tax could be applied to a variety of business activities.

A *Rent Tax on the Airline Industry*

The source of economic rents in the airline industry is the monopoly ownership of airports and the barriers to entry permitted by law to restrict airlines from operating in certain routes. Airports have a monopoly in most single hub facilities located near a major city because of the expense associated with having a number of airports within a geographical radius.⁷¹ The airport authority is able to set the price of all services provided to the travelling public as well as the airlines using the airport.⁷² A good example of this situation is found in the protection afforded to Australian airlines operating the Australia to US route. Singapore Airlines has been precluded by law from operating that route from Australian cities, thus being able to service the Australian public and threaten the monopoly profit being derived by certain airlines in Australia. There are many examples of this type of protection throughout the world especially where a national airline is being protected by the government owning the airline.⁷³ The monopoly situation is a classic element of 'economic rent' and therefore capable of being subject to a rent tax – the rent being the 'super profit' that is generated because of the monopoly situation.

B *Ocean Fishing*

The original concept of 'freedom of fishing' as advocated by Hugo Grotius, is no longer applicable due to the global demand for fish protein and the profit to be made from fishing.⁷⁴ Professor Prewo contends that fishing can command high economic rent and that the rent could be collected on the following: (i) the value of the output such as fish caught; (ii) the value of the inputs such as the boat, fishing gear or labour; or (iii) the lump sum charged for the fishing license.⁷⁵ Prewo suggests that the best option may be to auction the fishing permits and that the bids would reflect the economic rent, that is, the difference between harvesting costs and the market price at

⁷⁰ Commonwealth of Australia, *Review of Australia's Future Tax System*, (2010), 247.

⁷¹ Elizabeth Bailey and Jeffrey Williams, 'Sources of Economic Rent in the Deregulated Airline Industry' (1988) 31 *The Journal of Law and Economics* 173, 184.

⁷² *Ibid.*

⁷³ Examples are found with Singapore Airlines, Malaysian Airlines, Emirates and Etihad Airlines.

⁷⁴ Wilfried Prewo, 'Ocean Fishing: Economic Efficiency and the Law of the Sea' (1980) 15 *Texas International Law Journal* 261, 262.

⁷⁵ *Ibid* 273.

the socially optimal level of fishing.⁷⁶ The rent would accrue to the public rather than to the individual fishermen.⁷⁷ Governments would then collect additional revenue that could be used to fund the management of fishing resources or as part of their normal government revenue. The number of licences to be auctioned would safeguard future fishing stocks and replace quota systems.

Professor Muraoka examined the 'sea urchin' fishery off the coast of California in terms of managing the threatened species by the introduction of an auction system for the permits, which would generate an economic rent to be collected by the government and not the harvester of sea urchins.⁷⁸ In this case the economic rent is the additional value attaching to the permit being sold by the government.

C *The Australian Funeral Industry*

Small family owned funeral services have been taken over by large firms and multinational corporations. In Australia, the Texas-based 'Service Corporation International' (SCI) owns 25 per cent of the funeral business in Australia; 14 per cent in the United Kingdom; and 28 per cent of the French industry.⁷⁹ SCI maintains profits through economies of scale where the costs of hearses, chapels, embalming and crematoria, as well as ancillary services such as flowers, headstones and urns are augmented.⁸⁰ It is estimated that since the emergence of SCI in Australia the average price of funerals has increased by 40 per cent.⁸¹ SCI has effectively monopolised the most lucrative demographic death markets within Australia and is focusing on the 1.5 million Australians aged over 70 years.⁸²

At present approximately 134, 000 Australian die each year.⁸³ However, with a large proportion of the baby-boomers reaching the age of 70 years by 2016, which SCI and other funeral companies call the 'death age', the profit margins will start to increase.⁸⁴ This will be the 'golden age' for SCI.⁸⁵ Everyone requires a funeral service once in their lifetime. It is clear that the funeral business is becoming concentrated in the hands of very few corporations and the ability to increase profits is evident. This industry may present future governments with an ideal opportunity to impose an economic rent tax on the profits to be made as a direct result of an ageing population, especially the baby-boomer population. A rent tax could be imposed on the 'super profit' generated by the funeral industry after allowing for a normal rate of return to be earned on labour and capital costs, together with an uplift factor along similar lines to the MRRT or PRRT in Australia.

⁷⁶ Ibid 273.

⁷⁷ Ibid 274.

⁷⁸ Dennis Muraoka, 'Managing the Sea Urchin Fishery: An Economic Perspective' (1990) 30 *Natural Resources Journal* 139, 151.

⁷⁹ Drew Cottle and Angela Keys, 'The Monopolisation of the Australian Funeral Industry' (2004) 54 *Journal of Political Economy* 32, 33.

⁸⁰ Ibid.

⁸¹ Ibid 36.

⁸² Ibid.

⁸³ Ibid 39.

⁸⁴ Ibid.

⁸⁵ Ibid.

D *Geothermal Electricity Production*

Electricity is able to be generated either from geothermal steam or the heat found within the earth. The generation of electricity from geothermal steam has been in operation in the US since 1960.⁸⁶ According to Professors Muraoka and Mead, the US government was deriving revenue from this activity by leasing the land based on a per acre charge to the operator and, once production occurred, royalty payments were then made to the government.⁸⁷ However, they contend that among economists the goal of natural resource management should be to maximise the present value of the economic rent. They describe economic rent in the context of geothermal electricity production in the following terms:

Economic rent is the payment to a factor of production, like public lands, that is necessary to retain the factor in a particular use. For public lands used for geothermal energy production, economic rent is the difference between the discounted social value of the revenues that can be generated from the geothermal steam and the discounted social costs of production. ... We assert that the American people, as the owners of these lands, are entitled to the economic rent. The federal government, as trustee, should collect this value.⁸⁸

Muraoka and Mead advocate a bidding system based on a competitive auction for the various leases as promoting economic efficiency and collecting economic rent.⁸⁹ They are opposed to a royalty system which they contend leads to delays in production and premature abandonment of a geothermal field. Further, some investment in steam production becomes submarginal with royalty payments.⁹⁰ This reinforces the Australian government's view that royalties imposed on mining companies in Australia lead to inefficiencies in production decision making.

E *Hydropower Generation*

Hydropower generation of electricity uses nature's scarce resource but very few countries impose an economic rent tax on the profit derived from this industry.⁹¹ In Norway, 99 per cent of electricity is generated from hydropower and the current tax system it not able to elicit surpluses and rents in this sector.⁹² However, in 1992 the Norwegian government required power plants to cost electricity correctly and charge market prices for the electricity. This change has opened the way for the introduction of an economic rent on the production process. As Amundsen and Andersen contend, economic rent is residually determined by the demand for electricity.⁹³ If the demand for electricity increases as a result of income growth, then the rent will increase. If the demand decreases through conservation measures then the rent reduces.⁹⁴ In this way

⁸⁶ Dennis Muraoka and Walter Mead, 'Economic Issues in Federal Geothermal Leasing Procedures' (1987) 27 *Natural Resources Journal* 675, 675.

⁸⁷ *Ibid* 679.

⁸⁸ *Ibid* 682.

⁸⁹ *Ibid* 683.

⁹⁰ *Ibid* 687.

⁹¹ Eirik Amundsen and Christian Andersen, (1992) 13(1) *Energy Journal* 97, 97. The authors explain that this may be partly due to the fact that hydropower plants are government owned.

⁹² *Ibid* 97.

⁹³ *Ibid* 99.

⁹⁴ *Ibid*.

the rent tax is neutral and will not interfere with the marginal social value of the electricity produced.⁹⁵

F *Timber*

Many developed and developing countries have a considerable store of wealth in their timber resources. If governments wish to promote the efficient use of the resource and to collect fair value then the prospect of imposing an economic rent may provide the best solution.⁹⁶ The economic rent from timber is defined by Professors Muraoka and Watson as the following:

In the context of timber resources, economic rent can be expressed as the value of logs produced less total necessary cost of production including a normal rate of return for the developer.⁹⁷

In other words, the economic rent is the value or profit derived after deducting all expenses such as labour, equipment and capital and allowing for a normal rate of return to the developer along the lines of the MRRT (a long term bond rate plus an uplift factor). Muraoka and Watson conclude that species log scale bidding with payment at harvest is not maximising the economic rent.⁹⁸ In fact where excessive bidding occurs this leads to default in payment to the government. They advocate a lump sum payment bidding process as the best option to ensure economic efficiency and an increase in the available economic rent to be paid for the public timber resources.⁹⁹

G *Freshwater or Coastal Space – New Zealand*

The New Zealand Government introduced the *Resource Management Act 1991* (NZ) to impose a resource rent tax on those people using coastal land to store their boats.¹⁰⁰ The land was owned by the government and as such it was able to impose a charge on the users of the land. However, as Sinner and Scherzer point out, imposing a rent will produce positive net benefits to public welfare but sometimes political considerations such as maximising votes at the next election take precedence.¹⁰¹ As a result of the political considerations, no tax was imposed at that time. In the context of fresh water and coastal land, Sinner and Scherzer contend that collecting a resource rent tax protects against inefficient allocation of the resource.¹⁰² They identify two different kinds of inefficiencies: over-allocation and misallocation. In the first instance, a resource rent tax will ration the resource and in the second instance, misallocation would be resolved if the coast could be used for marine farming at the expense of recreational fishing.¹⁰³

⁹⁵ Ibid.

⁹⁶ Dennis Muraoka and Richard Watson, 'Improving the Efficiency of Federal Timber Sales Procedures' (1983) 23 *Natural Resources Journal* 815, 816.

⁹⁷ Ibid 817.

⁹⁸ Ibid 822.

⁹⁹ Ibid 825.

¹⁰⁰ Jim Sinner and Jorn Scherzer, 'The Public Interest in Resource Rent' (2007) 11 *New Zealand Journal of Environmental Law* 279, 280.

¹⁰¹ Ibid 286.

¹⁰² Ibid.

¹⁰³ Ibid.

V CONCLUSION

A resource rent tax has been in existence in many countries rich in mineral resources for many years, and it appears to be a logical form of taxation where limited resources which are owned by governments are taxed in such a way as to maximise the welfare of its citizens. An economic rent tax has been imposed on the owners of a range of factors of production: airports, airlines, timber, fish stocks, geothermal power, hydropower and even coastal land.

In the context of the above analysis, there seems to be no reason why governments should not consider imposing an economic rent tax on those industries that operate in a monopolistic environment and generate 'super profits' such as power generators and airports. Moreover, a rent tax would satisfy the requirements of a 'good' tax system by being equitable – both vertically and horizontally. Such a system is simple in form, relatively simple to assess and collect, and efficient in that it does not interfere with operational decisions because the cost of capital and labour has already been taken into account.