### **Principles and Practice of Resource Rent Taxation**

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#### Abstract

The Henry Review placed the taxation of rents from mines back on the national policy agenda. Mineral rent is potentially a source of neutral taxation. However, the various means of taxing resource rents in practice either fall short of the ideal of neutrality or collect for the revenue only a small proportion of the mineral rent. This article discusses the six principle instruments for taxing resource projects. It evaluates these forms of taxation in relation to stability, neutrality and government revenue maximisation. It suggests a combination of instruments that is likely to establish a good balance among objectives.

### **1.** Super Profits, Resource Rents and Neutrality in Taxation

This article discusses the taxation of mineral rents from the perspective of governments seeking to maximise some conception of national welfare. It considers neutrality, stability of arrangements, the amount of revenue generated from various arrangements, and the economic costs of raising revenue for the state. An accepted ideal in any system of taxation is that it should as far as possible be 'neutral'. The ideal of neutrality is that, without good reason, the tax should not alter decisions on investment, production or trade. The quest for neutrality does not exclude the use of special taxes to correct 'externalities', that is to say, cases in which the market itself does not provide the best use of resources. In a market economy, efficient outcomes require governments to tax or to regulate the external costs of various activities. 'Neutral' taxation then allows efficient allocation of resources after private participants in markets have taken the constraints on externalities into account. These points are, of course, highly relevant to the current discussion of climate change mitigation policy.

It has been recognised that the quest for neutrality in taxation reduces itself to finding ways of extracting no more and no less than what is called the 'economic rent'. Economic rent is the revenue derived from some activity minus the sum of the supply prices of all capital, labour and other 'sacrificial' inputs necessary to undertake the activity. The rent can be extracted by the owner of the resource or the taxation authority without affecting the amount of investment or production. The effects of a tax on investment and production cannot be ascertained by examining only the amount of revenue that it collects. As Anthony Clunies Ross and I said on the first page of our book a few decades ago:

Many people believe that the only important characteristic of a tax is how much it takes. This is far from true. The form of the tax may have extremely weighty effects in encouraging some activities or discouraging others. It is easy to assume, as governments often seem to have done in meeting the question of taxing mining companies, that there is a simple dilemma between heavy taxation, which discourages mining, and light taxation, which yields little in the way of revenue. On the contrary, provided that the form of the tax regime is chosen prudently, it is possible to improve the trade-off considerably...

[Garnaut and Clunies Ross 1983, p. 1]

The more that taxation can be concentrated on economic rent (and, it could be added, external environmental costs), rather than on transaction, income, consumption and other tax bases that in varying degrees introduce distortions, the less the economic burden of taxation. Mineral taxation is an area in which the identification of rent has a clear and practical meaning.

Of course, there are other sources of economic rent. These include ownership of land, access to a government licence to conduct some kind of business when the number of licences at issue is restricted, and monopolistic control of some technology or of a market.

Mineral rent is distinguishable from some of these other sources of rent in two ways that are relevant to taxation. One is that mineral resources are immobile between countries—a reality that is emphasised in the Henry Taxation Review (Australia's Future Tax System 2010). The other way in which mineral resources are different from some other sources of rent is that under the constitutions of Australia and of most other countries, most minerals are owned by the state, and their extraction is dependent on an exclusive licence provided by the state. (Our Constitutional history has us saying that mineral resources are owned by the Crown.) When an Australian state or territory government, or the Commonwealth in the case of offshore areas, allocates a mining lease, it is giving away a piece of state property to a private party, in the same way as it is giving away state property when it allocates land to a private firm or citizen, or privatises a state-owned business. The community has a reasonable expectation that when some of its property is given to a private party, that party will pay its full value. The value of the mining lease being made available to a private party is the expected present value of the economic rent (Garnaut and Clunies Ross 1983).

There are therefore two reasons to expect Australian governments to seek to extract the economic rent as revenue: it has lower economic costs than other forms of taxation: and it represents the value of public property that is being transferred to private ownership. Many Australians would add a third reason: that the recovery of mineral rent from the companies to which rights to mine have been allocated for the community represents a move to more equitable distribution of income, in a way that has lower economic costs than other measures to promote distributional equity. However, there is a strong basis for efficient resource rent taxation without going into the distributional issues.

#### 2. Rents and Quasi-Rents

Whenever a case arises in which it appears appropriate to tax a rent, one has to be careful that the apparent rent is not what economists since Alfred Marshall have called 'quasi-rents'. Quasi-rents are payments that in the long term provide some incentive to maintain an economically valuable allocation of resources. The return that a company expects from investment in mining includes a part that represents a return on exploration, which might have been undertaken a long time ago. That return is a quasi-rent of exploration. A current mine will not be closed down because a tax does not allow the generation of a satisfactory return on exploration, but new exploration will be affected.

Similarly, after a mine is in operation, part of its expected future cash flow represents a return on the original development of the mine—is a quasi-rent, if you like, on that mine development expenditure. While a tax could transfer part or all of that quasi-rent from a mining company to the government without affecting production at established mines, such a tax would remove the incentive for new mine development.

#### 3. Forms of Mineral Rent Taxation

Clunies Ross and I identified six main forms of mineral rent taxation (Garnaut and Clunies Ross 1983, pp. 87–125). These can be combined in various hybrids. The rates at which these various forms of taxation are applied can, in principle, be set in general legislation, negotiated case by case or established through a process of competition for access to a resource. The six forms of mineral rent taxation are the flat fee (FF); the specific or ad valorem royalty (SAVR); the higher rate of proportional profits or income tax (HRIT); the progressive profits tax (PPT); the resource rent tax (as in the Australian petroleum resource rent tax) (RRT); and the Brown tax (BT).

With a FF, an investor makes a once-for all payment for rights to extract minerals from a leased area. This is a major source of resource rent tax in some developed country jurisdictions in which resource industries are prominent; for example, Alberta in Canada and Alaska in the United States. In jurisdictions in which the flat fee is a major source of revenue, its level is set through competitive bidding.

Competitive bidding for licence fees was tried for a while for offshore Australia, but was disliked by industry and abandoned in the 1990s. It is likely to be a more effective instrument for taxing rents if it is combined with some form of rent tax that is conditional on the outcome of an investment (that is, on the value of production, cash flow or net present value). Competitive cash bidding is recommended for new leases by the Henry Review. It would need to be applied by the level of government with constitutional authority for mineral leasing: the Commonwealth offshore and the states on land within their areas of sovereignty. Specific and ad valorem royalties are the form of resource rent taxation mostly applied by the states. They are applied to the volume or value of production. (There are some instances

of profit-based taxes in the states and territories, most importantly in the Northern Territory and Western Australia, but also in South Australia. Western Australia applied a royalty in a form similar to the petroleum resource rent tax on the Barrow Island petroleum field.) The HRIT uses exactly the same tax base as the conventional income tax. It simply applies a higher rate of taxation to income received from the corporate sector, in recognition that part of that income represents mineral rent. This was the alternative form of mineral rent taxation favoured by the Western Australian Premier in his criticism of the Commonwealth Government's announcement on resource rent taxation on 2 May 2010 (Barnett 2010). The PPT also uses the same tax base as the conventional corporate income tax, but applies a higher rate of income tax in tax periods in which the amount of income (usually calculated as the rate of return on some measure of investment in the project) exceeds a specified level. It is the form of tax used famously in the renegotiated Bougainville Copper Agreement from 1974 (Garnaut and Clunies Ross 1983, pp. 235-6).

The RRT allows a mining company a deduction for all expenditure against revenue in the year in which the expenditure was incurred. It focuses on net cash flows, drawing no distinction between capital and recurrent expenditures.

Financial expenses (most important, interest on debt) are not allowed as deductions, as they are part of the return on investment. If in any year expenditures exceed revenuesthat is, if cash flows are negative-the negative cash flows are carried forward at an interest rate that is judged to correspond appropriately to the return on capital thought to be required ex ante by a mining company in considering an investment. It has been applied (as the PRRT) in Australia to petroleum produced offshore and on Barrow Island since the late 1980s. It is embodied crudely in the Australian MRRT, announced by the Australian Prime Minister on 2 July 2010 (Gillard, J., Swan, W. and Ferguson, M. 2010).

The BT is structurally similar to the RRT except that instead of any negative cash flows being carried forward with interest, the negative cash flows attract a payment equal to the product of the tax rate and the amount of the negative tax flow (Brown 1948). The Henry Review (Australia's Future Tax System 2010) advocates a modified version of the BT, which came to be called the resource super profits tax. The Henry Review modifications of the BT are of two kinds. The first is that rather than providing for a cash payment to the investor on negative cash flows at the BT rate in any year in which cash flows are negative, the Henry Review allows for the depreciation of capital expenditure over a number of years as with the standard income tax. The second involves delay in payments against negative cash flows, until such time as an investment is abandoned as being unsuccessful, or until there is an assessment for resource super profits tax against which it can be credited. Any undepreciated capital expenditures and unutilised tax credits are accumulated at an interest rate equal to the government's bond rate, and carried forward.

## 4. Stability, Neutrality and Revenue Maximisation

Clunies Ross and I evaluated the forms of rent taxation by a number of criteria, of which we emphasised neutrality, government revenue maximisation and stability (Garnaut and Clunies Ross 1983).

Stability is important for neutrality and government revenue maximisation and can be seen as having its effects through rather than independently of them. Perceptions of instability raise the supply price of investment (the rate of return sought in advance by investors to compensate for risk). Some forms of resource rent taxation—principally those that compress the probability distribution of after-tax outcomes (that is, which automatically increase their shares of revenues when profitability turns out to be high)—are intrinsically more stable than others.

The RRT and the PPT were judged to be superior

for stability. The BT was next best by this criterion. The FF and the BT were judged to be best from the point of view of neutrality, with RRT a close second (Garnaut and Clunies Ross 1983, p. 110; Fane and Smith 1986). A hybrid of the FF (with rate established by competitive bidding) and the RRT emerged from the 1980s Australian discussion as the favourite for overall effects (Emerson and Lloyd 1981, 1983; Emerson and Garnaut 1984; Garnaut and Clunies Ross 1983).

The taxes differ in other important respects, including ease of administration. The RRT and theBT can be administered mainly by reference to data that are required by the revenue agencies for income tax purposes.

Any new form of tax takes time to be understood, and for the development of case law to handle the many special issues that invariably arise. There is inevitable uncertainty as investors learn the details of a new tax. This is the source of the adage 'an old tax is a good tax'.

### 5. The Neutrality of the Pure and the Modified Brown Tax

The BT is, under specified conditions, almost completely neutral. The essential conditions for neutrality are all to do with uncertainty about whether the investor can rely on the cash offsets when cash flows are negative. The Henry Review acknowledges that the neutrality condition is met by the modified BT that it proposes only if investors are certain that the cash payments for negative cash flows will be paid.

The BT is more nearly neutral than the RRT if the former is thought by investors to be stable, with cash payments certain to be made when due from the taxation authorities to investors. Under these conditions it is neutral for the simple reason that if 100 per cent of cash flows, positive and negative, discounted at any rate, generates a positive net present value, then (100 minus X) per cent of cash flows will also generate positive net present value. Here, X is the percentage rate at which the BT is applied.

Garnaut and Clunies Ross (1983) noted a number of possible sources of non-neutrality in practice:

A disadvantage of the Brown Tax (BT) is that... it entails the greatest risk to the government. On a very large project, this risk might be unacceptable ... subsidising a project for making losses might also be difficult to 'sell' politically, even though the subsidies would not in principle convert the losses into gains for the investor . . . Afinal possible disadvantage is on grounds of stability of the fiscal regime, as seen by the investor. It may be difficult for investors to be completely confident that subsidies to future capital outlays will continue to be paid at some very high rate. Thus investors may just possibly react to a BT system as one involving greater risk or a higher expected tax burden than its formal character justifies.

#### [Garnaut and Clunies Ross 1983, p. 100]

The Henry Review's modification of the BT requires some additional faith on the part of the investor in the stability of the regime. What is at stake is not only the risk that future negative cash flows will not be fully compensated as they occur at the resources super profits tax rate, but also the risk that credits associated with past negative cash flows may not be recovered with interest.

There is another issue in the modification. The investor will have to raise finance to carry the delay in recoupment of a proportion of its negative cash flows. The Henry Review refers to finance theory that suggests that, at the margin, the cost of raising this capital is the cost of riskless capital. This would be appropriate in a world of zero transactions costs, perfect information and competitive finance. To the extent that the actual cost of capital to a mining company for funding the delayed tax credits exceeds the sovereign borrowing rate, the modification of the BT would introduce a disincentive to investment.

The pure form of the BT as distinct from the Henry form has one clear advantage over the RRT—it is the nearest of the other resource taxes to neutrality. Because no accumulation of negative cash flows over time is required, there is no necessity for the government to decide upon the appropriate discount rate at which negative cash flows are carried forward. The appropriate private discount rate varies across projects and investors, and also with phases of investment (above all being higher in the exploration phase because of greater uncertainty), so this can be a considerable advantage.

### 6. Instability and the Supply Price of Investment

Perceptions that taxation arrangements may change for the worse for investors typically raise the discount rate that investors apply in evaluation of a project (that is, they raise the supply price of investment). This reduces the rent value of the resource, and therefore the amount of revenue that can be extracted without deterring investment. In some countries at some times, the expectation of changes in taxation may raise the supply price of investment to an extent that low rates of taxation are required to attract investment. But the low tax rates are controversial when high profitchility is achieved in profited.

profitability is achieved in practice. High profitability in turn generates pressures for change in the taxation arrangements, and further increases the supply price of investment, thus yet again increasing pressures for change in the arrangements. Such cycles of instability were once thought to be an inherent feature of the resource industries. This spurred a mainly North American literature on instability in relations between governments and investors (Garnaut and Clunies Ross 1983, ch. 6).

Rent taxes that have a proportionately larger impact on more profitable projects, and so adjust automatically to changes in outcomes, can be expected to be more stable. This expectation has been evident in practice in many countries. Forms of resource taxation that have their greatest impact on the higher end of the probability distribution of outcomes-rent taxes based on profits or cash flows including the HIRT and the BT, especially if they are progressive with rates of return on investment such as the RRT and PPT—can be expected to be accompanied by a lower supply price of investment and to increase both the level of investment and, all other things being equal, the amount of revenue generated from the resources sector.

Instability is an inherent feature of SAVRs, which are traditional means of collecting revenues from mines. They are often initially set at low rates, but adjusted upwards if outcomes turn out to be highly favourable for investors. This was the history of taxation on Australia's offshore petroleum prior to introduction of the PRRT in the late 1980s.

Investors' risk aversion reinforces the presumption in favour of forms of resource rent taxes that yield more revenue from the higher moments of the distribution of possible outcomes.

Risk aversion typically causes investors to place less value on income that represents an exceptionally high return on investment.

# 7. Instability and Dilemmas of Transitional Arrangements

The benefits of stability are evident in all areas of policy, and not only in relation to taxation. But what should a government do when established arrangements are unfavourable for economic efficiency and equity and for the prospects for stability in the future? It is sometimes asserted that investors have rights to stability of the arrangements under which they made investments. Such an approach would rule out much reform to improve national productivity or to inhibit activities that were damaging to the environment or otherwise to the community. Unsatisfactory arrangements of any kind, once established, would continue forever unless their beneficiaries were bought out by the community. It is noteworthy that there has never been any reciprocal suggestion, that exceptional benefits to individual firms or individuals from economic reforms should be recovered for the community.

While there is no general rule or presumption that firms should be compensated for the effects of changes in taxation or regulation on the profitability of past investments, it is an established general principle of taxation that past income should not be affected by current changes in taxation. The application of this principle in other areas of taxation—for example, the taxation of superannuation lump sums and of capital gains, and changes in corporate and individual income tax rates—has not inhibited changes in taxation of future income, even though past investment and employment commitments are affected by prospective changes.

The absence of 'property rights' in established arrangements does not mean that the transitional arrangements do not matter for perceptions of stability. There will be adverse consequences for the supply price of investment if the treatment of past investments does not pass tests of reasonableness. It would be damaging to perceptions of reasonableness on future treatment if the changes affecting future income from established projects left a company in a less favourable position than it would have occupied if the new laws had been in place from the beginning.

#### 8. Neutrality at Exploration, Mine Development and Production Stages of a Project (and Optimal Rates of Depletion)

Resource taxation can distort and inhibit investment and production at four margins. It can constrain investment in exploration; investment in new mines; investment in expansion of old mines; and production from each established mine (that is, the 'cutoff grade' applied in the mine). The considerations affecting neutrality vary across the four margins, introducing the possibility that hybrid forms of rent taxation with different forms being applied at different stages of development—may generate the best results.

The exploration phase is associated with especially wide dispersion of the distribution of possible commercial outcomes. It is also separated by much more time from the generation of income than later stages of resources development and so is likely to be associated with perceptions of greater risk of change in fiscal arrangements. The former characteristic of the exploration stage argues for taxes for which the present value of taxes as a share of net cash flows after the mining lease has been granted is independent of the outcome of investments-the FF and BT. The latter characteristic of the exploration stage argues for concentration of taxation on later revenues, as with the RRT and to a lesser extent the other profit-based taxes. One other characteristic of exploration investment complicates the analysis: each project generally involves a smaller outlay than investments at later stages and especially at the mine development stage.

The balance of considerations makes the BT and the FF especially suitable to the exploration stage. The FF scores highest of all types of mineral rent taxation for neutrality at this stage, if its effects on stability are ignored, but not when they are taken into account. The combination of high risk and investors' risk aversion means that the FF yields relatively small amounts of revenue that, if applied alone, would make it unsuitable on the grounds of stability. The combination of a FF with the rate set at auction and a conditional tax on profits is especially suitable.

The new mine development stage is associated with high levels of capital expenditure. It is also associated with much lower levels of risk, as the scale of the investments causes investors to take great care to avoid significant chances of large-scale failure. At this stage, the RRT is likely to be nearly neutral, as the revenue that it is expected to collect is likely to be concentrated on income that is in excess of the risk-averse investor's minimum requirements. Here the RRT is likely to have advantages over the BT, because the latter is less likely to be acceptable to governments while it is likely to be associated with greater doubts about stability.

For 'brownfields' developments investments to expand or extend the life of production from established projects—there is generally much less risk than in new mine development, because the resource, engineering of the mine and metallurgy of the processing plant are well established. A major part of investment is likely to be covered by cash flow. The cash-flow-based taxes—the RRT and BT—are therefore likely to be neutral, and the other profit-based taxes nearly so. Brownfields developments are sometimes of large scale, in which case the considerations favouring RRT at the development stage will be influential.

For efficient production from established mines, there is a sharp distinction between SAVR and all of the other resource taxes. Specific and ad valorem royalties will raise to some extent the cutoff grade in established mines, leaving some economically valuable material in the ground. The RRT and BT, and for that matter the FF, are perfectly neutral at this stage.

Other profit-based taxes are close to being neutral.

#### 9. The Rate of Tax

The most important limit on the total rate of taxation out of income is the maintenance of incentives to economising behaviour for people working within the industry. The lower the rate of tax, the less the risk that participants in the industry will be discouraged from taking all available opportunities to increase profitability. Here it is the compound marginal taxation rate out of profit that matters—the combined effects of the general corporate income tax and the special resources tax.

Combining a rent tax that is conditional on revealed profitability with allocating leases by competitive tender for a fixed fee can be seen as reducing the onus on the conditional tax to collect all or most of the economic rent. As a result, the rate of the conditional tax need not be so high. The risks of distortion from the conditional tax are correspondingly lower. At the same time, the reduction in the residual of mineral rent after conditional taxes have been applied reduces the main disadvantage of the FF-that corporate risk aversion, especially for large outlays, causes anticipated revenues from successful investments to be so high that the FF yields relatively little revenue. The combination can therefore improve the effectiveness of the FF in raising revenue while avoiding the setting of conditional taxes so high that they distort behaviour.

### **10.** Are There Circumstances When Neutrality Is Not Desirable?

Implicit in this discussion is the idea that the rate of depletion of resources in each country

would be optimal in the absence of distorting taxation. Is there any reason why this might not be the case, justifying intervention to accelerate or decelerate the rate of expansion of production?

There is an optimal rate of depletion of any non-renewable resource for the world as a whole, and for the allocation of that depletion across countries. If the economic institutions of all countries are working efficiently-if there are secure property rights in the hands of governments until allocated unambiguously to individuals or firms; and systems of resource taxation that collect economic rent in place everywhere-then markets will secure the optimal rate of depletion. The rent value of each resource in each country tends to rise over time at the interest rate, generating a tendency for the prices of naturalresource based products to rise over time. This tendency can be disrupted by changes in expectations of growth in global demand and by exceptionally rapid technological improvements in exploration, mining, processing or transporting minerals. Mineral deposits will be developed sequentially, with the higher quality deposits—those with greatest rent value per unit of production—going first. This market determined order maximises value in resource exporting countries and in the world as a whole.

The efficient extraction of economic rent will not change the order of development of mines. A rent tax system that taxes marginal mines at low rates and highly profitable mines at high rates will not cause one country's high quality deposits to be developed later than low quality deposits elsewhere. Inefficient rent tax regimes, which raise the cost of marginal mines, may do so.

Specific or ad valorem royalty regimes increase the costs of production from some mines and so are more likely to change the order of development of mines as well as to reduce the amount of ore recovered from each mine that is developed. The established rent tax regimes in many petroleum-rich economies tend to apply SAVR at high rates and so have these effects in high degree.

Other features of mineral leasing policies in many countries and the effects of perceptions of sovereign and wider country risk on the supply price of investment also influence the order in which mines are developed on a global scale. Differences in the supply price of investment affect the order in which mineral deposits are developed: poorer deposits are likely to be developed earlier in countries that are perceived as being more stable, and which therefore have lower supply prices of investment. Perceptions of instability and a high supply price of investment have held back resources development in many developing countries. Incomplete property rights under most resource management systems can lead to premature development of mineral deposits: firms increase early production for fear of losing their rights or being subject to higher taxation later. This was a major factor causing uneconomically low prices for oil in the early postwar decades. This distortion caused countries that left more of their oil in the ground at that time to realise much higher value at a later date.

We have insufficient information on matters affecting current and optimal depletion for considerations of the desirable rate of mining to be an objective of public policy in current circumstances.

On balance, I would judge these factors to cause resource depletion in Australia to proceed now at a rate in excess of that which would be generated in a world of perfect information and markets. In addition, the persistence of SAVR regimes in Australia (and elsewhere) leads to underutilisation of resources in established mines: a proportion of what would otherwise be ore is rendered uneconomic and its economic value is extinguished forever by the fiscal arrangements. Movement towards more efficient resources taxation in Australia without coincident and comparable movement towards more economically efficient regimes elsewhere would cause a small acceleration of the rate of depletion as well as more complete resource utilisation.

Considerations of optimal depletion would not seem to be clear enough to seek to change the profile of resource development from that which happens to emerge from global fiscal regimes as they are currently configured and as they may develop as a consequence of current policy discussion.

There is another issue, which is rendered more important by any tendency for current fiscal and institutional arrangements to favour early (if incomplete) development of Australian resources: is the rate of investment in Australia too high at present from domestic economic development perspectives? Certainly this is a possibility, if currently high terms of trade and rates of growth in resources investment are pulling resources into resource industries and regions and away from other industries and regimes, when such developments may turn out to be temporary and require costly reversal at a later date.

It is possible that the high real exchange rate deriving from the current resources boom is leading to the contraction of other industriesexport and import-competing industries in the farm, manufacturing and services sectors-a contraction that will need to be reversed at considerable cost at a later date. If there is a problem of excessive pressures for economically excessive structural change as a result of the contemporary resources boom, it is unlikely that it could be dealt with satisfactorily through adjustments to the resources taxation regime. Much of the pressure for structural change occurs through government's receiving temporarily high revenues during the resources boom and spending the increased revenue. The associated appreciation of the real exchange rate can be moderated at lower cost by government's saving temporarily high revenue for use after the terms of trade and rates of growth in resources investment have eased to sustainable levels.

#### 11. Applying Analysis in Practice

The analysis leads towards an optimal resource taxation regime with the following elements. The core mineral tax would be the RRT, along the lines of the PRRT and the proposed mineral resource rent tax. Residual resource rent would be collected for new projects by a FF at a rate determined through a competitive process at the time of allocation of an exploration licence with a conditional right of conversion into a mining lease. The presence of the FF with the rate set for tender would allow the RRT rate to be set at moderate levels. The core RRT would be supplemented by the introduction of a BT at the exploration stage: a full loss offset in cash at the tax rate (that is, a pure BT) for exploration expenditure prior to issue of a mining lease. The loss offset would cancel any need for carrying forward exploration expenditure against revenue in assessment of the RRT.

At the stages of new mine development and brownfields expansion or mine life extension, the RRT would generate an approximation of neutrality.

At the production stage, the RRT would secure

neutrality. It would also secure full utilisation of economically valuable resources.

The implementation of arrangements judged to be optimal would face large issues of transition.

Developments in Australia would be likely to be influential elsewhere. The economic gains for Australia and the world as a whole from comprehensive reform of Australian resource taxation would be substantial.

These gains would be augmented over time by the movement of other countries towards more efficient resource taxation.

September 2010

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