Metadata of the chapter that will be visualized online

Chapter Title	Total Economic Rents in Australia as a Source for Basic Income	
Chapter Sub-Title		
Chapter CopyRight - Year	The Author(s) 2017 (This will be the copyright line in the final PDF)	
Book Name	Financing Basic Income	
Corresponding Author	Family Name	**Flomenhoft**
	Particle	
	Given Name	**Gary**
	Suffix	
	Division	
	Organization	
	Address	Acton, Canada
	Email	Gary.Flo@uvm.edu

Abstract	Interest in basic income (BI) has resurged from the realization that artificial intelligence (AI) is replacing human beings in the workforce. Therefore, it is urgent to resolve the controversial question of how to finance BI, overcoming objections to presumed violations of property rights. This chapter argues that resources produced by nature or society as a whole, are the property of the public. Therefore the citizenry are entitled to receive rent for use of their property, what economists call economic rent. Figures from the *Total Resource Rents of Australia* study is used to calculate revenue available for BI in Australia.

Keywords (separated by '-')	Economic rent - Basic income - Land rent - Dividend - Royalties - Commons and common assets

CHAPTER 4

Total Economic Rents in Australia as a Source for Basic Income

Gary Flomenhoft

AQ1

Abstract Interest in basic income (BI) has resurged from the realization that artificial intelligence (AI) is replacing human beings in the workforce. Therefore, it is urgent to resolve the controversial question of how to finance BI, overcoming objections to presumed violations of property rights. This chapter argues that resources produced by nature or society as a whole, are the property of the public. Therefore the citizenry are entitled to receive rent for use of their property, what economists call economic rent. Figures from the *Total Resource Rents of Australia* study is used to calculate revenue available for BI in Australia.

Keywords Economic rent · Basic income · Land rent · Dividend · Royalties · Commons and common assets

Basic income (BI), or guaranteed annual income as it was referred to in the past, is once again on the policy agenda worldwide. This is partly due to the tireless efforts of advocates who have been researching and promoting it through periods of great interest like the McGovern/Nixon era in the US, when both major political parties advocated the idea, through periods

G. Flomenhoft (✉)
Acton, Canada
e-mail: Gary.Flo@uvm.edu

R. Pereira (ed.), *Financing Basic Income*, Exploring the Basic Income Guarantee, DOI 10.1007/978-3-319-54268-3_4

of low interest during the recent neoliberal era. Stalwarts continued their work such as with the creation of the BI Earth Network (BIEN) organization in Europe and the BI Group (BIG) organization in the US. One noteworthy person is the late Al Sheahan, who wrote and worked on BI tirelessly from the late 1960s until his death in 2013, to whom I dedicate this chapter.

Recently, interest has revived due to one issue in particular. Policy analysts have suddenly realized that automation and artificial intelligence (AI) are putting people out of work, and economic growth is slowing down. A typical news report online states that robots will replace 50% of human jobs in next 10–20 years.[1] Some robots in Japan are already serving as hotel desk clerks and receptionists. This has jolted people into serious consideration of how to finance people when they no longer have jobs. The lacklustre recovery from the Global Financial Crisis (GFC), and growing inequality has also motivated renewed consideration of BI.

John Stuart Mill in his conception of the "stationary state" early imagined the leisure society, which was also expected by John Maynard Keynes in his projections of the future, both expecting machinery to replace human labour to a very significant extent. The problem then as now was how would people get paid.

One of the most contentious issues has always been the question of how to finance a guaranteed income. The main objection is the common aversion to giving people "something for nothing", and the redistribution of income that would result from most tax-based schemes that are commonly discussed in Europe. The longest lasting, currently operating BI scheme is the Alaska Permanent Fund Dividend,[2] which provides between US$1,000 and $2,000 per year to every resident of Alaska over the age of one. This plan avoids the thorny issue of income redistribution altogether, by basing the dividend checks on royalties from oil on state land, what economists call economic rent. A pair of recent books on the Alaska system explore this model (Widerquist and Howard 2012).

Economic rent is defined as the unearned income from production of a good after all expenses are paid, including a normal rate of profit. Sometimes it is called "windfall" profit, but it comes from payment for a production factor that has no production cost. Oil in the ground was produced by nature at no cost. It was created by geological processes over millions of years. Human beings had nothing to do with its creation. Although prospecting, exploration, well drilling, extraction, refining, transporting, etc. all have costs, the price of oil normally far exceeds these costs including a normal rate of profit. This is the source of unearned economic rent. Figure 4.1

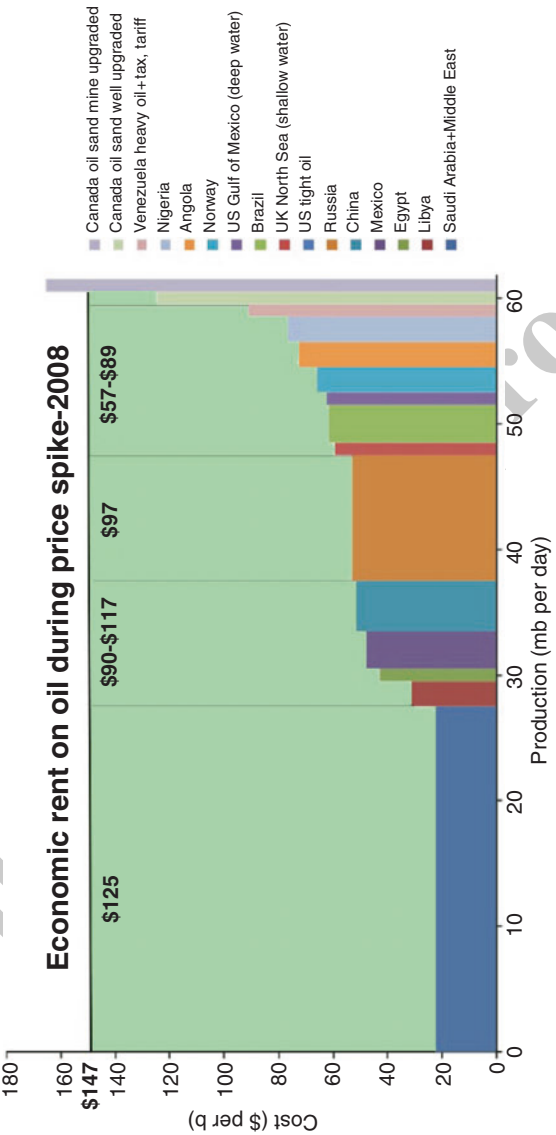

Fig. 4.1 Economic rent from oil extraction

This figure will be printed in b/w

shows the cost of extraction of oil from various countries around the world. When oil hit $147 per barrel in 2007, the economic rent (shown in green) ranged from $57 to $125 per barrel depending on the cost of extraction. Oil prices have recently dropped very low, which makes many wells uneconomical, but there is still economic rent from many wells.

Economic rent derives from the social and natural commons that are created by nature or by society as a whole.[3] If it comes from the commons, then by definition it is public not private property. Therefore, no one's income is taken when rent is collected, so there is no redistribution, the bogeyman of many conservatives. There are two opposing theories of economic rent, the democratic theory and the liberal theory. John Warnock describes them this way:

> The democratic theory of rent suggests that governments should maximize their collection of rent to the benefit of their publics, who own the resources. The liberal theory of rent suggests that public resources should be privatized and employed to make profits, and that rents should remain in private hands either entirely, or enough to ensure investment in the industry. (Warnock 2006: 6)

One approach to BI is to base it on the democratic theory of rent, with the assumption that the commons belongs to the public. John Locke and Thomas Paine's theories of property both supported this contention. Locke said that the commons belongs to all and the only justification for private land is if there is "as much and as good left in common for others". Locke contended that private property arises from the application of labour to the commons (Locke 1698). Likewise, Paine believed that the Earth is the common property of humanity, and it is only the products of labour that are private (Paine 1797). There is ample justification for the commons belonging to the public. This principle can be expanded to many natural resources besides oil, and extended to socially produced resources as well.

It is on this basis that Karl Fitzgerald updated the figures of the late Tony O'Brien's *Total Resource Rents of Australia* (1999) in 2013. Fitzgerald's report is based on the following categories of economic rent: Land Rent, Natural Monopolies, and Resource Rents, then adds in Sin Taxes and Non-Tax Receipts. The total figure amounts to AU$386.9 billion annually, which compares favourably to total government operating revenue at all levels of $390.1 billion. For economic rent alone, the total is $340.7 billion.

With a 2016 Australia population of 24,050,120 this economic rent amounts to $14,166 per person.

For this exercise we will assume that taxes are retained in order to fund all existing government programs and services, so we must subtract existing revenue from estimated economic rent to see what remains. We do not want to shortchange government of existing revenues, so we will subtract these from our total and only count additional economic rent generated. This does not account for the change in tax revenues that results from the collection of economic rent, or the payment of a BI. That is beyond the scope of this article, but would be worth pursuing in further research. There are several aspects to these dynamic changes that would need to be accounted for as explained in the following paragraphs.

The primary argument of conservatives and libertarians who favour guaranteed income going back to Milton Friedman, and more recently Charles A. Murray, is the huge reduction in bureaucracy and means testing infrastructure that would result, and thus the expected reduction of government expenditures. They also make moral claims on incentives and motivation, which we will leave aside. For the US, on strictly financial terms Murray claims, "This statement does not take transition costs into account, a complex issue that I set aside here except to note that a system that costs a trillion dollars less per year than the current system by 2028" (Murray 2008). Murray also lists many knock-on effects such as reduced crime, reduced unwanted births, less elderly poverty, better health, etc. We are unable to account for these effects here.

Tony O'Brien listed the following savings in his *1999 Total Resource Rents of Australia* report (Fitzgerald 2013: 42):

> Potential savings from the introduction of a Site and Resource Rent system and the removal of all other taxes could be extremely large, approaching one third of total current government outlays.
>
> Many of the following expenses would be greatly reduced or in some cases eliminated:
>
> - the cost of assessing, collecting and endeavouring to prevent the evasion of existing taxes
> - the cost of relieving involuntary unemployment and poverty which will decline and disappear as employment revives
> - the use by governments of tax concession and other privileges as "sweeteners" to solicit or hold large corporations
> - the cost of land acquisition for public purposes

Fitzgerald also cites savings in the pharmaceutical and the welfare budgets.

The second major financial impact results from the collection of economic rent on residential land. Although it is counter-intuitive to most people, the collection of a 5–6% land rent or land tax per year eliminates much of the unearned income from owning real estate, therefore reduces capital gains and speculation, and thus reduces its demand and should reduce its price. For homeowners, given a fixed average income level, if a larger share of income is spent on land taxes, this reduces the remaining amount of income left to pay for mortgages, providing a further impetus for reduced prices. It essentially substitutes a tax payment for mortgage payment. There is ample mathematical proof of this in the literature, so we won't delve into it here. The point is that the collection of economic rent on land could reduce the price of housing, which could improve disposable income, and therefore the need for housing subsidies and other transfer payments. There are a total of $71 billion in annual housing subsidies in Australia due to the inflated value of land, the largest being the capital gains tax exemption ($45 billion), and land tax exemption for owner-occupied property ($9.5 billion) (Flomenhoft 2016).

The third financial impact resulting from collection of economic rent is the reduction of so-called deadweight losses in production. This is due to paying for things that have no production cost, and allowing this revenue to accumulate in private hands instead of the public, according to the liberal theory of rent. We will not account for these benefits either.

On the progressive side of the spectrum many moral and ethical arguments have been made based on the prerogative of reducing poverty due to compassion and solidarity with the less fortunate, and also in favour of greater freedom (Van Parijs 1998). We will leave these arguments aside for now as well.

A BI using economic rent avoids all these practical and ethical arguments completely, especially the thorny issue of income redistribution, which is a major stumbling block to adoption of BI. The democratic theory of rent simply says that people are entitled to these payments because it is their property. No one disputes that a person owning stocks is entitled to dividends, that an apartment owner is entitled to collection of rent from tenants or that an owner of an oil well is entitled to royalties. Conservative Alaskans conceive of oil on state land as their property, and therefore support receiving a dividend check from Permanent Fund revenue. We won't address the question of the possible work disincentive, because wealthy trust-fund beneficiaries, and people living from investments

still seem to find productive uses of their time, whether for work or philanthropy. It is only the poor who apparently will become lazy if given unearned income. But we won't debate this.

The confusion arises when states assume the right to dispose of common property on behalf of the people. In more capitalistic countries, governments often grant ownership of the commons to the private sector in a process of privatization and sell-off of state assets. In more socialist leaning or even many capitalistic states (such as Alaska) governments may retain ownership of common assets, and use revenue for governmental services and infrastructure. Whether the people benefit or not depends on the level of democracy. We could compare use of oil revenue in democratic Norway, which has a nearly $1 trillion dollar oil fund, to a dictatorship like Saudi Arabia, where the commons are simply the property of the ruling family and the country is basically a private oil corporation. The state is not the equivalent of the public, and payment of BI from economic rent recognizes the commons as public property, not the property of the state, feudal lords or sheiks. Alaska uses oil revenues for both state funding and for the Permanent Fund and Dividend, so has elements of state and public ownership of oil rent.

The key point of Fitzgerald's *Total Resource Rents of Australia* (TRRA), is that there are many other sources of economic rent besides oil and minerals. Flomenhoft has documented 12 different common assets that could generate $10,348 of economic rent per person per year in the resource-poor state of Vermont, USA (Flomenhoft in Widerquist 2012). Natural assets in Vermont tabulated include fisheries and wildlife, public forests, ground and surface water, minerals, wind for wind power, and the atmosphere as a sink for CO_2 and other emissions. Socially created common assets included were the Internet and World Wide Web, the electromagnetic (EM) broadcast spectrum, the financial and monetary systems and the value of all land. AQ3

Fitzgerald has done a more extensive job identifying approximately 20 different sources of economic rent in Australia in Table 4.1 (Fitzgerald 2013: 5).

Fitzgerald divides the revenue into the following categories:

Part II - Calculation of economic rent
Part III – Natural monopolies
Part IV – The frontiers of monopoly
Part V – Existing government revenue

We will explore them to understand how these calculations were made.

Table 4.1 Total resource rents of Australia

Item	*Valuation $million*	*% of valuation*	*Raised $million*
Land – residential	2,794,800	5.5%	153,714
Land – commercial	338,500	6.5%	22,002
Land – rural	263,700	5.5%	14,504
Land – other	287,700	5.5%	15,791
Subsoil minerals	(67,359+14.637)[1]	40%	32,813
Oil and gas – PRR	20,229	40%	8,092
Water rights	50,000	2.60%	1,300
Taxi licenses	25,000	14,402[2]	360
Airports	1,919	40%	765
Utilities	220,000	10%	22,000
Fishing licenses	2,100	40%	840
Forestry	1800	2.7%	50
Gambling license	18,450	40%	7,380
EM spectrum	10,560	20%	2,122
Satellite orbit rights	5,100	10%	510
Internet infrastructure	64,500	10%	6,450
Domain name registration	100	3 million[3]	300
Banking license fees	43,427	40%	17,371
Corporate commons fee	1,382,000	2%	27,640
Patents	12,980	0.005%	65
Parking fees	Estimate		250
Public transport	Estimate		2,400
Liquor licenses	Govt budget		4,000
Vehicle rego, driver license	Govt budget		5,294
Sin taxes – tobacco, alcohol	Govt budget		12,510
Carbon tax	(4,020 +14,200)[4]		18,220
Govt non-tax receipts	20,323	50%	10,162
Total			**386,905**

[1]40% of BHP, RIO, and Xstrata EBITDAX (2011–2012) + shareholder dividends
[2]Number of taxi licenses 14,402 × $25,000 each = $360 million
[3]$100/domain × 3 million domains = $300 million
[4]Increase in petrol and diesel excise taxes during carbon tax regime

Land Rent

Land is the largest asset in any economy and rent from land constitutes 52.8% of the total rent calculation in this report (Fitzgerald 2013:19). Fitzgerald used a figure of 5.5% for residential, rural and other land, and 6.5% for commercial land. Residential land comprises 75% of the total land value in Australia. The land rent percentage was chosen as "just below long term

growth trends". The annual increase in land value that is typical of real estate bubbles worldwide can be seen as land rent capitalized into the price of land. When it is not collected it accrues to owners. Polanyi pointed out in 1944 that land, along with money and labour, is a fictitious commodity, that results in devastating effects on society when it is sold in markets (Polanyi 1944). The long-term trend of land prices is somewhat higher than 5.5–6.5% in Australia. From June 2014 to June 2015, land value increased from $4197.3 billion to $4722.2 billion for an increase of $524.9 billion, or 12.5%.[4] According to the HSBC, Australian home prices have risen to 24% in the past 3 years, with Sydney jumping by 39%.[5] The long-term trend is shown in Fig. 4.2. Total Australian land values increased from $665.1 billion in 1989 to $4267.5 billion in 2014 for a total increase of 541.6%. On an annual basis over 25 years this amounts to a long-term trend of 7.72% increase per year for all land.

Fitzgerald calculates potential land rent of $206.01 billion on a total land value of $3.684 trillion using the 5.5–6.5% rate. Existing land taxes are estimated at 2.5% giving existing revenue of $91.1 billion. Subtracting existing revenue from estimated land rent leaves a total of $113.9 billion in annual land rent available for BI. This comprises the largest portion of total economic rent out of a total of $252.5 billion or 45% of total rent.

Resource Rents

The TRRA report proposes a reformed Mineral Resource Rent Tax (MRRT) to base revenues on a 40% charge on Earnings Before Interest, Tax, Depreciation, Amortization and Exploration (EBITDAX). This is justified by countries such as Norway which have a 60% state ownership of oil production,[6] plus an ordinary corporate tax of 25%, 53% special tax rate and 78% marginal tax rate on profits.[7] The findings were calculated on the EBITDAX (2011–2012) earnings of the big three miners – BHP, Rio and Xstrata – totalling $67.359 billion. An additional $14.637 billion was added to EBITDAX totals to incorporate shareholder dividends paid. At a 40% rate, this sees a contribution from the entire mining sector of $32.8 billion. By comparison, in 2011–2012 the Australian government expected to earn just $1.5 billion from the mining and petroleum sector. Shareholders received $14.6 billion from the big three mining companies over this same period.

In the petroleum and gas sector, according to the ABS, the oil and gas extractions industry EBITDAX was calculated at $22.229 billion (2010–11).

AQ4

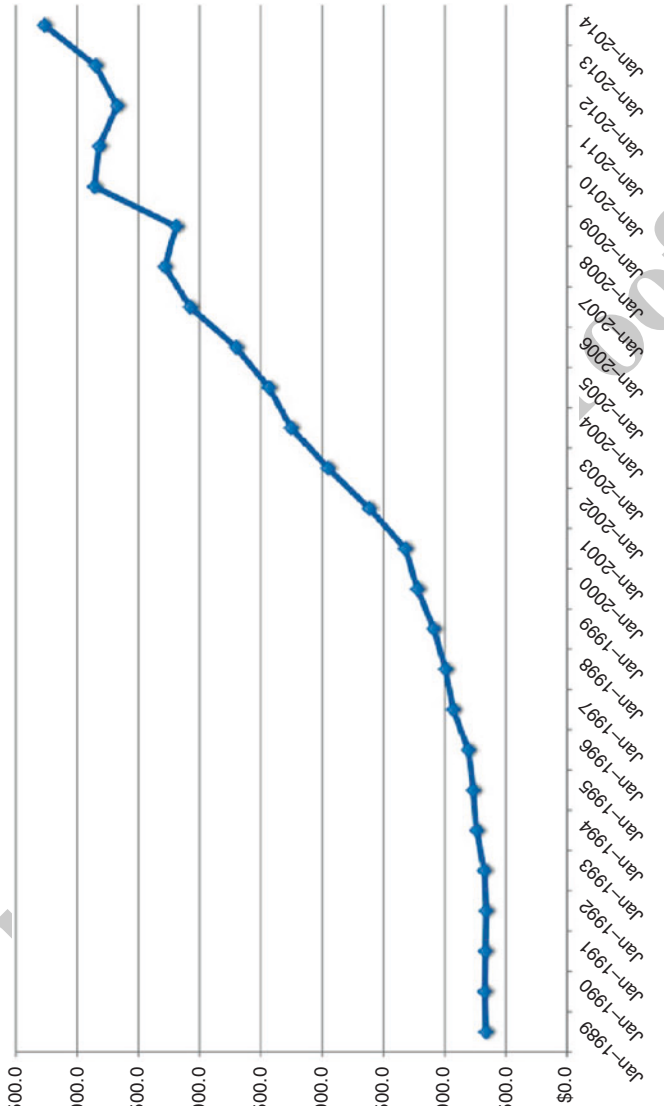

Fig. 4.2 Total Australian land prices 1989–2014 (Note: Australian Bureau of Statistics (ABS) 5204.0 – Australian System of National Accounts, 2014–2015, Table 61, column AT: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5204.02014-15?OpenDocument)

This figure will be printed in b/w

A 40% resource rent was levied to calculate the $8.092 billion contribution to government revenue. Adding minerals and petroleum product revenue together totals $40.9 billion. Subtracting $1.5 billion from existing revenue leaves $39.4 billion for BI.

EM Spectrum

Television licenses were given away in the 1950s according to Fitzgerald. Recently Australia auctioned portions of the 700 MHz EM spectrum. The sale raised $1.96 billion in one-off revenue for the 15-year license. This is equivalent to $133 million per year in payment. More than $1 billion of spectrum remains unsold. The ABS calculates the existing spectrum already allocated at $8.6 billion. If we add the recent $1.96 billion auction, the total is $10.56 billion. A 20% resource rent on the $10.56 billion total will see the multimedia industry (radio, TV, mobile) contribute $2.12 billion per annum. Subtracting $133 million from $2.12 billion per year leaves $1.989 billion for BI. This may be significantly undervalued as total spectrum value in the US is estimated at $1 trillion, according to the US economist J.H Snider (2003).

Corporate Commons

Peter Barnes relates an experience when he considered taking "Working Assets" the phone company he started public. "Our investment banker informed us that, simply by going public, we'd increase the value of our stock by 30%. He called this magic a liquidity premium. What he meant was that stock that can be sold in a market of millions is worth more than stock that has almost no market at all. This extra value would come not from anything we did, but from the socially created bonus of liquidity. We'd be reaping what others sowed" (Barnes 2006). The SEC, the stock exchanges and all the other social institutions that allowed the stock market to function, created a premium of 30% in public companies. Fitzgerald calculated a 2% corporate commons fee on the 2013 Australia Stock Exchange market capitalization of $1.382 trillion delivering $27.64 billion in annual revenue. If 30% of the value of public companies is due to the existence of the stock market itself, then 2% is rather modest. Barnes calls it liquidity rent.

Water

According to Fitzgerald, Water Entitlement holders currently pay no resource rents, and the ABS does not value the licenses in the national accounts. Robert O'Brien, managing director of Percat Water, writes that there are 140,000 license holders, with an estimated value of the water market of $50 billion.[8] Additionally, the value of access to underground aquifers has not been included. In Vermont and other US states groundwater, like surface water, has been declared a public trust resource. If government holds water in trust for the public, then government is also entitled to collect rent on behalf of the public who are its owners. With the value of 2012 Water Entitlements holding up despite regular rainfall, the report includes a 2.6% resource rent on this monopoly right. Applying that rate to O'Brien's $50 billion valuation results in an estimated $1.3 billion contribution to economic rent.

Public Utility Privatization

In the TRRA report it is stated that in October 2012, Infrastructure Australia (IA) spearheaded a move to privatize $220 billion in public assets via the sale of 82 government entities. Three existing public utilities pay a dividend of $3.2 billion to NSW, QLD, and VIC government. 79 others do not. The $220 billion valuation does not include existing private utilities. The utilities are natural monopolies, and privatization often results in higher prices. According to Queensland Energy Minister Stephen Robertson, public utilities in Queensland have lower prices than private utilities in Victoria.[9] Privatization of electrical utilities resulted in the collapse of Enron in the US, after Enron manipulated electric rates in California and bankrupted several private utilities. Public utilities did not suffer the same fate. Enron traders were recorded complaining about having to pay back all the money they stole from price gouging "those poor grandmothers in California".[10]

Fitzgerald calculates monopoly rents attributable to utilities in water, power, ports, rail and non-privatized airports at 10% on the $220 billion in assets for a total of $22 billion.

Airports

According to Fitzgerald, Australia and the UK are the only two nations in the world to have privatized their airports. To prove that this results in monopoly rent, Clive Domain has written, "Sydney Airport made an

operating profit of $773 million on $943 million in revenue. That's an operating margin of 82 per cent; the airport had to spend only $170 million to make nearly a billion. Through the miracle of accounting, Sydney airport last year lost $131 million after allowances for depreciation, debt servicing and other devices it is able to use".[11]

If government grants a monopoly to private business then it has the right to charge rent for the privilege. The TRRA report set the monopoly charge at 40% of EBITDA, amounting to $765 million in revenue.

Taxi Licenses

Government restricts the supply of taxi licenses, which creates scarcity rent. Although license holders only pay $512 per year for the privilege, 70% of licenses are leased to operators for around $30,000 per year. The average sale price of a license from 2003–2011 was over $400,000 in Brisbane and Melbourne. A Victorian Taxi Industry Inquiry suggested raising the annual fee to $25,000 to recapture the monopoly rent from license holders. The TRRA report adopts this recommendation and calculates potential revenue of $360,050,000 from a total of 14,402 licenses in Australia at $25,000 apiece. This formula may have to be changed as the paradigm of paid passenger travel is being severely challenged by Uber, Lyft and other ride services. The monopoly is being broken, which may significantly lower the value of a taxi license. This may just mean transferring the rental fee to a larger number of private vehicle operators.

Fishing Licenses and Quotas

Many valuable fishing licenses and quotas were given out for free but are now sold for large amounts of money. Fitzgerald cites bluefin tuna, abalone, jellyfish and the Northern Prawn Fishery, as fisheries generating large rents for license owners. He points out that "tuna king" Tony Santic sold Bluefin tuna quotas for $214,000 per tonne in the 1990s, to justify collection of rent on this government giveaway. Existing revenue from levy fees is given as $13.8 million on an industry valued in 2009–2010 at $2.18 billion. The report uses a 40% resource rent on $2.18 billion to generate $840 million of potential economic rent.

Forestry

The "commercial in confidence" nature of Australia's privatized forests makes data hard to come by. The same problem was encountered in the Vermont study. Information is proprietary. Nevertheless some information was available. According to the TRRA report, the Department of Agriculture, Fisheries and Forestry (DAFF) collects just five cents per cubic metre of timber and only 3.5 cents per cubic metre for export hardwood woodchip. In 2010–2011, Australia's production forests had a gross value of around $1.84 billion. DAFF collected $1.325 million for timber harvested equating to a royalty payment of 0.007%. This royalty does not come close to covering road subsidies and direct government contributions to the industry. The report estimates $50 million of potential revenue based on the annual production of $1.8 billion at a royalty of 2.7%. Fitzgerald (2013: 36) claims, "In years to come these forests will earn carbon credits and significantly increase in value according to their carbon sequestering capacity. The battle over who earns these carbon credits will be a hot issue".

Gambling

According to the TRRA report, 198,725 poker machines operate nationwide, delivering a net gambling surplus of $18.45 billion (2009–2010). The Victoria government has identified at least $50,000 per poker machine as economic rent, since the rights are auctioned for $5,500 and the machine makes $80,000 per year. $50,000 out of $80,000 is 62.5% economic rent. The TRRA report therefore makes a modest recommendation of 40% rent on the gambling surplus. A 40% resource rent on the $18.45 billion surplus would deliver $7.38 billion per year. (This is a correction on the report figure of $7.6 billion.) Deducting existing gambling revenues of $5.1 billion (2010–2011) from $7.38 billion, leaves a balance for BI of $2.28 billion. (Fitzgerald 2013: 36, 37).

Privatized Public Transport Providers

When public transit systems are built, land around transit stops increases greatly in value. Some municipalities recapture this value through special assessments in order to finance the transit system through the value they create. This is referred to as "value capture" or "value recapture". The

Melbourne Transit Rail operates the Melbourne train network and is also granted development rights above the train stations. The eight major city public transport systems are calculated to contribute $2.4 billion in revenue. Existing revenue consists of Sydney's RailCorp $74 million in payroll taxes and fringe benefits in 2010–2011, which must be subtracted.

Cybersquatting of Internet Domain Names

The term "cybersquatting" refers to purchasing a domain name, which a related business will one day see value in. For example, domains such as fridges.com.au sold for $20,000, sextoys.com.au for $25,500 and investmentproperty.com.au for $125,000. It was reported that Apple paid at least US$1 million to Michael Kovatch for the transfer of the iPhone.com domain name. No economic value is added by the middleman acquiring the domain for a registration price of as little as A$1. Any selling price above this is a pure economic rent. According to Deloitte Access Economics, by August 2012 total domain names registered in Australia reached over 3 million. The TRRA report recommends a fee of $100 to collect this monopoly rent and to discourage holding domain names out of use for future unearned profit. Applied to 3 million domain names, this will result in $300 million revenue.

Patents

Patents are a government-granted monopoly for a fixed period of time on research and development (R&D) investments. According to the Australian Bureau of Statistics (ABS), the mean lifespans of standard patents filed in Australia between 1980 and 2001 were between 10 and 13 years.[12]

The example of "patents on life" can be used to explain the logic of collecting a share of patent value. The patenting of genome sequences such as the BRAC1 and BRAC2 cancer genes is very controversial. Prime Minister Turnbull is quoted as stating that, "Companies holding these patents are able to charge very high fees to anyone who wants to test to see if the gene exists within their own bodies". If a patent is a government-granted monopoly, it is reasonable for the government to recover some of this cost from patent holders.

The ABS accounted for R&D spending in 2007–2008 with an increase in Gross Capital Formation of AU$320 billion, and estimated GDP increase of $12.9 billion. Fitzgerald uses the R&D impact on GDP as a

proxy for patents, and proposes a minimal 0.005% charge on 2007–2008 ABS R&D value of $12.98 billion, providing revenue of $64.9 million. Further analysis can more accurately determine the value of the monopoly privilege granted to patent holders, while maintaining the incentive to invent.

Satellite Orbits

The collection of rent on satellite orbits above Australian airspace is a questionable assertion in light of current space law. Carol Buxton points out that satellite orbital slots are allocated according to the *a priori*, or the *posteriori* system which means "first in time, first in right" (Buxton 2004: 689). The International Telecommunications Union (ITU) has granted some orbital slots as the need arises, favoured by the countries having space technology. "The a *priori* system, however, allots a number of slots to each nation, regardless of whether use of the slots will ever occur. Because less-developed nations fear that they will lose access to orbital slots due to their insufficient technology, they prefer the latter [a priori] system" (Buxton 2004: 703). The drawback of the *a priori* system was demonstrated by Tonga, which applied for 16 orbital slots, and was eventually granted six. Tonga then auctioned five allotments for $2 million per year for each orbit, and leased the remaining allotment. This demonstrates the problem with granting property rights to agents who do not plan to use the resource, but can profit from the labour of others, a form of exploitation.

> In 1976, several less-developed nations located at the equator claimed territorial
> sovereignty over the geo-stationary orbit with the Bogota Declaration. The nations
> contended that the natural resources of each sovereignty necessarily included the
> geostationary orbit above that territory. Though the Declaration directly conflicted with
> the Outer Space Treaty, which prohibits national appropriation of space, it became
> "effective as a political device that brought attention to developing countries" concerns
> over being prohibited access to the geo-stationary orbit by developed countries that

> already possessed the technological skills and resources necessary to utilize the resource'. This resulted in the implementation of Article 33 of the ITU's Radio Regulations, which requires that the ITU consider "the special needs of developing countries and the geographical situation of particular countries". The entire system directly conflicts with the Outer Space Treaty if the ITU grants slots to nations because the Outer Space Treaty expressly prohibits national appropriation. The ITU seems to focus on the idea of "access" rather than ownership. (Buxton 2004: 705)

The Space Foundation estimated the global satellite industry generated $257 billion in 2008. The TRRA report uses the Australian 2% share of global GDP applied to the satellite industry's $257 billion to get a figure of $5.1 billion. A 10% resource rent would generate a $510 million contribution. This figure might be considerably higher now due to the growth in data traffic since the calculation of these 2009 figures. Rather than basing rent on usage of airspace over Australia, the allocation of orbital slots by the ITU is bound to generate some rents. Since their slots are scarce, any Australian company which is able to acquire an orbital slot, is likely to have access to a partial monopoly, which generates rents. This scarcity rent might be a better source for the orbital rent.

Internet Infrastructure

The Internet itself was created by taxpayer funding in the US through the military research arm Defense Advanced Research Projects Agency (DARPA). Internet service providers (ISPs) charge users for access to the Internet. Therefore, it is not unreasonable for the public to consider charging ISPs for access to the publicly created Internet. If a private company had developed the Internet, but other companies were using it and charging people for access, I am sure that company would be suing for its property rights. But the public has no such advocate for the right to its property. Government is typically dominated by economic interests who favour the liberal theory of rent, giving them ownership rights to the commons.

According to the TRRA report, the cost of installing Australia's National Broadband Network (NBN) is expected to be $43 billion with

existing Internet infrastructure estimated at half that value. Since this is a public investment, surely Internet service providers should not be granted ongoing use of it for free since they charge users for access. Fitzgerald proposes a 10% resource rent on the $64.5 billion existing asset base providing $6.45 billion in revenue annually from the industry, including NBN and Internet service providers such as Bigpond, Optus and iiNet. Sir Tim Berners Lee created the World Wide Web including URL, http and html protocols in his spare time working at the *Conseil Européen pour la Recherche Nucléaire* (CERN) in Geneva, but required CERN to provide it as an open source common to everyone, so it would not be appropriate to charge for access.

Banking Licenses

The publicly granted privilege of banks to create money through bank loans may be the most valuable public asset given away by government. According to the Bank of England private banks create 97% of the money supply through loans,[13] of which 75–80% are mortgage loans. Professor Michael Hudson has stated, "a property is worth whatever a bank will lend, because that is the price that new buyers will be able to pay for it".[14] Reforms to land rent proposed in the report would curtail banks' ability to profit from capitalized land rents. Since property makes up a major proportion of their balance sheets, a reduction in property prices will affect their capital base. Another approach is to enforce 100% reserve requirements on banks, which would prevent them from creating credit and would restrict them to only loaning out deposits on hand, serving as intermediaries between depositors (savers) and borrowers. If there is any doubt that banks create money, consider that private central banks in the US, EU and Japan have created trillions of dollars in "quantitative easing" a euphemism for (electronic) money printing. This money was then given to banks in exchange for their non-performing assets.

Profits for the big four Australian banks (National Australia Bank [NAB], Commonwealth Bank [CBA], Australia and New Zealand Banking Group [ANZ] and Westpac [WBC]) totalled $27 billion (cash basis, 2011–2012), with dividends of $16 billion. A 40% resource rent is proposed on these earnings, which delivers $17.317 billion in rent for the value of a banking license. Revenue would increase with the inclusion of the rest of the banking industry (Fitzgerald 2013: 41).

Carbon Taxes

At the time the TRRA report was written the carbon tax was in effect. It has since been repealed. It is listed as existing government revenue, but is really rent for use of the atmosphere as a sink for waste. In the past the impact of Carbon dioxide (CO_2) on the climate was unknown, but it is now obvious that the climate is changing due to anthropogenic greenhouse gases including carbon dioxide (CO_2), nitrous oxide (N_2O) and methane (CH_4). Charging rent for use of the atmosphere as a dump for waste helps to reduce emissions, due to increasing the price of fossil fuels, and can also provide revenue to mitigate the impacts.

2011–2012 carbon taxes increased from $4 billion to $18.2 billion by moving the petrol and diesel excise taxes to the source, meeting efficiency outcomes according to the report. The recommendation is that carbon tax revenue should be raised by a carbon tax based on the heat content burnt as measured by the British Thermal Unit (BTU). However, this method favours dirtier fuels because coal, for example, produces far more pollution per unit of CO_2 than oil or natural gas. It is better to charge per tonne of carbon, which favours the cleaner fuels. Recommendations for carbon taxes around the world vary from $10 to $100 per tonne. The price of carbon will most likely depend on the severity of the climate crisis. 2015 greenhouse gas emissions in Australia were 549.3 Mt CO_2-equivalent according to the department of the environment.[15] At a rate of $10/ton the revenue would be total $5.49 billion and at $100/ton it would be $54.9 billion.

In previous discussions of carbon taxes with policymakers in Vermont, the figure of $100/ton evokes a somewhat shocked response that this is an inordinately high figure. To put it in perspective, consider that $100 per ton of carbon on a molecular weight basis is equivalent to almost $1 per US gallon of petrol (89c). According to the OECD the average petrol tax among the 34 advanced economies is $2.62 per gallon, and goes as high as $4.32 in Turkey.[16] So that is equivalent to a carbon tax of $294–485 per ton. From that perspective $100/ton of carbon is rather modest.

Summary

For the final calculation we start with total economic rent plus government revenue from monopolies of $386.9 billion. From this figure we subtract existing government revenue in each category so as not to shortchange government. To this we add new carbon tax revenue of $54.9 billion,

leaving a total of $289.3 billion economic rent. Now that we have subtracted existing revenue, we can look at the total economic rent available for BI in Australia. Dividing the total of *$289.3 billion* by the current population of *24.05* million, results in a per capita BI of *$12,027*. This is an amount that others have arrived at from very different premises based on a subsistence level income. Some analysts are concerned that the work incentive will be reduced if the BIG is too high, and this figure would probably reassure them, since it is by no means exorbitant. If several members of a family were able to obtain this income, it might be enough to live on, but only barely enough unless the cost of housing was substantially reduced. It is based entirely on dividends that people are entitled to as their share of common wealth, and these figures demonstrate that it is also practical and feasible (Table 4.2).

Table 4.2 Economic rent minus existing revenue

Item	*Valuation $million*	*% of valuation*	*Raised $million*	*Existing revenue $million*	*Remainder $million*
Economic rent-land and resources				**~2.5%**	
Land – residential	2,794,800	5.50%	153,714	69,870	83,844
Land – commercial	338,500	6.5	22,002	8,463	13,540
Land – rural	263,700	5.50%	14,504	6,593	7,912
Land – other	287,700	5.50%	15,791	7,193	8,599
Total land	**3,684,700**		**206,011**	**92,118**	**113,894**
Subsoil minerals	67,359 +14.637	40%	32,813	–	–
Oil and gas – PRRT	20,229	40%	8,092	–	–
Total minerals and petroleum			**40,905**	**1,500**	**39,405**
Natural monopolies					
EMS	10,560	20%	2,122	1960/15=133.1	1,989
Corporate commons fee	1,382,000	2%	27,640	0	27,640
Water rights	50,000	2.60%	1,300	?	1,300
Utilities	220,000	10%	22,000	3,200	18,800
Airports	1,919	40%	765	0	765
Taxi licenses	25,000	14,402	360	7.4	352.6

Table 4.2 (continued)

Item	*Valuation $million*	*% of valuation*	*Raised $million*	*Existing revenue $million*	*Remainder $million*
Fishing licenses	2,100	40%	840	13.8	826.2
Forestry	1800	2.7%	50	1.3	48.7
Gambling license	18,450	40%	7,380	5,100	2,280
Public transport	estimate		2,400	74	2,326
Frontiers of monopoly					
Domain name registration	100	3 million	300	0	300
Patents	12,980	0.005%	65	0	65
Satellite orbit rights	5,100	10%	510	0	510
Internet infrastructure	64,500	10%	6,450	0	6,450
Banking license fees	43,427	40%	17,371	0	17,371
Existing revenues					
Parking fees	Estimate		250		0
Liquor licenses	Govt budget		4,000		0
Vehicle rego, driver license	Govt budget		5,294		0
Sin taxes - tobacco, alcohol	Govt budget		12,510		0
Carbon tax	4,020 +14,200		18,220	(18,220 repealed)	54,930
Govt non-tax receipts	20,323	50%	10,162		0
Total ($million)			**$386,905**		**$289,252**
Population (million)					**24.05**
BI per capita					**$12,027**

Notes

1. Chris Smith, "Bank of England: 95 million jobs going to robots in the next 10 to 20 years", November 16, 2015 http://bgr.com/2015/11/16/robots-replacing-human-jobs/.
2. Alaska Permanent Fund Corporation website: http://apfc.org/home/Content/home/index.cfm.
3. Adapted from Cambridge Energy Research Associates (CERA-defunct) "Ratcheting Down: Oil and the Global Credit Crisis", 2008.

4. Tomales Bay Institute, "State of the Commons Report": 2, 35, 2002–2003 http://bollier.org/commons-resources/commons-reports.
5. Dan Moss, The New Daily, "Cabinet Colleagues Jump to Hockey's Defence", June 10, 2015.
6. Alberta Department of Energy, "Let's Talk Royalties: Let's Talk About Norway", 2015 https://letstalkroyalties.ca/did-you-know/lets-talk-about-norway/.
7. Norwegian Ministry of Petroleum and Energy, "The Petroleum Tax System", (Update) November, 2016 http://www.norskpetroleum.no/en/economy/petroleum-tax/.
8. Robert O'Brien, The Eureka Report, "The Ultimate Liquid Asset", April 19, 2010 http://www.eurekareport.com.au/article/2010/4/19/commodities/ultimate-liquid-asset.
9. Stephen Dziedzic, ABC News, The World Today "Government Pushes States to Privatize Power", December 15, 2011 http://www.abc.net.au/news/2011-12-13/government-pushes-states-to-privatise-power/3727966.
10. Richard A. Oppel Jr., New York Times, "Word for Word/Energy Hogs; Enron Traders on Grandma Millie And Making Out Like Bandits", June 13, 2004 http://www.nytimes.com/2004/06/13/weekinreview/word-for-word-energy-hogs-enron-traders-grandma-millie-making-like-bandits.html?_r=0.
11. Clive Domain, Traveller, "The True Cost of Our Airports", August 29, 2011 http://www.theage.com.au/travel/blogs/travellers-check/the-true-cost-of-our-airports-20110829-1jha7.html.
12. "5310.0.55.002 – Information Paper: Implementation of New International Statistical standards in ABS national and International Account", Sept. 2009: http://www.abs.gov.au/ausstats/abs@.nsf/Products/5310.0.55.002~September+2009~Main+Features~Chapter+6%20Research+&+Development?OpenDocument.
13. Michael McLeay, Amar Radia and Rayland Thomas, Bank of England, "Money in the Modern Economy: an introduction", 2014Q1 http://www.bankofengland.co.uk/publications/Pages/quarterlybulletin/2014/qb14q1.aspx.
14. Michael Hudson, "America's Deceptive Fiscal 2012 Fiscal Cliff", Dec. 28, 2012 http://michael-hudson.com/2012/12/americas-deceptive-2012-fiscal-cliff/.
15. Department of the Environment, "Quarterly Update of Australia's National Greenhouse Gas Inventory": June 2015, http://environment.gov.au/climate-change/greenhouse-gas-measurement/publications/quarterly-update-australias-national-greenhouse-gas-inventory-june-2015.

16. Kyle Pomerleau, Tax Foundation, "How High Are Other Nations Gas Taxes?" March 3, 2015 http://taxfoundation.org/blog/how-high-are-other-nations-gas-taxes.

References

Barnes, P. (2006) *Capitalism 3.0 A Guide to Reclaiming the Commons*. San Francisco: Berrett-Koehler.

Buxton, C. R. (2004) "Property in Outer Space: The Common Heritage of Mankind Principle Vs. The 'First In Time, First In Right' Rule of Property Law." *Journal of Air Law and Commerce* 69(4). AQ6

Fitzgerald, K. (2013) *Total Resource Rents of Australia, Harnessing the Power of Monopoly*. Melbourne: Prosper Australia.

Flomenhoft, G. (2016) *GST or Land and Resource Taxes? A Question Of Values*. (unpublished). Melbourne: Prosper Australia.

Locke, J. (1698) *Second Treatise of Government*. England: Awnsham Churchill.

Murray, C. A. (2008) "Guaranteed Income as a Replacement for the Welfare State." Basic Income Studies 3(2). AQ7

Paine, T. (1797), *Agrarian Justice: Opposed to Agrarian Law, and to Agrarian Monopoly*, London -eBook, Paris: printed by W. Adlard. London: re-printed for T. Williams, No. 8, Little Turnstile, Holborn.

Polanyi, K. (1944) *The Great Transformation*. Toronto: Farrar & Rinehart.

Snider, J.H. (2003) *The Citizen's Guide to the Airwaves*. Washington, D.C: New America Foundation.

Van Parijs, P. (1998) *Real Freedom for All, What if Anything Can Justify Capitalism?*. Oxford: Clarendon.

Warnock, J. W. (November 2006). *Oil and Gas Royalties, Corporate Profits, and the Disregarded Public*. Parkland Institute and Canadian Centre for Policy Alternatives – Saskatchewan Office

Widerquist, K., and M. Howard (Eds.) (2012a) *Alaska's Permanent Fund Dividend*. New York: Palgrave Macmillan. AQ8

Widerquist, K., and M. Howard (Eds.) (2012b) *Exporting the Alaska Model*. New York: Palgrave Macmillan. AQ9

Chapter 4

Number	Query
AQ1	Please provide affiliation details and author biography of the author.
AQ2	Please specify whether this is 2012 a or b.
AQ3	The reference "Widerquist 2012" is cited in the text but is not listed in the references list. Please either delete in-text citation or provide full reference details
AQ4	Please provide the expanded form of acronym "TRRA, ABS, and BHP".
AQ5	Table 4.2 was not cited in the text. Please confirm if the inserted citation is okay.
AQ6	Please provide missing page number for the "Buxton, 2004" references list entry.
AQ7	Please provide missing page number for the "Murray, 2008" references list entry.
AQ8	The reference "Widerquist, K., and M. Howard, 2012a" is listed in the references list but is not cited in the text. Please either cite the reference or remove it from the references list.
AQ9	The reference "Widerquist, K., and M. Howard, 2012b" is listed in the references list but is not cited in the text. Please either cite the reference or remove it from the references list.