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Investing in a Job Guarantee for Australia

William F. Mitchell and Martin Watts[1]

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1. Introduction

The coronavirus pandemic has thrown the Australian labour market into chaos and threatened to leave a generation of Australians without adequate work or no work. The Australian government stimulus programs have not been sufficient to curb the significant increase in official unemployment and hidden unemployment since the crisis started impacting in March 2020. In part, this is because the scale of the fiscal stimulus was grossly inadequate given the problems faced, especially the uniqueness of the lockdowns and their impacts on the ability of workers to maintain their jobs. Further, the programs introduced were not designed to create jobs.

However, the Australian labour market was weakening before we entered the crisis. Since the first of the oil shocks in the early 1970s, the underutilisation of labour either through official unemployment, or, since the 1991 recession, through underemployment has remained at elevated levels. The unemployment of the 1990s, gave way to the underemployment in the 2000s. Since February 1978, Australia's unemployment rate has averaged 6.2 per cent. By contrast in 1974, the rate of unemployment was less than 3 per cent. And since the beginning of 1991, underemployment has averaged 7.6 per cent.

Both sides of politics now eschew the adoption of policies of direct job creation to reduce the rate of unemployment.[2] Monetary and fiscal policy has been geared to keeping inflation low and to achieving fiscal surpluses, respectively. There is a belief that if inflation is kept in check, then deregulated markets will deliver the necessary and sufficient conditions for the return to full employment.[3]

The evidence doesn't support the supposition.

At the same time unemployment is now viewed as an individual problem rather than a collective problem. Governments now talk of full employability rather than full employment. The 'job services' industry, the privatised offshoot of the old Commonwealth Employment Services, manages the unemployed with a rather pernicious system of work tests. Various compliance tests have evolved since the late 1990s with no evidence to support the claims that this system assists unemployed workers back into sustained, well-paid, productive work.

The persistent shortage of work is evidenced by the fact that the unemployment to vacancies ratio has always been well above one. In May 2020, there were more than 7 unemployed for every job vacancy, and the problem of a lack of jobs intensifies if we include the 600 thousand odd who have dropped out of the labour force due to lack of work and the 1.8 million who are underemployed, and, desire, on average, an additional 15 hours of work per week.

Meanwhile, the economic and social costs of these persistent elevated levels of labour underutilisation are substantial (Sen, 1997a,b; Mitchell and Watts, 1997; Watts, 2000a, Watts and Mitchell, 2001). In this paper, we estimate the income losses arising from elevated levels of unemployment in Australia and the investment required to introduce a Job Guarantee (JG) Program under the principles of the buffer stock mechanism to reduce unemployment in Australia (Mitchell, 1998). We adopt conservative assumptions. The annual value of increased output under a JG Program is calculated to be about $101.3 billion, due to the conservative assumption of lower productivity in the public sector.

The net increase in government outlays of $51.7 billion takes into account the wage and on-costs of direct job creation, the impact of the multiplier on private sector job creation, income tax and profits tax and other savings (for example, the reduction of unemployment benefits). Our estimates ignore many other ways in which the government would reduce outlays, for example, via the impact of unemployment on personal health, crime rates, mental health incidence, and more. In that sense, the exact net outlays required to introduce a Job Guarantee in the way described in the paper are a maximal estimate.

In Section 2 we outline the methodology used to compute the economic costs of maintaining an unemployment rate at 10 per cent rather than 4 per cent. The income losses scale up and down in a linear fashion for different benchmarks. In Section 3 the methods used in Section 2 are developed to outline the estimation of the costs of implementing a Job Guarantee. Concluding remarks follow in the final Section.

2.   The Costs of Unemployment

2.1   Introduction

Sustained unemployment imposes significant economic, personal and social costs (Sen, 1997a,b; Watts and Mitchell, 2001, and Mitchell and Fazi, 2017). Our main focus in this paper are the measurable static economic costs of unemployment, namely foregone output, and the fiscal investment required to implement the Job Guarantee. In doing so, we do not consider the wider costs of unemployment, which include:

- social exclusion and the loss of freedom;
- skill loss;
- psychological harm, including increased suicide rate;
- ill health and reduced life expectancy;
- loss of motivation;
- the undermining of human relations and family life;
- racial and gender inequality; and
- loss of social values and responsibility.

Many of these costs are difficult to quantify but clearly are substantial given qualitative evidence from an extensive research literature (see Watts and Mitchell, 2001).

2.2   Full-time equivalent employment shortage

The first task is to estimate the output and income losses that arise from unemployment being below what we might term to be an irreducible minimum, which incorporates an allowance for frictional unemployment (people moving between jobs, etc).

A number of conceptual and empirical issues arise in the computation of foregone output resulting from unemployment, hidden unemployment and underemployment.

There are also a raft of special circumstances arising during the pandemic as a result of the way the Australian Bureau of Statistics (ABS) is choosing to classify workers in the face of the various Federal support programs (JobKeeper and JobSeeker), which have altered normal behavior.

In the case of the JobKeeper wage subsidy scheme, the ABS note that this has allowed some workers to retain an attachment with their employer even if they are working zero hours and would normally be classified as unemployed. They are currently being counted among the employed which has reduced the severity of the official unemployment count. In May 2020, the ABS estimated that some 360 thousand employees worked zero hours.

Another complication is that the ABS recently noted that if the increase in workers who were classified as 'not in the labour force' since March 2020, the so-called hidden unemployed, had been recorded within the official unemployment count (given these workers were functionally equivalent) then the unemployment rate would have been higher by 4.2 points higher in May 2020 (ABS, 2020). In June 2020, as workers returned to the labour force, the adjusted unemployment rate (counting in the hidden unemployed) would be 10.6 per cent.

Thus, in addition to establishing a reasonable benchmark unemployment target (whether that be a concept of full employment or otherwise), the difficulty in designing our

conceptual experiment to gauge the loss of output in June 2020 arising from unemployment relative to that benchmark, is that we have a problem actually tying down what the unemployment level actually is given these complicating factors.

First, the choice of the target rate or benchmark level of unemployment is important. In the past we have used a figure of 2 per cent as our full employment unemployment rate benchmark (see Watts and Mitchell, 2001). That can be justified in a number of ways.

In this paper, we use 4 per cent, only because it is the low-point unemployment rate that the Australian economy reached in February 2008 before the Global Financial Crisis (GFC) emerged. We do not argue that this is a full employment state. In fact, we believe the irreducible minimum unemployment is below this level. Further, as you will understand, our estimates are linear and can be extrapolated relatively easily for lower unemployment benchmarks if the need arises.

So, our benchmark of 4 per cent unemployment is a first-stage policy aspiration rather than an end-goal.

Second, the aggregate labour force participation rate is pro-cyclical. Accordingly, the computation of the additional jobs to achieve the target unemployment rate must include an estimate of hidden unemployment (HU). Mitchell (2000a) used regression analysis to estimate the increase in participation associated with the target unemployment rate of 2 per cent as a way of computing the level of hidden unemployment.

In this paper, we use a simpler method, which relies on assessing how far the participation rate has deviated from its maximum value over the available data. Given that the maximum participation rate achieved since February 1978 in Australia was 66.2 per cent in August 2019, we are relatively certain that deviations since have not been driven by structural factors, such as ageing. The participation rate in June 2020 was 64 per cent. The labour force would have been 13,785 thousand in June 2020, rather than 13,320.8 thousand, if the participation rate had have remained at the August 2019 level. We consider this difference to be the level of hidden unemployment in June 2020. We abstract from gender differences in preferences for full-time and part-time employment among the hidden unemployed.

However, we do caution again adopting an assumption that there was zero hidden unemployment in August 2019. Using the estimation technique outlined in Mitchell (2000), we find that there was still potential for the participation rate to rise further than the August 2019 peak. But for simplicity, we assume that hidden unemployment is captured by the workers who have dropped out of the labour force since August 2019. It understates the true cyclical jobs response but has the advantage of being easy to understand and estimate.

Third, there were 1,556.6 thousand underemployed workers in Australia in June 2020, who on average, desire around 15 extra hours per week. That represents a massive income loss to the Australian economy and the workers who are forced by lack of overall activity to endure the hours shortfall. In the estimation that follows, we also do not include the investment required to eliminate all this time-based unemployment. We leave that issue to another time when more comprehensive data are available from the ABS. However, there would be a modest decline in time-based underemployment through the creation of more part-time jobs at our estimate of workers' desired weekly hours.

The Australian Treasury has estimated that as a result of the COVID-19 crisis, the unemployment rate would rise to 10 per cent in June 2020. They also estimated that without the JobKeeper wage subsidy program, the rate would have risen to 15 per cent. The fiscal outlay for that program over 6 months is estimated to be $A70 billion (after initially claiming the outlay over 6 months would be $A133 billion).

In June 2020, official unemployment had risen to 7.4 per cent (992.3 thousand). This is lower than was initially expected (even by the Australian Treasury) because 464.2 thousand workers have dropped out of the labour force since August 2019, in the face of collapsing job opportunities. As noted above, this represents a drop in the participation rate of 2.2 percentage points.

Then the adjusted unemployment rate would be 10.6 per cent if the 464.2 thousand workers were classified as unemployed.

To keep matters simple (and because our estimates are linear and can be scaled up and down easily in percentage point terms), the exercise we conduct here is to take the Treasury estimate of a 10 per cent unemployment rate as at June 2020 (which also is in the range that we estimated in the previous paragraph), and then compute the employment required to achieve an official unemployment rate of 4 per cent with a participation rate as at August 2019. In other words, we estimate a 6-percentage point reduction in the unemployment (from 10 per cent), taking into account that jobs have to be provided for the 464.2 thousand workers who have dropped out of the labour force. We do not attempt to include adjustments for workers on JobKeeper who are working zero hours.

Table 1 presents the underlying labour market aggregates that we need to start computing the output losses arising from mass unemployment. Our first step is to work out the full-time equivalent (FTE) jobs shortfall that the 6-percentage points unemployment gap represents.

In June 2020, out of a labour force of 13,320.8 thousand, 73.7 per cent of those classified as being officially unemployed were seeking full-time employment. Average weekly hours worked was 33.8, with part-time employees working an average of 18.3 hours per week and full-time employees 40.8 hours per week.

The apparent disparity between the required and actual composition of jobs to reduce the unemployment rate to 4 per cent arises due to the higher share of the unemployed who want full-time jobs, as compared to the full-time share of total employment.

Taken together, the total employment change required to move from a 10 per cent unemployment rate to a 4 per cent unemployment (with an August 2019 participation rate) would be:

- 1,244.9 thousand jobs (or 1,113.4 thousand FTE jobs).
- Of those jobs, 464.2 thousand would go to workers reentering the labour force (415.2 thousand FTE) and 760 thousand would go to workers currently classified as unemployed.

Table 1: The jobs required to move from 10 per cent to 4 per cent unemployment

As at June 2020	Actual	FTE
Working age population (000s)	20,823.2	
Participation rate (%)	64.0	
Peak participation rate (%) - August 2019	66.2	
Labour Force (000s)	13,320.8	
Potential Labour Force at peak participation	13,785.0	
Change in hidden unemployment since August 2019	464.2	
Official unemployment (000s)	992.3	
Official unemployment rate (%)	7.4	
Adjusted unemployment rate including change in HU (%)	10.6	
Actual Employment (000s)		
Total	12,328.5	
Full-time	8,489.1	
Part-time	3,839.4	
Employment at 10 per unemployment current labour force (000s)		
Total	11,988.7	
Full-time	8,255.2	
Part-time	3,733.6	
Employment at 4 per cent unemployment potential LF (000s)		
Total	13,233.6	
Full-time	9,112.3	
Part-time	4,121.2	
Total Jobs required to achieve 4 per cent unemployment (000s)		
Total	1,244.9	1113.4
Full-time	917.8	917.8
Part-time	327.1	195.7
Of which extra jobs for hidden unemployed (000s)		
Total	464.2	360.4
Full-time	342.2	342.2
Part-time	122.0	73.0

2.3 The income losses from mass unemployment are huge

The level of foregone output associated with the prevailing level of unemployment and underemployment is proxied by a direct measure of output per worker, that is in turn, multiplied by the number of additional employees.

Clearly this calculation depends on a number of factors, which have to be assumed.

First, which workers will close the unemployment gap specified: all Job Guarantee workers or a mix of public and private. As you will see in later sections, because the introduction of a Job Guarantee creates positive multiplier effects, ultimately the employment necessary to shift the economy from 10 to 4 per cent unemployment (as outlined in Table 1) involves a mix of Job Guarantee and private sector jobs.

Second, that mix depends on the private sector labour productivity measure we deploy. The lower the productivity, the greater the proportion of workers that gain new jobs in the private sector for a given output boost from the spending associated with the decision to offer jobs to the Job Guarantee workers. Further, in Australia's case, the capital intensity of the mining sector and its relatively small employment base, creates an upward bias in any estimate of average productivity in the private sector. Clearly, it is also likely that the productivity attained in the Job Guarantee sector will be lower than that prevailing in the non-government sector overall.

There is no definitive correct way to proceed. In this instance we assume that the private sector productivity levels per FTE worker is 80 percent of total economy wide productivity net of mining (around 90 per cent of the total) that is 72 percent of economy wide productivity; whereas the productivity of a Job Guarantee worker is her total input cost (which is a conventional way of estimating public sector productivity when services are not delivered at market prices (around 47 per cent of total productivity net of mining).

In the past exercises like this, we have conservatively assumed that the productivity of the newly employed full-time equivalent workers in the private sector is 60 per cent of the economy-wide average, reflecting the lower skills of the unemployed, , and possible capital shortages resulting from the higher level of economic activity.

The scale of annual GDP (income) loss resulting from the unemployment rate being at 10 per cent rather than 4 per cent ranges from $95,404 million (if all workers were absorbed in the retail trade sector) to $201,384 million (if the workers had average non-mining productivity). That range on a daily basis would be $261.4 million (5 per cent 2019 GDP) to 551.7 million (10.6 per cent of 2019 GDP).

However, even if the losses are at the lower end of this sort of range, the quantum is very large and represent huge deadweight losses that are never recovered, and losses of some degree accumulate every day that unemployment remains above 4 per cent

Further, we clearly do not take into account the personal and community losses noted in Section 2.1, in this calculation.

In terms of the debate about the relative scale of the losses arising from the failure to maintain full employment and microeconomic inefficiencies, the late James Tobin (1977: 468) wrote:

Any economics student can expatiate on the inequities, distortions, and allocation of inefficiencies of controls or guideposts or tax rewards and penalties. But just consider the alternative. The microeconomic distortions of incomes policies would be trivial compared to the macroeconomic costs of prolonged underemployment of labor and capital. It takes a heap of Harberger triangles to fill an Okun Gap.

Quiggin (1998) summarised a number of studies in the Australian context into the benefits of microeconomic reform and concluded that the gains were in fact "modest" and the "benefits of further reductions in tariff rates are likely to be very small". The average impact on national output estimated from a broad range of studies was much lower than the lost output from mass unemployment. Quiggin estimated the benefits to be less than 1 per cent of GDP, taking account of the impact of microeconomic reform on unemployment. Thus, there is persuasive evidence that the macroeconomic costs of unemployment, as measured solely by foregone output, dominate any realistic measure of the costs of microeconomic inefficiency. Thus direct, macroeconomic intervention is justified.

This becomes accentuated when we start to compile estimates of the social costs arising from prolonged unemployment and underemployment.

## 3.	A guarantee whichever way

There are two broad ways to control inflation and the use of buffer stocks are involved in each:

- <u>Unemployment buffer stocks</u>: Under a mainstream NAIRU regime (the current orthodoxy), inflation is controlled using tight monetary and fiscal policy, which leads to a buffer stock of unemployment. This is a very costly and unreliable target for policy makers to pursue as a means for inflation proofing.
- <u>Employment buffer stocks</u>: The government exploits the fiscal power embodied in a fiat-currency issuing national government to introduce full employment based on an employment buffer stock approach.

The point is that there is a guarantee of either unemployment or employment depending on the choice of buffer stock made by government We argue that the former is an inferior approach given the massive costs involved, in terms of daily lost income and damage to the individuals and families who have to endure the unemployment.

Full employment requires that there are enough jobs created in the economy to absorb the available labour supply. Focusing on some politically acceptable (though perhaps high) unemployment rate is incompatible with sustained full employment.

Over the last several decades, governments have abandoned their commitment to full employment and central banks have, increasingly, been given the responsibility by government for managing the price level. In conducting monetary policy to fulfill their major economic objectives, central banks manipulate the interest rate and attempt to manage the state of inflation expectations via aggregate demand impacts.

They now use unemployment as a policy tool rather than a policy target to discipline the inflation generating process. Where negative real effects from the operation of inflation-first monetary policy are acknowledged they are theorised to be necessary for optimal long-term growth and employment and small in magnitude. Mitchell and Muysken (2008) present evidence to show that these theories have little empirical support.

In Modern Monetary Theory (MMT), a superior use of the labour slack necessary to generate price stability is to implement an employment program for the otherwise unemployed as an activity floor in the real sector, which both anchors the general price level to the price of employed labour of this (currently unemployed) buffer and can produce useful output with positive supply side effects (Mitchell, Wray and Watts, 2019).

The employment buffer stock approach, termed the **Job Guarantee**, exploits the imperfect competition introduced by a fiat (flexible exchange rate) currency, which provides the issuing government with pricing power and frees it of nominal financial constraints.

We know that a currency-issuing government can purchase whatever goods and services that are for sale in its own currency including all unemployed labour. Mass unemployment is thus, always, a political choice rather than the result of financial constraints on government.

The problem with the current approach to fiscal policy is political. Governments think that large deficits are to be avoided so they **spend on a quantity rule** – that is, allocate $x billion to a program(s), which they think is politically acceptable. It may not bear any

relation to what is required to address the existing spending gap left by non-government leakages from the income-expenditure cycle.

A better basis for the conduct of fiscal policy which is exemplified in the provision of employment guarantees is to **spend on the basis of a price rule**. That is, the government just has to fix the price (the Job Guarantee wage) and 'buy' whatever is available at that price. After all, the fiscal deficit is endogenous and has to be whatever it takes to get full employment.

The Job Guarantee is thus an unconditional offer of public employment at a socially inclusive minimum wage to anyone who wants to work but cannot currently find employment. It is based on a buffer stock principle whereby the public sector offers a fixed wage job (*spending on a price rule*) to anyone willing and able to work, thereby establishing and maintaining a buffer stock of employed workers. This buffer stock expands (declines) when private sector activity declines (expands), much like today's unemployed buffer stocks.

Spending on a price rule means that the program is demand-driven, with the government providing a perfectly elastic demand curve for labour at the socially inclusive minimum wage. This is in juxtaposition to other programs which are supply-constrained (*spending on a quantity rule*), where the fiscal allocation is set, and the outcomes are thus limited.

The Job Guarantee proposal in the MMT literature was conceived independently by Mitchell (1998) and Mosler (1997-98). Other authors have also added to this literature since, including, most recently, Tcherneva (2020), A comprehensive treatment of the idea appears in Mitchell and Muysken (2008).

Mitchell (1998) argued that, if the private sector does not provide sufficient job opportunities to achieve full employment, then the government should guarantee a job at the living wage level to everyone who desires one. The workers would then choose the hours they desire to work, thus eliminating time-based underemployment as well as unemployment.

The Job Guarantee thus fulfils an absorption function to minimise the real costs associated with the flux of the private sector. When private sector employment declines, public sector employment will automatically react and increase its payrolls. The nation always remains fully employed, with a changing mix between private and public sector employment. Since the Job Guarantee wage is open to everyone, it will functionally become the national minimum wage. This means the program does not disturb the private sector wage structure and avoids the government competing for labour resources at market prices. That element is necessary to ensure the Job Guarantee is consistent with price stability.

The aim is to replace unemployment and time-based under-employment with paid employment (up to the hours desired by workers), so that those who are at any point in time surplus to the requirements of the private sector (and mainstream public sector) can earn a reasonable living rather than suffer the indignity and insecurity of underemployment, poverty and social exclusion.

The Job Guarantee is designed to generate both full employment and price stability.[4] The Job Guarantee is better thought of in MMT as a macroeconomic stabilisation framework rather than just being a job creation program. When the level of private sector activity is

such that wage-price pressures forms as the precursor to an inflationary episode, the government would manipulate fiscal policy settings to reduce the level of private sector demand. As a result, instead of creating mass unemployment, the government policy shift would see labour being transferred from the inflating sector to the 'fixed wage' JG sector, which would eventually resolve the inflationary pressures.

But in general, there cannot be inflationary pressures arising from a policy that sees the Government offering a fixed wage to any labour that is unwanted by other employers. The Job Guarantee thus involves the Government 'buying labour off the bottom' rather than competing in the market for labour. By definition, the unemployed have no market price because there is no market demand for their services. The unemployed have a zero bid in the labour market.

The Job Guarantee is also seen as a high quality automatic stabiliser, which resolves many of the uncertainties that may make counter-cyclical discretionary fiscal interventions problematic. The fiscal allocation rises and falls automatically to ensure there are always jobs available to those who want to work.

Further, if the business community or anyone else thinks the fiscal deficit is 'too high' or that there are 'too many' workers in the Job Guarantee pool – then there is a simple remedy that is available to them – they can just increase private spending (for example, invest more in productive capacity). Then the fiscal deficit will shrink, and the Job Guarantee pool will decline.

In other words, just as the fiscal balance at any point in time is significantly driven by non-government spending and saving decisions, so would the size of the Job Guarantee pool. In normal times, the pool would be relatively small. But the important point is that the Job Guarantee would create a safety net for workers in the face of the flux and uncertainty of non-government sector spending fluctuations. In that sense, it is infinitely superior to the alternative approach of using unemployment as the buffer stock to cope with these fluctuations.

There are many unfulfilled needs that could be met by Job Guarantee workers including environmental restoration, community services to the aged, the youth, and the disabled, and other similarly useful activities. Local councils have the knowledge and expertise to identify pressing social needs and employment agencies could readily establish the extent of idle labour. Such a program would generate a high rate of social return on public expenditure (Mitchell 2000b, Cook *et al*., 2008).

The Job Guarantee would be a permanent buffer of jobs that would always be available to the most disadvantaged workers as an employment safety net, thus eliminating all involuntary unemployment at all times.

Further, subject to preference, the Job Guarantee, which provides the highest quality 'work test', would be able to replace the elaborate income support schemes relating to unemployment benefit payments. However, both systems could run together if that was the preference, although it is hard to see why a society that was always capable of providing paid work would maintain a system of payments for the unemployed. The Centrelink structure could be reoriented to overseeing the federal responsibility for the Job Guarantee (see Cook *et al*., 2008).

4 Investing in the Job Guarantee

In this section, we provide estimates of the scale of investment that the Australian government would require to implement a Job Guarantee. The analysis is predicated on several assumptions, which we articulate in the following discussion.

4.1 Employment Generation

What are the impacts on public and private employment of a Job Guarantee program designed to reduce the unemployment rate from 10 per cent to 4 per cent.?

From Table 1, we know that to achieve that goal requires the creation of 1,244.9 thousand jobs or 1,113.4 thousand FTE net jobs. But, in instigating such a job creation program, the government would trigger spending multiplier effects, which would stimulate private sector employment through the higher incomes earned by the unemployed who are brought back into productive employment.

Our estimation framework takes in account this multiplier process to determine the mixture of private and public sector jobs that result from the initial expansion of public sector employment. We abstract from details such as disability support pension holders. They may be among the hidden unemployed, but we do not consider them formally.

The thought experiment we conduct is this (see Cook *et al.,* 2008 for detailed analysis of the assumptions):

1. What would happen to full- and part-time employment if the government created 100 new public sector jobs at the current legal minimum wage in Australia?
2. Each full-time employee under the Job Guarantee program is paid $A753.80 per week (the minimum wage in Australia as at July 1, 2020) and works a standard 38-hour week.
3. Each Job Guarantee job is subject to on-costs of 30 per cent.
4. Additional capital costs (supervision, equipment, etc) of 35 per cent are added to support each Job Guarantee worker. Thus, we assume that the Labour-Capital ratio for each job is 65/35.
5. The Marginal Propensity to Consume (MPC) out of wage income is 0.9 for Job Guarantee workers, 0.8 for private sector workers, and 0.6 for consumption from profit income. The Marginal Propensity to Import (MPM) is assumed to be 0.20.
6. Unemployment benefits are withdrawn when a worker takes a Job Guarantee job.
7. The tax structure is the current Australian structure as at April 9, 2020.
8. We simulate the result based on private sector productivity being 80 percent of economy wise productivity net of the mining sector.

The creation of 100 new Job Guarantee jobs in the public sector results in increases in disposable income associated with securing a public sector job for those persons registered as unemployed and for those who were hidden unemployed. This extra disposable income will reflect the extra gross income, the prevailing tax rate and the claw back of benefits.

The multiplier process then kicks in, driven by the MPC, the MPM and the tax structure (direct and indirect taxes), which leads to further increases in domestic consumption expenditure, which gives rise to increased private sector employment, the magnitude depending on the level of private sector productivity per worker. The increase in private sector employment is also spread pro-rata by part-time and full-time status.

The real impacts (in terms of employment and output) are summarised in Table 2.

Table 2 The real impacts of a Job Guarantee from 10 per cent to 4 per cent unemployment

	000s Annual
Total change in employment	1,244.9
Job Guarantee	1,044.1
New private sector	200.8
	$A billion
Total change in real GDP	101.2
Public	74.2
Private	27.1

Source: Authors' calculations.

4.2 Government Outlays and Revenue

Table 3 summarises the estimated annual changes to government outlays and revenue that would result from creating 1,244 thousand new jobs in total.

The other point to note is that our experiment assumes that the employment gains would persist in the form outlined in Table 2 for 12 months, which is, of course, highly unlikely. The probable outcome would be that investment confidence would be stimulated by the higher employment and output and that the non-government sector would start adding jobs at a faster pace and reducing the pool of workers within the Job Guarantee pool fairly quickly.

Table 3 The fiscal impacts of a Job Guarantee from 10 per cent to 4 per cent unemployment

	$A billion Annual
Gross government investment outlay on Job Guarantee	74.2
Less:	
Reduced outlays on unemployment benefits	4.5
Increased tax income on wages	6.8
Increased tax income on profits	1.1
Increased indirect taxes	10.1
Net government investment outlay on Job Guarantee	**51.7**
Change in share of government spending in GDP (percent)	2.3

The returns of having everyone in meaningful employment would be substantial. There will be those who only focus on the net investment required by Federal government to implement the scheme. In this era of fiscal surplus obsession, that would bias the case against the Job Guarantee. However, a more reasoned policy approach would be to compare this investment in the Job Guarantee relative to its overall benefits, which include dramatic reductions in outlays to other major government programs that we have not considered here (for example, disability support pension).

Mitchell (1998) and Wray (1999) argue against the Job Guarantee being measured as a cost to government. They say that the fiscal deficit should not be a target of policy makers and should instead be allowed to vary endogenously. Central to their analysis is the rejection of the analogy that is made between the budgetary constraints that households face in making their spending decisions and the financial constraints on government. They argue that Federal government spending is not constrained. The existence of mass unemployment signifies that the fiscal deficit is too low. In this context, arguments about whether the investment required to implement the Job Guarantee is too high or a feasible amount to add to the fiscal deficit are irrelevant.

5.   Conclusion

The paper has demonstrated that, even under conservative assumptions about parameter values, the static economic costs of sustained high unemployment are extremely high. The inability of unemployed individuals and their families to function in the market economy also gives rise to many forms of social dysfunction.

The apparent failure of neo-liberal supply side policies to reduce unemployment and the modest benefits of microeconomic efficiency points to the need for demand management policies. If the Government had the political will, it could readily overcome the problem of persistently high unemployment.

The arithmetic of the Job Guarantee program demonstrates that, under conservative assumptions about spending propensities, a 6-percentage point reduction in unemployment would deliver substantial net benefits to the nation.

The net investment required by the federal government is clearly within its fiscal capacity and compares well, in terms of dollar returns, to other stimulus measures that the government has introduced.

Further, the program provides a pathway for the nation to end its dependence on welfare payments and the pernicious 'unemployment' industry that 'manages' the unemployment through a never-ending cycle of punishment and failed outcomes.

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[2] Mitchell (2000b) presented data for 1970-2000, which shows that the failure of public sector employment to grow proportionately with the labour force explains a substantial portion of the persistent unemployment. The private sector achieved employment growth in proportion to the labour force growth. Between 1985-1990, private employment growth was significantly above labour force growth, whereas public sector growth actually fell and the opportunity to reduce the huge stock of unemployment was lost. In the following recession, public sector employment behaved pro-cyclically (contrary to its historical counter-cyclical tendency) and the employment gains of the late 1980s were dwarfed by the large increase in unemployment.

[3] For a concise statement of the belief that in the long-run full employment will be the outcome of low inflation see Reserve Bank (1996).

[4] See Mitchell *et al.* (2019) for an account of the in-built inflation control associated with the Job Guarantee policy.