

Theurl, Simon; Tamesberger, Dennis

Article

Does a job guarantee pay off? The fiscal costs of fighting long-term unemployment in Austria

European Journal of Economics and Economic Policies: Intervention (EJEEP)

Provided in Cooperation with:

Edward Elgar Publishing

Suggested Citation: Theurl, Simon; Tamesberger, Dennis (2021) : Does a job guarantee pay off? The fiscal costs of fighting long-term unemployment in Austria, European Journal of Economics and Economic Policies: Intervention (EJEEP), ISSN 2052-7772, Edward Elgar Publishing, Cheltenham, Vol. 18, Iss. 3, pp. 364-378, <https://doi.org/10.4337/ejeep.2021.0077>

This Version is available at:

<https://hdl.handle.net/10419/277525>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Does a job guarantee pay off? The fiscal costs of fighting long-term unemployment in Austria*

Simon Theurl**

Chamber of Labour, Vienna, Austria

Dennis Tamesberger***

Chamber of Labour, Linz, Austria

The idea of a job guarantee (JG) to tackle unemployment has become popular again over recent years. Critics often point to the fiscal costs and the macroeconomic impact of a government financing full employment. In this paper, we analyse the fiscal costs of a JG for long-term unemployed people over the age of 45 in Austria. We show that a JG pays off in the long run. Even if the amount of jobs to be provided increases in times of a recession, or if a government starts with a certain amount of jobs and increases it afterwards, the JG would pay for itself.

Keywords: *job guarantee, employer of last resort, long-term unemployment, unemployment, full employment, budget, finance, Austria*

JEL codes: *J20, J23, J45, J48, J68, H50*

1 INTRODUCTION

Long-term unemployment has become a serious challenge for European societies as a delayed consequence of the Great Recession of 2008. Even though the economies of most countries in the European Union (EU) are slowly recovering from the global financial crisis, long-term unemployment remains high in many countries (Bentolia/Jansen 2016). In 2018 long-term unemployment – defined as being out of work and actively seeking employment for at least one year – affected more than 7 million people, or 3 per cent of the labour force in the EU. Almost one in two unemployed people has been unemployed for 12 months or more. Long-term unemployment has far-reaching consequences for the individuals affected, for the economy and for society at large (Jahoda et al. 1933; Ludwig-Mayerhofer 2008; Holleder 2011). Therefore, well-designed solutions are of the essence. In the academic discussion, there are mainly two streams of thought. The first group argues for an active labour market policy, which seems to be

* The opinions expressed in this article are those of the authors and do not necessarily reflect those of the Chamber of Labour. Thanks are offered to Rudolf Moser, Oliver Picek, Mathias Schnetzer, Georg Feigl, Markus Marterbauer, Michael Mesch and Tobias Schweitzer for their helpful comments. For academic assistance we are in debt to Noah Oder and Denisa Hus. We thank Marius Wilk very much for providing data.

** Email: Simon.Theurl@akwien.at.

*** Email: Tamesberger.D@akooe.at.

Received 10 April 2020, accepted 27 January 2021

more effective for the long-term unemployed than for the average population. Here, especially human-capital-intensive programmes like providing training for the unemployed are recommended, meaning a supply-side solution (see for example Card et al. 2016; Duell et al. 2016; Kroft et al. 2016). On the other hand, the shortage of jobs is recognised as the main cause of unemployment, or rather long-term unemployment. Accordingly, the second group (see for example Minsky 1965; Wray 1998; Atkinson 2015; Tcherneva 2018; Picek 2019) suggests the creation of direct employment by the public sector. Here, the public sector acts as the ‘employer of last resort’ and provides a job guarantee (JG) for those who are not able to find work. This is what we call a demand-side solution. The main criticisms of the JG concern the costs of such a policy (Palley 2018).

This paper contributes to this discussion by designing a concrete JG for long-term unemployed people and estimating the fiscal costs based on experiences in Austria. It is structured as follows: in Section 2, we present the main idea and the theoretical background of the JG. In Section 3, the proposed JG is described in detail. The methods of cost estimation are portrayed in Section 4. We present the results of our empirical study in Section 5, and in Section 6 we discuss our findings and offer concluding remarks.

2 THE JOB GUARANTEE AS A WAY TO FULL EMPLOYMENT: THE LITERATURE SO FAR

The idea of a JG as a possible way to full employment goes back to Kalecki’s ‘Political aspects of full employment’ (1943) and first and foremost to Minsky’s ‘The role of employment policy’ (1965), both of which had a lasting impact on their authors’ scientific discipline. As the latter argued,

[t]he policy problem is to develop a strategy for full employment that does not lead to instability, inflation, and unemployment. The main instrument of such a policy is the creation of an infinitely elastic demand for labor at a floor or minimum wage that does not depend upon long- and short-run profit expectation of business. Since only government can divorce the offering of employment from the profitability of hiring workers, the infinitely elastic demand for labor must be created by government. (Minsky 1986: 343)

Minsky’s idea of public-sector jobs at statutory minimum wage, guaranteed by the government for anyone willing and able to work in order to achieve full employment in society, subsequently inspired many scholars (Mitchell 1998; Wray 1998; Forstatter 1999; Tcherneva/Wray 2005; Quirk et al. 2006; Fullwiler 2007; Watts 2010; Godin 2014) to intensively work together to develop his ideas further (Klosse/Muysken 2016: 201).

Wray (1998) ties in with Minsky’s idea of the government working as an employer of last resort (ELR), to achieve full employment in society. According to Wray, such a state of zero unemployment is not only realistically achievable, but also – quite the contrary to its critics – *not* inflationary and leads to the introduction of a minimum wage for the economy as a whole. The key argument is that although the implementation of an ELR programme will prompt an increase in government spending, these expenses are not perceived as negative since states with their own currency are able to produce almost as much fiat money as they need (modern money theory). Besides, as much as half of the costs can be covered by the associated reduction/elimination of other kinds of social spending. This would include, for instance, public spending on the unemployed within the unemployment insurance scheme or for the group of out-of-labour-force spending within social assistance (ibid.).

Tcherneva (2018) adds that this programme would not only guarantee a basic human right, as outlined in the United Nations Declaration of Human Rights (UN General Assembly 1948), but also lead to an increased income floor. The JG offers an alternative to bad, low-paid jobs, has positive effects on formerly unemployed people's mental and physical health and can even generate significant environmental benefits by creating jobs that focus, for example, on environmental clean-up or development of water- and housing-related infrastructure (see Papadimitrou 2008; Tcherneva 2018). Less recognised is that a JG could raise consciousness among the working class due to unemployment becoming a political and not a private issue. This brings society as a whole to the realisation that unemployment is neither natural nor the result of individual indolence (Ramsay 2002). A JG also helps unemployed workers to retain job skills due to a shortening of unemployment duration, and, moreover, new skills can be acquired through ongoing on-the-job training. In addition, demotivation and a total withdrawal from the labour market can be counteracted (Tcherneva 2018).

Furthermore, the cost of such a programme, as simulated by Fullwiler (2007) and Tcherneva (2018) for the US, would only amount to 1.3 to 2.4 per cent of GDP, a large proportion of this amount being recouped by positive multiplier effects. It is important to be aware of the counter-cyclical function of a JG, which leads to a stabilisation of consumer demand and tax revenue (Quirk et al. 2006). In that context, eurozone institutions could be modified by a job guarantee and a euro treasury in order to make sure that government spending is forthcoming on a permanent basis. This would enable the eurozone to follow a path to full employment (Cruz-Hidalgo et al. 2019).

There are also critics of JGs. Aspromourgos (2000), Sawyer (2003) and Tymoigne (2013) warn of JGs' inability to deal with structural unemployment due to their allegedly almost non-existent provision of training and limited learning opportunities, which consequently weakens the JG workers' skills. The arising competition between the JG and public- and private-sector activities is assessed negatively by its critics since it would induce a decrease in the JG workers' motivation to look for 'real' jobs. Further, Aspromourgos (2000), Lopez-Gallardo (2000) and Sawyer (2003) claim that a JG would endanger price stability. A microeconomic concern that Palley (2018) raises in this context is the accompanying introduction of a floor for employment conditions in the private sector as a result of a JG which many businesses could consider to be too high. When it comes to costs, the aforementioned authors argue that the expenses estimated by several proponents are far too low, which is then also used as a reason for the supposedly destabilising effects of such a JG on the economy as a whole (see for example Tymoigne 2013).

Most of the especially macroeconomic concerns call attention to the fact that countries with a deteriorated aggregated demand (AD curve) are highly susceptible to higher unemployment, which raises the JG's cost (Palley 2018). These costs can then not be fully covered by the generated revenues of the programme, which results in policy trade-offs, meaning the waiving of other costly policy proposals. There are already programmes in place that follow the JG method where the consequences can be observed. Sweden's full employment model with its activist labour market policies followed Keynes's idea of 'socialization of investment' (Keynes 1936). Between 1938 and 1970 Sweden offered, for instance, an alternative to welfarism by emphasising the 'right to work' rather than the 'right to income'. In other words, the unemployed had the right by law to work up to six months in public service. Sweden's full employment model can still be quoted as a positive example when it comes to the effects of JGs since it kept the unemployment rate under 3 per cent for decades (Kaboub 2007; Papadimitrou 2008).

There are also public employment programmes, which are part of the national labour market strategy. Their aim is to increase aggregate demand for labour in case markets fail

to create jobs to the extent required. Therefore, a public employment programme has similar aims to a JG. In the Netherlands, a similar approach was developed called Melkert 1. It targeted the long-term unemployed and combined two objectives, an increase in the number of low-qualified and low-paid jobs, and an improvement in public service quality. As a result of this programme, approximately 35 000 jobs were created in 1994 and – after its transformation into the so-called I/D job scheme (an improved version of the Melkert 1 scheme that was now specifically aimed at motivating people to find jobs outside the scheme) – another 20 000 in 1999 (see Van Berkel/De Schamphelleire 2001; Atkinson 2015).

Additionally, Antonopoulos et al. (2014) simulated the results of implementing a JG in Greece in 2012, which show very positive outcomes. Depending on the size of the programme (between 200 000 and 550 000 directly created jobs), employment would have been provided to 22 to 64 per cent of all the 1.2 million people unemployed in 2012. In this context, the annual costs of a JG would vary between 1.5 and 5.4 per cent of GDP, again depending on the size of the programme. However, multiplier effects would once more come into force, so that the real net cost would come in at between 0.6 and 2.2 per cent of GDP (see Antonopoulos et al. 2014). Also, Austria can draw on a range of experiences with different labour market policies that can be seen as forerunners of a JG. A central instrument was the Aktion 8000, which was a wage subsidy for organisations within the public and the non-profit sectors, between 1983 and 1995. Aktion 8000 was designed as start-up financing, and after a defined period, the project or the workplace should be financed by other sources (Lechner et al. 2016). In order to cope with the increasing long-term unemployment rate in Austria, which is a delayed consequence of the Great Recession of 2008 (Bentolia/Jansen 2016), the Grand Coalition government then introduced a public employment programme known as Aktion 20.000 in 2017. The aim was to create 20 000 publicly subsidised jobs for long-term unemployed people aged over 50 (Picek 2019). The Public Employment Service (AMS) paid 100 per cent of the collective agreement on minimum wages for new jobs. Net costs of around €200 million (0.05 per cent of GDP) for Aktion 20.000 have been assumed. Initial evaluations show positive effects of the pilot period of Aktion 20.000. Within the first four months, it was possible to create around 1500 new jobs for the target group (Sozialministerium 2017). In those regions where Aktion 20.000 was implemented, the long-term unemployment of the population aged 50-plus decreased on average by about 10 per cent during the pilot period. In all other regions long-term unemployment increased by about 2 per cent.

3 THE PROPOSED JOB GUARANTEE FOR AUSTRIA

The JG we discuss in this paper targets persistent unemployment which can be easily explained by the hysteresis effect (Ball 2009). Briefly, the longer the duration of unemployment, the lower the chances of re-employment. In other words, unemployment has a negative impact on psychological and physical health, knowledge and human capital might become obsolete, and after just ten months of unemployment the response of companies to an application decreases by about 30 per cent (Nüß 2017; Farber et al. 2018).

The proposed JG starts precisely at this point and aims to counteract market failure. The JG is designed for those unemployed people who need it most. To keep costs and possible deadweight loss effects as low as possible, we follow two criteria (Picek 2019). First, a lower age limit to target the unemployment group with the lowest probability of transition to employment. Second, the duration of previous unemployment to support

those people who have suffered longest from the scourge of unemployment. Table 1 shows that in the group of unemployed people with an unemployment duration of over two years, people over 45 are significantly over-represented.

Against this background we suggest a JG for all long-term unemployed people (unemployment duration of above two years) aged 45 and over who are entitled to unemployment allowance. According to Table 1, it can be assumed that in Austria 44 000 people meet these criteria (approximately 1 per cent of the labour force, or 10.8 per cent of total unemployment). The participation in the JG should be voluntary and rejecting a job offer within the JG should not be sanctioned by cancelling the person's unemployment allowance. Instead the JG should be implemented as a 'right to work' as intended in Article 23.1 of the Universal Declaration of Human Rights; if a person is unable to find a job outside the JG then he or she should be given the chance to work within the JG until the regular pension age.

The JG aims to create full-time or part-time jobs of at least 30 working hours per week, which provide living wages for the long-term unemployed. Accordingly, the wages for the created jobs have to be on the wage level agreed through collective bargaining, or at least equal to the minimum wage of €1700 (gross full-time wage) (ÖGB 2019). To minimise deadweight loss effects and distortions of competition, we suggest a similar approach to that found in Germany (BMAS 2018), namely to grant the wage subsidy in the amount of 100 per cent only for the first year. Afterwards, the wage subsidy will be reduced by about 10 per cent per year.

For the target group, there should be the possibility of coaching and training within the first two years if needed. Public and non-profit organisations are only qualified for the wage subsidy if they are able to provide meaningful employment to the target group. The wage subsidy can only be provided for new jobs.

Besides reducing long-term unemployment among those aged 45 and above, the JG also aims to develop and improve social and ecological structures. Therefore, we suggest

Table 1 Unemployment^a in Austria by age and duration, 2018

	Age	Total	Percentage of total unemployment
Total unemployment	15–24	72 761	17.60%
	25–44	185 213	44.70%
	≥ 45	156 503	37.80%
	Total	414 478	100.00%
Long-term unemployment (duration > 1 year)	15–24	19 740	13.20%
	25–44	61 620	41.10%
	≥ 45	68 509	45.70%
	Total	149 868	100.00%
Long-term unemployment (duration > 2 years)	15–24	8 416	9.87%
	25–44	32 829	38.52%
	≥ 45	43 988	51.61%
	Total	85 233	100.00%

Note: a. We use a different indicator from the AMS (special analysis), namely 'Geschäftsfall' (business case). This indicator encompasses different kinds of labour market status (unemployed, in training, searching for vocational training) and interruptions of up to 62 days; these various types of worklessness do not in fact reduce the total duration of unemployment (Tamesberger/Theurl 2019).
Source: Public Employment Service, own calculations.

a communal participatory decision-making process concerning the allocation of the subsidies. The Public Employment Service (AMS) and the social partners would not only be responsible for the administration of the JG but also for establishing a network between the AMS municipalities, non-governmental organisations (NGOs) and companies. This network is a crucial aspect of the JG concept as it ensures that only those jobs that provide the services and products which are urgently needed in the region are subsidised (for example childcare, public mobility or environmental protection). In that context, the JG can build on the experiences of ‘municipal participatory budgeting’ (Wright 2010; Cabannes 2015), which showed efficient and meaningful results.

The proposed model is a limited JG which can lead to different results compared to a universal job guarantee. The reduction in unemployment, poverty and inequality achieved by a limited JG will of course be smaller than by a universal one. It is questionable whether a limited programme could raise consciousness among the working class. However, the limited JG has the charm of a political experiment with manageable costs and consequences, which could be extended to a universal JG in the event that the pilot was successful. The advantage of a limited JG would be that politicians, labour market institutions and the local population have the chance to adapt the JG to regional demands and structures. Managing a publicly limited amount of jobs seems, as a first step, to be a more realistic approach than an attempt to solve unemployment as a whole. Also, it would be a more incremental rather than a radical change of the welfare state, which implies broader support within society in general (Anderson 2015).

4 METHOD: THE COSTS OF A JG IN AUSTRIA

The overall costs of a JG depend on several factors. Previous attempts to estimate the costs rely on input–output models or on static calculations (Palley 2018). In this paper, we analyse fiscal expenditures of a JG. We take into consideration (long-term) unemployment in- and outflows, meaning that we calculate the dynamic costs of a JG. We argue that a JG increases the productivity of long-term unemployed people. Before outlining different scenarios which illustrate the fiscal cost of a JG under different circumstances, we discuss our assumptions as well as some of the factors that have an impact on (long-term) unemployment in- and outflows.

4.1 Theoretical assumptions

From a (macro)economic perspective, the business cycle crucially determines (un)employment in- and outflows. If jobs vanish, inflows to unemployment rise and vice versa. Jobs are created or destroyed by effective demand (Blanchard/Wolfers 2000; Stockhammer 2004; Blanchard 2006; Stockhammer/Klär 2011). In a recession, inflows exceed outflows and unemployment rates increase. During a recovery, this dynamic reverses. Therefore, the duration in unemployment depends on overall economic developments (Acs 2013).

However, there is no guarantee that unemployment will vanish completely, even during an economic recovery. Due to hysteresis effects (Ball 2009), unemployment might remain high, as employability decreases with unemployment duration. That is because the duration of unemployment has a negative impact on psychological and physical health (Jahoda et al. 1933; Ludwig-Mayerhofer 2008; Holleder 2011), knowledge and human capital, and because of unemployment stigmatisation (Nüß 2017; Farber et al. 2018). The JG we propose targets these hysteresis effects. Employment (combined with special coaching and training) increases the employability of long-term unemployed people as it increases their productivity. Consequently, a JG has two major effects: first, it increases

the income of formerly long-term unemployed people, which increases effective demand and positively affects the economy (Tcherneva 2020). Second, it steadily increases the productivity of formerly long-term unemployed people, and therefore output. Due to assumed multiplier effects and increasing productivity, (long-term) unemployment vanishes, the funded jobs increasingly pay for themselves as productivity rises and the fiscal costs funding a JG decrease progressively. In other words, we understand long-term unemployment as a specific form of market failure, and a JG as an apposite solution. Above all, initial evaluations of the German programmes ‘Teilhabe am Arbeitsmarkt’ (participation in the labour market) and ‘Eingliederung von Langzeitarbeitslosen’ (integration of the long-term unemployed), which also feature this type of degressive subsidy, demonstrate a large extent of utilisation even by private firms (BMAS 2020).

Regarding the dynamics, the employability of long-term unemployed people increases, as does the transition between funded and non-funded jobs. Indeed, this is the case with social economic enterprises (SEEs). SEEs are NGOs or enterprises which specialise in transitioning long-term unemployed people from funded to non-funded jobs. They operate on the basis of a mixture of funded transition jobs and regular jobs (AMS 2018). Due to EU competition law, these firms must generate at least 60 per cent of the revenue without government subsidies. Former evaluations have shown that SEEs improve the employability of the long-term unemployed (Eppel et al. 2014).

Since we argue that the fiscal costs of a JG decline as the productivity of long-term unemployed people goes up, it is necessary to take a closer look at public jobs. Public jobs differ with respect to their capability for self-financing. On the one hand, public services which are free of charge do not pay for themselves, for example kindergartens, public schools, public healthcare, etc. However, some public services such as transport or postal services are typically not free of charge for users, but still do not cover all of the expenses they incur. On the other hand, state-owned enterprises, such as telecommunications, oil companies, or different parts of state-owned industry, may even generate a surplus. In order to keep our calculations simple, we assume a mix of JG jobs which on average generate sufficient revenues to cover all of the labour costs.

Finally, the question remains whether a JG creates new jobs or is supplanting privately generated jobs. Unfortunately, there is no conclusive answer to this question since different theoretical and empirical approaches lead to different conclusions. Microeconomic textbooks (for example, Cahuc/Zylberberg 2004) point to different theories and empirical studies compared to post-Keynesian macroeconomic textbooks (for example, Lavoie 2014). In a nutshell, the debate is about price–wage equilibria and the impact of aggregate demand. From a microeconomic and a New Keynesian perspective, unemployment is the result of sticky wages. According to this theory, unemployment is just a short-term phenomenon and market interventions would possibly do more harm than good. On the other hand, post-Keynesian macroeconomists consider unemployment as a lack of demand. They acknowledge that imperfect equilibria with unemployment are likely and that persistent involuntary unemployment exists. In the context of a JG, assumed fiscal multiplier effects play an important role: each publicly financed job would create income that is spent, therefore raising aggregate demand and production, and hence creating additional employment. As mentioned above, the theoretical debates revolve around the question of whether a JG would create additional jobs or replace existing jobs. To answer this question pragmatically, one can consider mechanisms to avoid job displacement. It is necessary to implement appropriate rules that support the creation of additional jobs rather than the replacement of existing jobs. A possible solution would be the democratic participation of local civil society to decide which work/products they want to create. This can help to create useful and additional jobs and benefit local communities.

Table 2 Overview of the scenarios and their assumptions

Scenario	Fixed costs	Progressively declining costs	Constant increase in unemployment (steady-state model)
I	Costs of public employment for a given number of people at a given point in time (one year, stable costs).	–	–
II	–	Subsidies decline by 10 per cent each year. Duration of the JG is 10 years maximum. The costs of a JG do not change over time.	–
III	–	Subsidies decline by 10 per cent each year. Duration of the JG is 10 years maximum. The costs of a JG do not change over time.	A government creates 30 000 initial jobs in the first period and adds 1500 new jobs each year. Each created job is subsidised for 10 years maximum.

4.2 Scenarios

To calculate the fiscal costs of a JG under different circumstances, we discuss three scenarios (Table 2). We assume that the decision to implement the proposed JG has no impact on labour market policy (LMP); there is no impact on the LMP budget or on the LMP strategy, either. We argue that a lack of demand or an external shock initially increases unemployment. Unemployment then stabilises at a high level due to productivity and employability decreasing as a consequence of unemployment duration. A JG, on the other hand, increases the productivity and employability of the long-term unemployed. As aggregate demand and productivity grow, the initial costs of a JG decline, and compared to the opportunity cost of paying for unemployment, the JG pays for itself.

To calculate the dynamics of fiscal costs, we first present a static model, that is, the costs of public employment for a given number of people at a given point in time (scenario I). This scenario covers the calculation of the costs of a JG in Austria (Tamesberger/Theurl 2019) and is summarised briefly below. Drawing on this calculation, we determine a basic model with progressively declining costs (scenario II). We then analyse the costs of a JG during a recession (scenario III), where the government has to increase the amount of new jobs each year.

5 RESULTS

5.1 Scenario I: one year, stable costs

Tamesberger/Theurl (2019) made a first simple calculation of a JG for Austria based on the initial experiences of the programme Aktion 20.000 (see ch. 3.3). This calculation is a comparison of the regular passive costs for an average long-term unemployed person

(expenditure on unemployment and social insurance, costs incurred by the AMS minus reflows of tax revenues and social contributions) and the active cost for each person employed in the JG scheme (expenditure on wages, social insurance and taxes minus reflows of tax revenues and social contributions). The result of this passive–active transfer (Picek 2019) shows that the additional cost for one employed person in the JG is around €6785 per year.

Financing a JG for one person costs about €36 588 gross and about €17 355 net. A JG for 45 000 people would therefore cost €1.646 billion gross (0.4 per cent of GDP). This is in line with cost calculations for the programme Aktion 20.000 (Sozialministerium 2017) and for general public employment programmes in the context of fiscal stimulus packages (Marterbauer 2010). If we consider the regular costs for the unemployed (passive–active transfer), which amount to €10 570 per person per year, the net cost of the JG would be around €305.3 million (0.08 per cent of GDP) per year.

5.2 Scenario II: progressively declining costs

In this scenario, we want to know the development of the costs of the JG proposal over time from a fiscal perspective. Costs are calculated for one person, assuming that subsidies decline by 10 per cent each year (see Appendix 1); the duration of the JG is a maximum of ten years. For reasons of simplicity, we assume that the costs of a JG do not change over time. This assumption necessarily leads to a slight underestimation of actual costs, as we disregard such changes as increasing wages.

In the first case, one participant remains in a funded job for at least ten years. During this time, he or she improves his/her skills, learns and begins to cover labour costs. Within ten years, the costs of the JG would rise to €95 453 gross per person per year. These are the costs of the JG job when subsidies decline by 10 per cent each year, depicted in Figure 1 as the gross cost of the job guarantee. Unemployment benefits, on the other hand, add up to €10 570 each year. The cumulative cost of the JG would equal the cumulative cost of doing nothing (that is, the cumulative cost of unemployment) after just 8.82 years. That

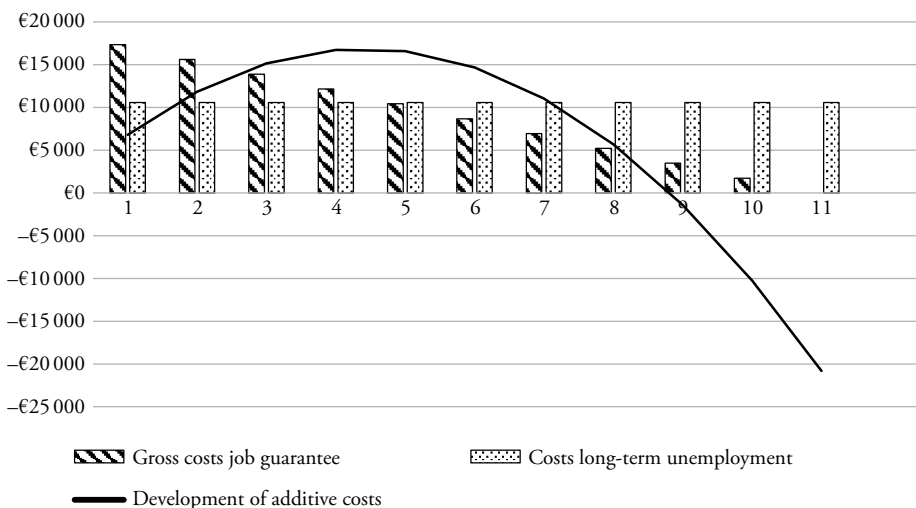


Figure 1 Development of the fiscal costs of a JG over time

is, the fiscal balance of the public sector would reach the initial level as it was before the JG was launched. Furthermore, after roughly the fifth year of the JG's implementation, the JG already begins to pay for itself and the fiscal balance improves.

In the case of premature transition to a non-funded job, the JG will pay for itself much earlier. The same is true if the JG employment is funded for two instead of ten years. If a JG employee transitions to self-financing employment after two years, the costs of the JG would be €32 974. On the other hand, the costs of paying for unemployment amount to €31 710 within three years and increase by €10 570 each following year. In this case, a JG pays for itself after three years.

In the case of the premature termination of a JG employment after two years – that is, if the participant becomes unemployed after two years – net costs would add up to €11 834. We can now combine both results. A JG with a duration of two years would pay for itself after four years even if 50 per cent of the participants become unemployed again once funding ends.

5.3 Scenario III: progressively declining costs and constant increase in unemployment

In this scenario, we analyse the development of fiscal costs in the event that unemployment rises and costs decline progressively. We want to know how the costs of a JG develop if a government increases the amount of new jobs each year (see Appendix 1). This could be the result of anti-cyclical spending, such as if a government creates jobs to counter a recession. It may also be the case if a government plans to implement a JG gradually.

By way of an example, we suppose that unemployment increases by 5 per cent each year (compared to the initial year). To fight increasing unemployment, a government creates the same amount of additional jobs in total. We start with 30 000 initial jobs in the first period and add 1500 new jobs each year. This way, a government would create 45 000 jobs within ten years. The cost of the JG would add up to €3.723 million (0.009 per cent of GDP), whereas the cost of unemployment would have risen to €3.884 million (0.010 per cent of GDP). After ten years, the JG pays for itself.

In the event that the JG funding successfully ends after two years, costs rise to €1015 million. However, we assume that inflows into unemployment would remain at 1500 people each year and (as long as a government pays for 1500 additional jobs) costs increase by €49 million each year. Therefore, after four years, the costs would rise to €1114 million. Nevertheless, in comparison, the costs of unemployment increase to €1.364 million within four years and (*ceteris paribus*) the fiscal balance of the public sector would have improved slightly, compared to the initial level four years earlier.

6 DISCUSSION

In this paper, we have analysed the development of the fiscal costs of a JG (in Austria) and compared them to the cost of paying unemployment benefit. In our model, we assume that a JG is accompanied by declining costs, because a JG increases the productivity of long-term unemployed people and aggregate demand.

Following our proposal for implementing a JG in Austria, we suggest reducing the subsidies for the JG by 10 per cent each year. Our results show that a JG is economically reasonable and:

1. It is a humane way to combat long-term unemployment.

2. It aims to develop and improve social and ecological structures.
3. It can be conceptualised as a bottom-up approach by including civil society in the decision-making process.
4. After nine years, the cumulative costs of financing unemployment exceed the initial costs of the JG as productivity and output rise.

The lesson learned is that a JG is a simple way to combat involuntary unemployment and improve social and ecological structures in a region. Although a JG is relatively expensive initially, after a short time it pays for itself and even creates revenues in the long run. The fiscal costs of a JG clearly depend on the duration of subsidies, which itself has to depend on the duration when employment begins to finance itself. Therefore, we calculated the costs for different durations: ten and two years. In the first case, the JG pays for itself after 8.8 years (scenario II). If we assume that substituted jobs transition to self-financing jobs after two years, the JG would pay for itself after a little more than three years (scenario II). We showed that even if 50 per cent of funded employment resulted in unemployment, once the funding ends the JG would still pay for itself after four years (scenario II).

In scenario III, we ask what happens if the quantity of jobs increases over time. This is the case when a government tries to counter a recession with a JG or when a government starts a JG as a small experiment and slowly increases the amount of jobs afterwards. Starting with 30 000 jobs and increasing the amount by 1500 jobs each year, a government can create 45 000 jobs within ten years. After the ninth year, the JG costs less than financing unemployment, even if the government continues to add 1500 jobs each year. The result holds until we reach full employment, as both the declining costs and savings in unemployment benefit determine the result. While a JG could combat unemployment immediately, the fiscal benefits take longer than the customary term of an elected government to materialise. Again, if substituted employment transitions into self-financed employment in the second year, the JG would pay for itself after slightly less than four years under a scenario of unemployment and JG jobs increasing permanently. Which means that with this approach, the advantages do indeed materialise before the end of the average government's term of office, potentially improving support and consciousness within the electorate as a whole and among politicians themselves.

Concerns of job displacement, as well as concerns regarding whether or not guaranteed jobs are useful and meaningful, should be counterbalanced by finding mechanisms to avoid negative impacts rather than by not tackling the scourge of unemployment. We suggest democratic involvement to choose the jobs people want; this way it is possible to create useful and additional jobs and raise support for a JG.

Because of the far-reaching negative consequences of long-term unemployment, there is political urgency to combat it, even if this implies increasing public debt. This paper has shown that a limited JG aiming at reducing long-term unemployment pays for itself within a relatively short period of time. One main reason for this result is that the alternative – that is, accepting unemployment – is very expensive for both the public budget and the social security system, which is rarely taken into account in public discussions.

REFERENCES

- Acs, G. (2013): *Assessing the factors underlying long-term unemployment during and after the Great Recession*, Report, Washington: Urban Institute.
- AMS (2018): *Bundesrichtlinie für die Förderung Sozialökonomischer Betriebe*, AMF/15-2018-GZ: BGS/AMF/0722/9976/2018, Vienna: AMS Österreich.

- Anderson, K.M. (2015): The politics of incremental change: institutional change in old-age pensions and health care in Germany, in: *Journal for Labour Market Research*, 48, 113–131.
- Antonopoulos, R., Adam, S., Kim, K., Masterson, T., Papadimitriou, D.P. (2014): Response to the unemployment challenge: a job guarantee proposal for Greece, Report, Annandale-on-Hudson, NY: Observatory of Economic and Social Developments Labour Institute, Greek General Confederation of Labour.
- Aspromourgos, A. (2000): Is an employer-of-last-resort policy sustainable? A review article, in: *Review of Political Economy*, 12(2), 141–155.
- Atkinson, A.B. (2015): *Ungleichheit: Was wir dagegen tun können*, London: Harvard University Press.
- Ball, L.M. (2009): Hysteresis in unemployment: old and new evidence, National Bureau of Economic Research of Cambridge Working Paper, No 14818.
- Bentolia, S., Jansen, M. (eds) (2016): *Long-Term Unemployment: After the Great Recession – Causes and Remedies*, London: CEPR Press.
- Blanchard, O. (2006): European unemployment: the evolution of facts and ideas, in: *Economic Policy*, 21(45), 5–59.
- Blanchard, O., Wolfers, J. (2000): The role of shocks and institutions in the rise of European unemployment: the aggregate evidence, in: *The Economic Journal*, 110(462), 1–33.
- BMAS (Bundesministerium für Arbeit und Soziales [German Federal Ministry of Labour and Social Affairs]) (2018): Neue Perspektiven und Teilhabechancen durch öffentlich geförderte Arbeit, URL: <https://www.bmas.de/DE/Presse/Pressemitteilungen/2018/teilhabechancengesetz.html;jsessionid=FE34B2DF2105C47031674E42CCC12FE3> (accessed 8 October 2018).
- BMAS (Bundesministerium für Arbeit und Soziales [German Federal Ministry of Labour and Social Affairs]) (2020): Erfolgreiche Bilanz nach einem Jahr Teilhabechancengesetz, URL: <https://www.bmas.de/DE/Presse/Meldungen/2020/teilhabechancengesetz-teilhabe-am-arbeitsmarkt.html> (accessed 12 November 2020).
- Cabannes, Y. (2015): The impact of participatory budgeting on basic services: municipal practices and evidence from the field, in: *Environment and Urbanization*, 27(1), 257–284.
- Cahuc, P., Zylberberg, A. (2004): *Labor Economics*, London: MIT Press.
- Card, D., Kluve, J., Weber, A. (2016): Active labour market policies and long-term unemployment, in: Bentolia, S., Jansen, M. (eds), *Long-Term Unemployment: After the Great Recession – Causes and Remedies*, London: CEPR Press, 11–23.
- Cruz-Hidalgo, E., Ehnts, D.H., Tcherneva, P.R. (2019): Completing the euro: the euro treasury and the job guarantee, in: *Revista de Economía Crítica*, 27, 100–111.
- Duell, N., Thurau, L., Vetter, T. (2016): *Long-Term Unemployment in the EU: Trends and Policies*, Guetersloh: Bertelsmann Foundation.
- Eppel, R., Horvath, T., Lackner, M., Mahringer, H., Hausegger, T., Hager, I., Reidl, C., Reiter, A., Scheiflinger, S., Friedl-Schafferhans, M. (2014): Evaluation von Sozialen Unternehmen im Kontext neuer Herausforderungen, Research Paper, WIFO (Austrian Institute of Economic Research) und Prospect.
- Farber, H.S., Herbst, C.M., Silverman, D., Wachter, T. (2018): Whom do employers want? The role of recent employment and unemployment status and age, Princeton University, Industrial Relations Section Working Paper, No 619, URL: <http://arks.princeton.edu/ark:/88435/dsp01mp48sg464> (accessed 29 August 2019).
- Forstatter, M. (1999): Functional finance and full employment: lessons from Lerner for today, in: *Journal of Economic Issues*, 32(2), 475–482.
- Fullwiler, S.T. (2007): Macroeconomic stabilization through an employer of last resort, in: *Journal of Economic Issues*, 41(1), 93–134.
- Godin, A. (2014): Job guarantee: a structuralist perspective, in: *Revue de la Régulation*, 16(2), 1–27.
- Hollereder, A. (2011): Erwerbslosigkeit, Gesundheit und Präventionspotenziale, Ergebnisse des Mikrozensus 2005, Wiesbaden: VS Verlag für Sozialwissenschaften.
- Jahoda, M., Lazarsfeld, P.F., Zeisel, H. (1933 [1975]): Die Arbeitslosen von Marienthal, Ein soziographischer Versuch über die Wirkungen langandauernder Arbeitslosigkeit, Frankfurt am Main: Suhrkamp.

- Kaboub, F. (2007): Employment guarantee programs: a survey of theories and policy experiences, Levy Economics Institute of Bard College Working Paper, No 498.
- Kalecki, M. (1943): Political aspects of full employment, in: *The Political Quarterly*, 14(4), 322–330.
- Keynes, J.M. (1936 [1977]): *The General Theory of Employment, Interest, and Money*, Amherst: Prometheus.
- Klosse, S., Muysken, J. (2016): Curbing the labor market divide by fostering inclusive labor markets through a job guarantee scheme, in: *Psychosociological Issues in Human Resource Management*, 4(2), 185–219.
- Kroft, K., Lange, F., Notowidigdo, M.J., Katz, L.F. (2016): Long-term unemployment and the Great Recession: the role of composition, duration dependence, and nonparticipation, in: *Journal of Labor Economics*, 34(1, pt 2), 7–54.
- Lavoie, M. (2014): *Post-Keynesian Economics: New Foundations*, Cheltenham, UK and Northampton, MA: Edward Elgar Publishing.
- Lechner, F., Reiter, W., Wetzel, P., Willsberger, B. (2016): Die Beschäftigungseffekte der experimentellen Arbeitsmarktpolitik der 1980er und 1990er Jahre, Vienna: AMS Österreich.
- Lopez-Gallardo, J. (2000): Budget deficit and full employment, in: *Journal of Post Keynesian Economics*, 22(4), 549–563.
- Ludwig-Mayerhofer, W. (2008): Arbeitslosigkeit, in: Abraham, M., Hinz, T. (eds), *Arbeitsmarktsoziologie: Probleme, Theorien, Empirische Befunde*, 2nd edn, Wiesbaden: VS Verlag für Sozialwissenschaften, 199–240.
- Marterbauer, M. (2010): Budgetpolitik im Zeitalter verminderter Erwartungen, WIFO (Austrian Institute of Economic Research) Working Paper, No 366.
- Minsky, H. (1965): The role of employment policy, Institute of Industrial Relations, University of California, Berkeley Working Paper, No 270, URL: http://digitalcommons.bard.edu/hm_archive/270 (accessed 18 July 2019).
- Minsky, H. (1986): *Stabilizing an Unstable Economy*, New Haven, CT: Yale University Press.
- Mitchell, W.F. (1998): The buffer stock employment model and the path to full employment, in: *Journal of Economic Issues*, 32(2), 547–555.
- Nüß, P. (2017): Duration dependence as an unemployment stigma: evidence from a field experiment in Germany, IMK Working Paper, No 184.
- ÖGB (Austrian Federation of Trade Unions) (2019): 1.700 oder mehr, Mindestlohn ist fair! Wer Vollzeit arbeitet, muss genug für den Lebensunterhalt verdienen, URL: https://www.oegb.at/cms/S06/S06_500.0.a/1342577860467/1-700-oder-mehr-mindestlohn-ist-fair (accessed 17 June 2019).
- Palley, T. (2018): Government spending and the income-expenditure model: the multiplier, spending composition, and job guarantee programs, Forum for Macroeconomics and Macroeconomic Policies of the Hans-Böckler-Stiftung Working Paper, No 30.
- Papadimitriou, D.B. (2008): Promoting equality through an employment of last resort policy, Levy Economics Institute of Bard College Working Paper, No 545.
- Picek, O. (2019): Eine Jobgarantie für Österreichs Langzeitarbeitslose, URL: <http://oliverpicek.com/wp-content/uploads/2019/01/ELRAustria.pdf> (accessed 28 May 2019).
- Quirk, V., Allen, E., Andresen, T., Bill, A., Cook, B., Goldsmith, B., Juniper, J., La Jeunesse, R., Mitchell, W., Myers, J., Watts, M., Welters, R., Wrightson, G. (2006): The job guarantee in practice, Centre of Full Employment and Equity of the University of Newcastle Working Paper, No 15.
- Ramsay, A. (2002): The jobs guarantee: a post Keynesian analysis, in: *Journal of Post Keynesian Economics*, 25(2), 273–292.
- Sawyer, M.C. (2003): Employer of last resort: could it deliver full employment and price stability?, in: *Journal of Economic Issues*, 37(4), 881–907.
- Sozialministerium (Ministry of Social Affairs) (2017): Zwischenbericht zur Aktion 20.000. Bilanz zum Ende der Pilotphase, URL: https://www.sozialministerium.at/cms/site/attachments/0/0/1/CH3582/CMS1511508633739/zwischenbericht_zur_aktion_20.000.pdf (accessed 17 May 2019).
- Stockhammer, E. (2004): Explaining European unemployment: testing the NAIRU hypothesis and a Keynesian approach, in: *International Review of Applied Economics*, 18(1), 3–23.

- Stockhammer, E., Klär, E. (2011): Capital accumulation, labour market institutions and unemployment in the medium run, in: *Cambridge Journal of Economics*, 35(2), 437–457, URL: <https://doi.org/10.1093/cje/beq020>.
- Tamesberger, D., Theurl, S. (2019): Vorschlag für eine Jobgarantie für Langzeitarbeitslose in Österreich, in: *Wirtschaft und Gesellschaft*, 45(4), 471–495.
- Tcherneva, P.R. (2018): The job guarantee: design, jobs, and implementation, Levy Economics Institute of Bard College Working Paper, No 902.
- Tcherneva, P.R. (2020): *The Case for a Job Guarantee*, Cambridge, UK: Polity Press.
- Tcherneva, P.R., Wray, L.R. (2005): Common goals – different solutions: can basic income and job guarantees deliver their own promises?, in: *Rutgers Journal of Law and Urban Policy*, 2(1), 125–166.
- Tymoigne, E. (2013): Job guarantee and its critiques, in: *International Journal of Political Economy*, 42(2), 63–87.
- UN General Assembly (1948): Universal declaration of human rights (217 [III] A), Paris, URL: <http://www.un.org/en/universal-declaration-human-rights/> (accessed 18 July 2019).
- Van Berkel, R., De Schampheleire, J. (2001): The activation approach in Dutch and Belgian social policies, in: *Journal of European Area Studies*, 9(1), 27–42.
- Watts, M.J. (2010): How should minimum wages be set in Australia?, in: *Journal of Industrial Relations*, 52(2), 131–149.
- Wray, L.R. (1998): Government as employer of last resort: full employment without inflation, Levy Economics Institute of Bard College Working Paper, No 270.
- Wright, E.O. (2010): *Envisioning Real Utopias*, London: Verso.

APPENDIX 1

A1.1 Scenario II

To calculate the cost of long-term unemployment c_{ue} we multiply the costs of long-term unemployment by time. We obtain the additive cost after t periods.

$$c_{ue}(t) = c_{ue} * t$$

To calculate the costs of the JG in the first τ years, we calculate the arithmetic series sa for 10 per cent decreasing costs:

$$\begin{aligned} \tau &= 10; \quad a = 0,1; \quad k = 0,1 \\ sa &= \sum_{t=1}^{\tau} a * t = 5.5. \\ s_{JG}(t, sa, \tau) &= sa - \frac{\tau - t}{2} (2 * a + ((\tau - t - 1) * k)). \end{aligned}$$

Based on this, we can calculate the cumulative cost of a JG for ue people:

$$\begin{aligned} c_{JG}(t) &= s_{JG}(t, sa, at) * c_{JG} * ue & t &= [1; 10] \\ c_{JG}(t) &= sa * c_{JG} * ue & t &> 10. \end{aligned}$$

To calculate the net cost of the JG proposal, we enter into the equation $c_{JG} \approx \text{€}17\,355$ and $c_{ue} \approx \text{€}10\,570$ (scenario I). After ten years the net cost of the JG adds up to $\text{€}95\,453$ for one person who stays in the programme for the whole period of ten years. Finally, we want to compare the costs of the JG with doing nothing and calculate the point in time at which the JG pays for itself. To calculate the breakeven point, we solve the equation

$$s_{JG}(t, sa, \tau) * c_{JG} = c_{ue} * t$$

and gain the result $t = 8.82$ years.

A1.2 Scenario III

To calculate the cost of long-term unemployment $\bar{c}_{ue}(t)$ at a certain point in time t , we multiply the costs of (long-term) unemployment by the growth in (long-term) unemployment Δue and the initial amount of (long-term) unemployment ue :

$$\bar{c}_{ue}(t) = c_{ue} * (t * ue + (t - 1) * \Delta ue).$$

To calculate the costs of the JG, we can use the formula from scenario II to calculate the costs at a certain point in time and add the cost of newly created jobs ΔJG . This gives the following formula:

$$\begin{aligned} \bar{c}_{JG}(t) &= (ue * s_{JG}(t) + \Delta JG * \sum_{i=1}^t s_{JG}(i-1)) * c_{JG} & \text{if } t &= [1; 10] \\ \bar{c}_{JG}(t) &= (5.5 * ue + (5.5 * t - 22) * \Delta JG) * c_{JG} & \text{if } t &\geq 10. \end{aligned}$$