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ARTICLES IN THIS ISSUE

Unemployment and monetary policy: a revisit and new job strategies — **Dante B. Canlas**

A SYMPOSIUM ON THE CARE ECONOMY

Introduction to the symposium on the care economy — **Maria S. Floro, Elizabeth M. King**

Child and elderly care in South Korea: policy analysis with a gendered, care-focused computable general equilibrium model — **Martín Cicowiez, Hans Lofgren**

Women's market work and childcare policies in Colombia: policy simulations using a computable general equilibrium model — **Martín Cicowiez, Hans Lofgren, Ana Tribin, Tatiana Mojica**

The enduring impact of the pandemic on gender patterns of paid and unpaid work: evidence from time-use data in Turkey — **Ipek Ilkkaracan, Emel Memiş**

Unpaid eldercare and its impact on the US labor supply — **Tanima Ahmed, Maria S. Floro**

Care work and the demographic composition of households: two Asian cases — **Elizabeth M. King, Hannah L. Randolph, Jooyeoun Suh**

Care workers' sense of responsibility, working conditions, and the quality of care in South Korea — **Shirin Arslan, Arnob Alam, Maria S. Floro, Seung-Eun Cha, Eunhye Kang**

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1 Unemployment and monetary policy: a revisit and new job strategies
Dante B. Canlas

A Symposium on the Care Economy

10 Introduction to the symposium on the care economy
Maria S. Floro
Elizabeth M. King

19 Child and elderly care in South Korea: policy analysis with a gendered, care-focused computable general equilibrium model
Martín Cicowiez
Hans Lofgren

65 Women's market work and childcare policies in Colombia: policy simulations using a computable general equilibrium model
Martín Cicowiez
Hans Lofgren
Ana Tribin
Tatiana Mojica

99 The enduring impact of the pandemic on gender patterns of paid and unpaid work: evidence from time-use data in Turkey
Ipek Ilkkaracan
Emel Memiş

123 Unpaid eldercare and its impact on the US labor supply
Tanima Ahmed
Maria S. Floro

158 Care work and the demographic composition of households: two Asian cases
Elizabeth M. King
Hannah L. Randolph
Jooyeoun Suh

191 Care workers' sense of responsibility, working conditions, and the quality of care in South Korea
Shirin Arslan
Arnob Alam
Maria S. Floro
Seung-Eun Cha
Eunhye Kang

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Unemployment and monetary policy: a revisit and new job strategies

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This paper revisits the natural unemployment rate and some studies of labor markets with search frictions that it has inspired. New job strategies being proposed suggest a need for an enhanced labor market research agenda, which looks at additional movements in the labor force. New directions in the conduct of monetary policy beyond concerns over dangers to banks and financial markets posed by interest-rate adjustment may follow as a matter of course in the context of newly emerged labor market policy.

JEL classification: J08, J18, E52
Keywords: unemployment, monetary policy, labor market

1. Introduction

The revisit in the title of this paper is a reminder that the topic has had a long history, featuring episodes of how macroeconomic theory has influenced monetary policy since the Great Depression of the 1930s. About the influence of such theory on policy, I underscore in particular the signing into law of the Employment Act of 1946 by US President Harry Truman, committing the US government "to create employment opportunities for all Americans."

Since then, putting the conduct of monetary policy in the service of maximizing employment has been a focus of interest in macroeconomics, and to this day invites debates among macroeconomists of varying persuasions. Some approaches are called classical or neoclassical, while others are referred to as Keynesian or neo-Keynesian. Calling specific approaches by the school of thought that influenced them is useful from a historical standpoint, but I will not take that route. Instead, I will look at the main propositions that emerged from the debates related to the actual conduct of monetary policy, shining a light on the process of prominent academic writings about the subject at hand.

Given the long history of the natural rate of unemployment, I want to start somewhere. An important point of departure is the paper of Friedman [1968],

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which introduced the concept of the natural rate of unemployment or the equilibrium rate of unemployment. The latter has been widely accepted by a long line of macroeconomists and has yielded a large body of knowledge that continues to influence the actual conduct of monetary policy geared to full employment. Among labor economists, however, the failure to reduce unemployment in some countries and the worsening of income inequality, such as those in the European Union (EU), has resulted in a reconsideration of job strategies, referred to in some environments as "a Great Reversal." The main objective of this paper is to examine what labor market research agenda is opened by the reversal.

Friedman [1968] started his paper by describing what monetary policy cannot do. In case employment were to be the target of monetary policy, he referred to the natural rate of unemployment and described the term as follows:

> The 'natural rate of unemployment,' in other words, is the level that would be ground out by the Walrasian system of general equilibrium equations, provided there is embedded in them the actual structural characteristics of the labor and commodity markets, including market imperfections, stochastic variability in demands and supplies, the cost of gathering information about job vacancies and labor availabilities, the costs of mobility, and so on.

Friedman had in mind a labor market that relies on a decentralized price and wage system to coordinate and allocate labor among various economic and business activities, and in the process, determine wages and compensation. If such a labor market is embellished with imperfect information, as well as risk and uncertainty, a positive natural unemployment rate emerges, which in that labor market setting, is a real magnitude that monetary policy cannot affect. Easing monetary growth in an attempt to reduce further the unemployment rate to a level below the natural rate is likely to usher in inflation. If producers misinterpret an initial inflation rise as a relative price increase that increases the demand for their products, they may be led to expand production, resulting in an excess demand for labor, and an increase in real wages, thereby raising the unemployment rate and stoking inflation.

The natural unemployment rate that Friedman [1968] described opened up studies of the labor market with search frictions. For example, Hall [1979] formally defined the natural unemployment rate as the result of job search that workers and firms conduct. Job losses and job finds occur as a matter of course. Job search frictions have been incorporated in many formal studies that describe the equilibrium features of the natural unemployment rate.

Diamond [1982] and Mortensen and Pissarrides [1994], for instance, were awarded the Nobel Prize in Economics in 2010 for their contribution to the analysis of labor markets with search frictions. In particular, Mortensen and Pissarrides [1994] focused on equilibrium features, yielding a rigorous description of the natural unemployment rate as an equilibrium phenomenon.

The natural unemployment rate has triggered interest, for one, in alternative approaches to the conduct of monetary policy conducive to maximizing employment. An economy that is in a natural unemployment rate sees less need for active monetary policy. For another, the facts of labor markets have been focused on flows, involving job loss (whether voluntary or involuntary terminations), job finding, and job matching, instead of stocks based on merely counting the employed, unemployed, and labor force participants. In a typical job search model, the number of job losses equal the number of job finds in equilibrium, which yields a positive natural unemployment rate. Public policies and labor regulation are normally held to affect the natural unemployment rate through their effects on job-losing and job-finding rates. Minimum wage legislation (MWL) and collective bargaining (CB) actively pursued by labor unions, for example, are typically held by free market adherents as conducive to job loss and obstacles to job find.

All this has led to broader and deeper studies of the labor market effects of labor policies and regulations. On the employment effects of MWL, Card and Krueger [1994], for instance, have seen no evidence about the disemployment effects of MWL in the fast food industry in New Jersey and Pennsylvania. Meanwhile, countries that have endeavored to raise quality of life in the workplace through, for instance, employment protection and inclusiveness, have seen better economic outcomes. In consequence, the Organization of Economic Cooperation and Development (OECD) reversed its Jobs Strategy in 2018. The new OECD Jobs Strategy is a reversal of the 1994 approach, veering away from labor market flexibility, towards improved quality of the employment relationship, encompassing employment protection and collective bargaining. Given the OECD's reversal of its Jobs Strategy in 2018, the question emerges: what labor market research agenda is suggested?

This paper opens with a review of a basic model of the labor market with search friction. The incorporation of search friction draws attention to labor market flows affecting job loss and job find. Both firms and workers conduct job searches that take time before a job-worker match is consummated. Vacancies are also observed as a result. The job matching process results in a positive rate of unemployment, an equilibrium rate that an easing of monetary policy is not going to affect. The resulting unemployment, however, may improve job-worker matches, a positive externality from labor turnover. Many studies have focused on flows from employment to unemployment and vice versa; this paper suggests additional labor market flows beyond this usual movement. Furthermore, studies on the job search process suggest the need for a deeper investigation of labor market policies and regulations expected to impede job finding or accelerate job loss, resulting in an increase in the natural unemployment rate. The importance of data helpful in testing conventional thinking about impacts of labor policies and regulation, such as MWL and employment protection, is indicated.

Section 2 presents a basic job search model that yields a positive natural unemployment rate. Section 3 discusses alternative perspectives on the economic role of labor turnovers and the resulting positive externalities. Section 4 discusses the OECD's reversal in 2018 of its 1994 Jobs Strategy. Section 5 presents for consideration an enhanced labor market research agenda in consideration of the OECD's new Jobs Strategy. Section 6 makes concluding remarks.

2. A model of job search and the natural rate of unemployment

The most common model of job search inspired by Friedman's [1968] view of the natural rate of unemployment involves workers in search of a wage offer that exceeds their reservation wage. They end their job search once they get such a wage offer. Meanwhile, firms face job applicants and search for workers with marginal products that exceed the firms' reservation marginal productivity. A job-worker match is consummated once the respective goals of worker and firm are met. Some of the unemployed workers find jobs while firm vacancies are reduced. The natural rate of unemployment is positive, an offshoot of worker and firm job search (see Hall [1979]). This is a departure from the garden-variety labor market clearing model, which suggests zero unemployment rate in equilibrium.

In this simple job-search model, the natural unemployment rate (u) is affected by the rate of job loss and job find, that is,

$$u = \Delta / (\Delta + \lambda) \tag{1}$$

where Δ is the rate of job loss, and positively related to u; while λ is the rate of job find that is negatively related to u. If the labor market slackens, and Δ increases, then u rises. But once the labor market tightens and λ rises, then u declines.

The job search model of natural unemployment rate has drawn attention to factors that influence job loss and job find. Among government policies, MWL is often cited as a factor conducive to job loss, thereby raising the natural unemployment rate. MWL in a covered sector raises the real wage rate above the prevailing one. The standard thinking is that firms have an incentive to lay off workers whose productivity falls below the minimum wage. Low-skilled workers and young workers are frequently thought to be vulnerable to being fired. However, if there is a sector not covered by MWL, raising the latter may not have a disemployment effect. Traditional agriculture is widely thought to be uncovered with ease of entry and exit. Similarly, self-employment is believed to be similarly situated. Workers laid off in the covered sector may seek jobs in the uncovered sector, given ease of entry and exit therein. Unemployment in the aggregate may not rise but average real wage in the covered and uncovered sectors may decline. Any real wage gain in the sector covered by MWL may be offset by the real wage decline in the uncovered sector.

Recently, prominent labor economists studied empirically the employment effects of MWL. For example, Card and Krueger [1994] examined the 1992 effects of New Jersey's minimum wage using their own survey of employment before and after the change in fast food restaurants in New Jersey and Pennsylvania. The latter didn't change its minimum wage and was used as a control group. The main finding was employment did not change in New Jersey relative to that in Pennsylvania. The Card and Krueger critique was challenged by other studies (see, e.g., Neumark and Wascher [1995]). In any event, the employment effects of MWL remain a much-debated issue that cries out for further empirical investigation.

Similarly, labor unions are often thought to be cause of unemployment in view of their ability to raise union real wages above non-union wages in collective bargaining, raising the unemployment in the unionized sector. However, given ease of entry, in the non-unionized sector, the latter may be able to absorb laid off workers from the unionized sector and cause a decline in the average real wage in the non-unionized sector. It is also an empirical issue whether unionization is behind the aggregate unemployment in the Philippines. Unionization has been declining over time and no one has made a claim that unionization is one of the major factors behind unemployment and underemployment.

In the Philippines, there has been recurring clamor for instituting unemployment insurance (UI). Some UI bills have been filed in Congress, particularly, at the height of the COVID-19 pandemic. Laid-off workers are screened for eligibility under the UI and for determining the duration of the benefits. In the debates, detractors typically echo the arguments against UI heard in developed countries: that UI is an incentive to prolong the duration of the worker's unemployment spell. The more liberal are the UI benefits, the weaker is the incentive for job search and for ending the period of unemployment on the part of UI beneficiaries. In the debate over the high rate of unemployment in the European Union relative to that of the US, a generous UI is often cited as a key factor. Based on information from the OECD in the mid-1990s, the unemployment rate, for example, in Spain was 23 percent, 12 percent in France and Italy, compared to 5.5 percent in the US.

3. Economic role of labor turnovers

Labor turnovers lie at the center of job search. The natural unemployment rate depends a good deal on labor turnovers, whether voluntary terminations like quitting or involuntary, such as firing. One view is focused on minimizing labor turnover costs while another view engendered by the natural unemployment rate highlights positive externalities from job search.

Becker [1964] in his theory of human capital identified education and on-the-job training as an instrument for accumulating human capital, referring to the set of skills that workers bring to the workplace. The training may be specific, which is useful only to the firm hiring the workers. But the training may also

be general skills that are useful to all other firms. Under specific training, the firm has an incentive to pay for the cost, while the worker has none. It is also to the interest of the firm to minimize turnovers given the cost of specific training. Similarly, with general training, workers may be willing to pay for the cost since they can bring their skills to other firms in case they get dissatisfied with the firm that originally hired them. But since the firm also pays for general training, it is also interested in minimizing turnovers.

The natural unemployment rate, however, recognizes that job search may be more efficient if workers quit and engage in full-time job search. For instance, as the labor market tightens in the course of a recovery and as economic growth gathers strength, quits become prevalent as more workers expect job search to become remunerative. Full-time job search may be efficiency enhancing by improving job-worker matches. The economy benefits if the efficiency gains exceed all training costs. This is a positive externality emerging from labor turnovers. The resulting unemployment does not pose a social problem that must be actively reduced. Free market believers do not believe in activist monetary policy to combat this form of unemployment. Relatedly, some macroeconomists have pointed out that labor contracts tend to hold over a specific period of time and grant protection to workers against wage uncertainties during that time period. In this context, free marketeers argue that there is no need for a monetary stimulus even if some slackening of labor markets is perceptible.

This situation gives rise to questions about how to deal with involuntary terminations, particularly, if such terminations are triggered by an expected weakness in the economy. A monetary stimulus may bring the private economy to what a social planner may envision as optimal. In this regard, many observers found concerning the layoffs announced by Big Tech companies like Google, Amazon, Microsoft, and Twitter. Suspicions have been raised that layoffs are determined by artificial intelligence (AI)-based algorithms, which decide which workers are likely to be high performers in the companies or candidates for layoff. How should the monetary authority respond to these strategies of Big Tech, if true? Given that Big Tech has important sectoral complementarities and develops AI-based virtual assistants, the nature of the monetary policy response is critical.

4. Reversal in job strategies

Going back to the functioning of labor markets, there is an increasing clamor to reconsider job strategies based on labor market flexibility. The OECD, for example, reversed in 2018 its Jobs Strategy of 1994, away from labor market flexibility to one of employment protection and inclusiveness. As large data, data science, and computing advance inexorably, will a reversal in job strategies be the wave of the future?

In the 1990s, the EU posted high rates of unemployment. In 1994, the OECD issued a jobs strategy based on improving labor market flexibility. In this context, the jobs strategy counseled veering away from overregulation and policies like MWL and collective bargaining with unions. This Jobs Strategy was shared by international financial institutions like the World Bank and the International Monetary Fund. In that Jobs Strategy of the 1990s, reducing unemployment hinged on instituting flexibility in labor markets. It was held that employment protection should be reduced and collective bargaining downplayed. Meanwhile, income inequality worsened.

Seeing no evidence that the 1994 Jobs Strategy based on labor market flexibility had yielded salutary results, the OECD reversed its Jobs Strategy in 2018, citing that "countries with policies and institutions that promote job quality, job quantity, and inclusiveness perform better than countries where the focus of policy is predominantly on enhancing market flexibility" (see Evans and Spriggs [2022]). The new Jobs Strategy recognizes the positive role of collective bargaining. It also acknowledges that reducing income inequality stems not only from investing in education and training for skill acquisition, but also considers MWL and collective bargaining as helpful.

5. Enhancing the labor market research agenda

The reversal by the OECD in 2018 of its Jobs Strategy counsels continuation of studies on labor markets with search frictions. In addition, it must investigate labor turnovers beyond movements of labor from employment to unemployment and vice versa. It must also look at movements in and out of the labor force. Discouraged workers are relevant in this regard. What indicators of labor market tightness will make them end their being out of the labor market and encourage them to undertake job search again. Will those indicators of labor market tightness be accelerated by monetary policy?

As for overseas Filipino workers (OFWs) on furlough, it is useful to ask whether their reservation wages have risen, forcing them not to search actively for local jobs. Similarly, investment in higher education may lift reservation wages of graduates, thereby prolonging their search and unemployment spells. In addition, there are women, generally, highly educated, who are currently out of the labor force, having decided to drop out to raise preschoolers and invest in their children's human capital at an early age.

Studies of this sort call for new labor market data emanating from job search views of labor markets. In the absence of such data, public policy directed towards higher employment and reduced unemployment outcomes may be misled. This suggests recognizing the heterogeneity of the labor force, classified by type of worker, age, and demographic group.

6. Conclusion

This paper has revisited the natural unemployment rate and a selected body of academic work on labor markets with search frictions it inspired. The data of labor markets have been directed at flows, including voluntary and involuntary labor turnovers, rather than at the usual stock variables. Alternative perspectives on labor turnovers have been proposed, which recognize, for example, positive externalities from unemployment, in particular, the efficiency gains from improving job-worker matches. Monetary policy tended to support job strategies based on improving labor market flexibility in acceptance of the notion that most market-oriented economies guided by a decentralized price system faced natural unemployment rates.

In 2018, however, the OECD veered away from its previous Jobs Strategy of labor market flexibility after seeing the failure of that approach in reducing unemployment rates in many countries in Western Europe. Its new Jobs Strategy, adopted in 2018, now embraces the importance of employment protection, and recognizes the ability of MWL and collective bargaining to improve income distribution, all designed to improve quality of life in the workplace.

The new Jobs Strategy suggests the importance of continuing a labor market research agenda that builds on the study of labor markets with search friction.

The research agenda should, however, be enhanced to recognize additional labor market movements that acknowledge the heterogeneity of the labor force.

Developments in the labor market will continue to be an important dimension that central bankers consider in the conduct of monetary policy. This paper has suggested new directions in enhancing a labor market research agenda. It is, however, premature for this paper to indicate the new directions for monetary policy at this point. This paper is thinking beyond what Brunnermeier [2023] had proposed following the surge of inflation amid excessive public debt in the aftermath of the COVID-19 pandemic, which has been complicated recently by the dangers of interest-rate adjustments on banks and financial markets.

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