



EcoNZ@Otago

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email: econz@otago.ac.nz

A MAGAZINE ABOUT CONTEMPORARY ECONOMIC ISSUES FOR EVERYONE

FROM THE EDITOR

The economy is way more complex than people realise. Every time an economist answers one question about economic activity, two more seem to appear. For academics, priority number one is to inspire the next generation to study Economics; to encourage the young to join our ranks and contribute their unique talents to furthering our understanding of the socio-economic environment in which we live. In this issue of *EcoNZ@Otago*, we focus on students. Economics students at the University of Otago and elsewhere in New Zealand were given research tasks to complete in the field of Macroeconomics. We look at their work. The winner of the 2014 *EcoNZ@Otago* Secondary Student Essay Competition is announced and her winning essay on youth unemployment is presented. The traditional understanding of labour markets is criticised, the history of macroeconomic thinking is reviewed, the difference between fiscal and monetary policy is explored, and the inflation-targeting practices adopted by several central banks is scrutinised. As usual, *Highlights* – short commentaries on economic issues – accompany selected articles.

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DAN FARHAT

EcoNZ@Otago
University of Otago – Department of Economics
PO Box 56
Dunedin 9054
econz@otago.ac.nz

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The 2014 *EcoNZ@Otago* Secondary Student Essay Competition

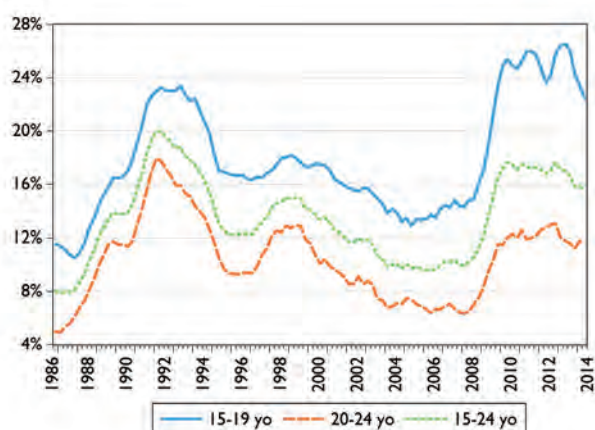
WINNER: Rachael Grant
Napier Girls' High School

The Task: During the Global Financial Crisis, the unemployment rate for teenage workers in New Zealand rose more sharply than the unemployment rate for workers just a few years older. Discuss why this may have occurred. Describe any steps the government took to improve the employment outcomes of young workers, and suggest possible initiatives that the government *could* implement. Also provide recommendations for teenage workers which could improve their first job market experiences.

Donald Trump's iconic "YOU'RE FIRED!" slogan was no laughing matter during the Global Financial Crisis [GFC] of 2007-2010. Left, right, and centre – employees were made redundant and teenagers took the brunt of the blow. The unemployment rate for teenage workers (15-19 year olds) rose more sharply during the GFC compared to the unemployment rate for workers just a few years older (20-24 year olds). This can be seen in the statistics and surveys carried out during the GFC. Teenagers are the runt of the labour market. They're unskilled and inexperienced, placing them at the bottom of the employment hierarchy and making them more susceptible to unemployment.



Figure 1 – New Zealand youth unemployment rates (% of labour force, four-quarter moving average)



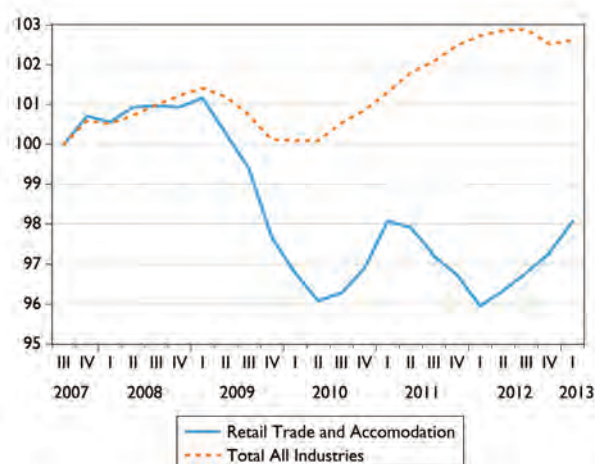
Source: Statistics New Zealand (2014b)

During recessions unemployment increases because employers' business confidence and profits decrease. Therefore in order to cut costs, "you're not hired" and "you're no longer hired" become familiar to the majority of employees' ears. Because of high unemployment, there is capacity in the labour market so employers can hire more workers. However, despite the abundance of willing workers looking for jobs, causing an increase in the supply of labour, the demand for labour was minimal due to low business confidence. In hard economic times, employers are reluctant to invest resources in training young people when older unemployed experienced workers are available. Therefore, employers are more likely to hire a skilled worker over those who are entering the labour force for the first time. Hence the unemployment rate for teenagers increased by about 11% during the GFC compared to 20-24 year olds' unemployment rate which rose 6%. This can be seen in Figure 1 where it is evident youth unemployment increased significantly but teenagers were affected the most.

Teenagers tend to seek part-time jobs in the food and retail industries which ultimately get hit the hardest in recessions. This is because during recessions, consumer spending decreases due to falling household incomes and consumer confidence. Hence the drastic decline in teenagers finding employment. This can be seen in Figure 2 where it is evident that the retail industry was impacted severely and is only just starting to recover. Also, the retail and hospitality industries tend to have low skilled jobs, and therefore teenagers find it easier to find employment in these industries as jobs in other industries require certain qualifications which teenagers have not yet been able to acquire. Hence the 20-24 year olds who have had time to gain some qualifications and experience weren't affected as much by the GFC as they could secure jobs in other more skilled industries. Unlike teenagers, some workers aged 20-24 don't have to juggle tertiary studies alongside their employment and thus seek full-time jobs over part-time jobs which tend to be more secure.

In 2008 the youth minimum wage rate of \$9.00 per hour was replaced by the New Entrant Wage Rate of \$9.60 per hour, which only applies to 16 and 17 year olds who have recently entered the workforce. Youth workers who have 3 months' work experience therefore had to be paid the adult minimum wage rate of \$12. So consumers make themselves available for jobs causing the labour supply to increase. However, firms' demand for workers decreased as this meant employers had to pay more for an inexperienced worker causing their costs of production to increase. Hence unskilled workers, mainly teenagers, were the first to be made redundant and the last to be employed as firms wanted to cut costs.

Figure 2 – Industry employment (index, 2007q3 = 100, four-quarter moving average)



Source: Statistics New Zealand (2014b)

A way to find out if those aged 15-19 faced higher unemployment than those aged 20-24 would be to look at statistics and surveys carried out during this time period. One survey which would be useful to use is the Household Labour Force Survey. This gives statistics on the number of people in occupations and industries, their actual and usual hours worked, and the number of people employed, unemployed and not in the labour force. With this wide range of categories, the survey is a reliable way of proving the teenage unemployment rate increased significantly during the GFC.

Youth are often among the first workers made redundant because they lack work experience. Therefore the Government can help aid this problem by implementing schemes in schools, enabling students to gain work experience while not necessarily resulting in employment. For example, the Government could devise a scheme which encourages employers to visit schools and deliver courses in order to increase teenagers' exposure to the world of work. The Government could also encourage employers to continue or expand quality apprenticeship and internship programmes. This can prove beneficial for both parties as it provides young people with access to opportunities without the employer having to commit long term. Recognising the popularity of technology amongst teens, the Government could encourage businesses to take advantage of the internet, social networking and mobile phones. Employers could create a business website informing youth about job openings and credentials needed in their industry. On the other hand they could also use job-seeking websites to advertise any employment opportunities. While it maximises the recruitment reach of employers, it will also give young people more transparent access to labour market information. Implementing this scheme will also broaden youths' understanding of available jobs in the market, and the skills and experience needed.

In 2011 the Government invested \$55.2 million in a Youth Employment Package to provide employment and training over the next four years for 13,000 young people. This package provided an average subsidy of \$5,000 to youth to help cover training costs and provide in-work support. The scheme has proved successful as it has helped 10,000 youth workers find jobs. The Government has also started a Youth Worker Training Scheme, which aims to increase the quality of youth work practices in New Zealand by encouraging the development of training opportunities for youth workers.

In order to improve their work experience, teens could ask their school for information and help in finding work experience. They could also look for jobs; introduce themselves (showing independence) and kindly ask if the employer could contact them if they have job openings or ones coming up. For eligible workers aged 18-19 who are going to university away from home, applying for a job in the area months before attending could increase the chances of finding early employment. This gives the employer forewarning, and shows them that you plan ahead which can give credibility to your character. For those who don't attend school/university, you could seek apprenticeships, internships, or courses on entrepreneurship, hopefully resulting in finding a job you enjoy. In general, teenagers should seek part-time or seasonal employment while in high school as it will be beneficial in the long term as it provides the basic skills employers look for: communication, critical thinking, and teamwork skills.

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Congratulations

The winner of the 2014 *EcoNZ@Otago* Secondary Student Essay Competition, Rachael Grant, received a \$300 gift certificate (book voucher, iTunes card, or mix of the two) and \$200 in book vouchers for her school.

The first and second runners up were Toby Flatley (Otago Boys' High School) and Fiona Wu (Epsom Girls' Grammar School) respectively. They each received a \$150 gift certificate (book voucher, iTunes card, or mix of the two) and \$100 in book vouchers for their schools.

The main prizes for this year's competition were sponsored by University of the Third Age [U3A] Dunedin Charitable Trust (u3adunedin.org.nz). U3A Dunedin organises short courses for those who are retired and wish to keep on learning.

Students who submitted noteworthy essays received a prize pack consisting of a University of Otago beanie, card, pen, sticker and magnet. These were provided by the new University of Otago Visitors' Centre, located on the corner of St. David Street and Cumberland Street in Dunedin.

We congratulate our winners and all the participants in our essay competition. We also thank U3A Dunedin and the University of Otago Visitors' Centre for their support.

Is this working? A review of the traditional labour market model

Molly Rebekah Benson¹

The Task: Identify central shortcomings of the 'classical' economic model of the labour market. In your answer, make sure to describe the underlying objectives of households and firms in this model and point out why these may not be realistic. Briefly highlight empirical regularities (unemployment rates and vacancy rates in particular) associated with the functioning of modern labour markets and describe why the classical model may be too abstract for practical use.



In the 'classical' labour market model, households and firms harmoniously interact in the labour market despite having different objectives. Households are concerned with choosing how much to work in order to maximise their utility from both consumption goods (which require income from working) and leisure time. Firms aim to choose how many workers to hire so as to maximise their profits. Both parties take wages as given and adjust their decisions when wages change: households tend to work more when wages rise while firms tend to hire less. The classical model of the labour market captures these behaviours with an upward-sloping labour supply curve (from the households) and a downward-sloping labour demand curve (from the firms) with respect to wage. The wage where the quantities of labour demanded and supplied are equal is referred to as the *equilibrium wage*. In the classical model, wages adjust until this equilibrium wage (w^*) prevails and the market clears (see Figure 1a).

The classical model implies a perfectly functioning labour market; in equilibrium there is zero unemployment and zero vacancies in the long

run, as every worker whose *reservation wage* (the minimum amount they require to accept a job) has been met will choose to enter the labour force and be guaranteed a match with a firm willing to pay that wage. However, despite what appears to be a perfectly efficient allocation of labour, Marshall, Cartter & King (1976) state "the simple [classical] supply and demand framework needs to be substantially modified if it is to be of use to many labour market issues of current concern."

WHICH WAGE IS THE FAIREST OF THEM ALL?

Over the last century, increases in education, welfare programmes and civil rights have resulted in a vast increase in labour force participation. This increase in labour supply shifts the supply curve in the classical model to the right, consequently lowering the equilibrium wage (see Figure 1b). Despite the implication that labour is always allocated most efficiently at the equilibrium wage (where both unemployment and job vacancies are zero), this lower wage may not necessarily be the most

¹ Molly Benson is a fourth-year University of Otago student pursuing a Bachelor of Science [BSc] degree in Economics and a Minor in Finance.

beneficial to society. One could argue that as wages fall, it becomes less likely that a household is capable of surviving off the resulting income even though every household member who wants a job has one. To combat this, many governments introduced a price floor in the modern labour market (known as the *minimum wage*). It became illegal to pay workers any less than an established rate. Minimum wage policies resulted in conflicting responses from households and firms when they were implemented.

The sudden increase in the market wage meant many households whose reservation wages had not previously been met were suddenly keen to work. A larger percentage of the population entered the labour force, increasing the quantity of labour supplied. However, as the cost of hiring workers significantly increased, profit-maximising firms hired fewer employees than they would have done at the equilibrium wage to ensure that their marginal costs did not exceed their marginal revenues. With the labour force rising and employment falling, unemployment surged (see Figure 1c).

Jobs that pay low wages typically require little skill or education (so we can think of Figure 1c as pertaining to labour markets for low-skill jobs). Consequently, one sector of the lower class is often helped at the expense of another when minimum wages are set. Workers lucky enough to get jobs and earn the minimum wage now have sufficient income, but unemployment rates soar amongst the remainder of the less educated and unskilled as the number of low-skill jobs to compete for is now reduced. If minimum wages are set for some industries but not others, the subsequent drop in demand for workers in minimum-wage sectors leads to a sudden flood of labour supply into sectors not covered by the minimum wage. The already existing low wages in these sectors are then further depressed. An example of this that Marshall, Cartter & King (1976) cite is "that of the several thousand pecan-shellers in Texas who were earning only 8 cents an hour when the 25 cent minimum wage was established in 1938". Both the pecan industry (one of the largest in America at the time) and union representatives lobbied for an exemption from paying the federally-mandated minimum wage to pecan workers because they feared their workers' jobs would be replaced by machines if labour became too expensive. Little did the unions realise that doing so could result in an increase in the supply of pecan-shellers (newly unemployed workers from the minimum wage industries), permanently lower wages and a weakening of their bargaining power. (Their petition for exemption ultimately failed, by the way, and 10,000 jobs were replaced by machines.)

The attempt to introduce welfare systems to compensate those unable to find work only encourages the minimum wage to further increase, as it can hardly be expected that the unemployed would accept jobs which provide little more income than benefits paid under the welfare system. To fund a substantial increase in benefit payments, the government has to raise taxes. Consequently, this leaves those actually working with less usable after-tax income and possibly encouraging even more people to leave their jobs and apply for welfare.

THE RIGHT ONE COULD STILL BE OUT THERE...

The unemployment rate reflects not only the number of jobs relative to number of persons seeking work, but also the efficiency with which people and jobs are matched. Jobs (vacancies) are always being advertised in newspapers and on employment websites. Employers are on the lookout for suitable workers for these open positions. As vacancies are filled, the unemployment rate ought to fall. From the classical labour market model, we'd expect both the unemployment rate and the vacancy rate (measured as the total number jobs that are not occupied divided by the labour force) to immediately fall to zero. By observing historical data on unemployment rates and vacancy rates, we can see that the two are in fact negatively related (see Figure 2 – this relationship is known as the Beveridge Curve), however both tend to coexist. Neither seems to be approaching zero.

Figure 1 – The classical labour market model

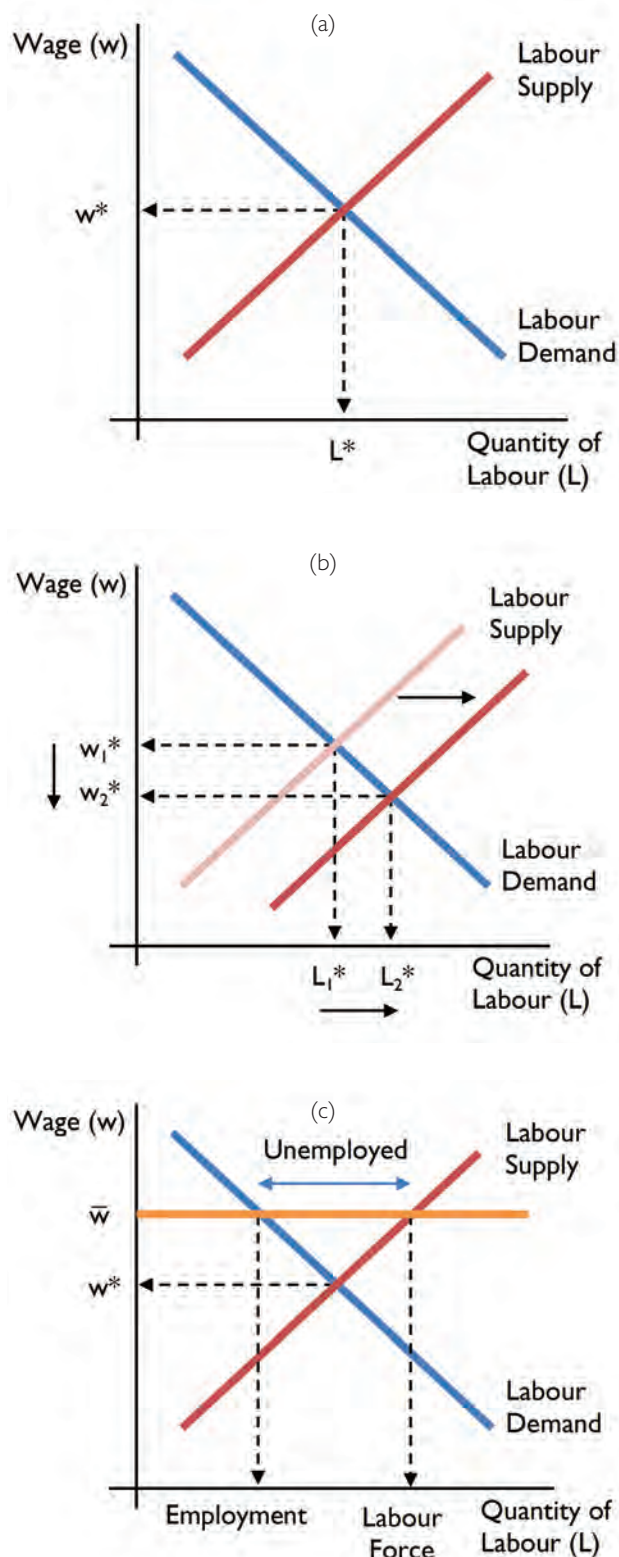
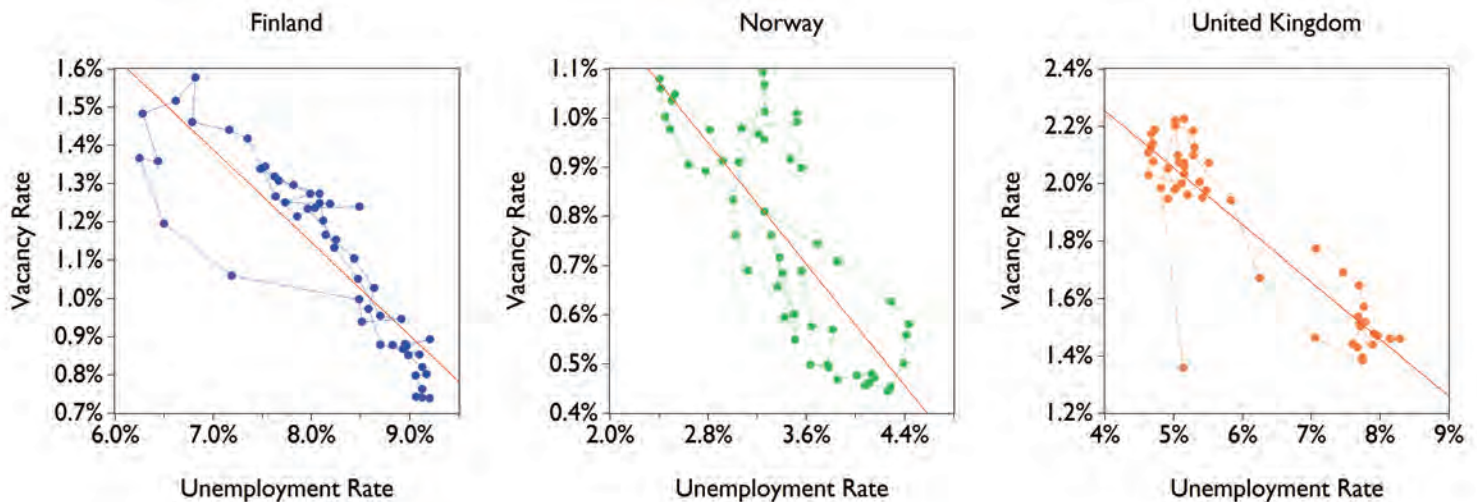


Figure 2 –Beveridge curves for Finland, Norway and the United Kingdom (2001-2013, quarterly data)



Source: OECD (2014)

Although several of the inconsistent differences between vacancy and unemployment rates can be explained by fluctuating business cycles, between recessions and booms, it is clear that the matching between workers and firms has never been perfectly efficient. The inefficiency of the matching process introduces some serious economic costs. Both households and firms have to pay expenses associated with the job search process; these can be quite large. Non-efficient job matching results in greater job turnover (as unsuitable workers are fired or quit), which leads to more unemployment and vacancies. Jobs aren't being done, so the economy is losing out on potential output. Moreover, if workers are not appropriately matched with firms, the likelihood that a worker may be over-skilled for the position they hold increases. Thus, the potential value that a worker could bring to the firm is ignored or underappreciated. This implies that the firm could be missing out on potential extra productivity, hence profits. It is also possible that workers employed in jobs where they are poorly rewarded or underappreciated may become abusive or withdrawn in their relationships with others or engage in antisocial activities. Can this be avoided?

#evolutionoftheinternet

The development of the internet has been revolutionary to the modern-day labour market with respect to job matching for many reasons. Firstly, both online job advertisements and job applications contain significantly more information than before, meaning firms can specify detailed characteristics about what the job entails and the qualities they are looking for in applicants. Likewise, not only can workers be more informed about both the job and the firm that they are applying for but can also advertise their own skills to these firms. The job websites themselves also play an active role in job matching using algorithms to find and suggest plausible matches to both firms and workers, increasing initial meetings and shortening the screening process of applicants. With both firms and households more knowledgeable about potential matches, the probability of a good and successful match hugely increases, which in turn reduces job turnover rates. This decreases unemployment and job vacancy rates as well as also saving money and increasing productivity in all sectors.

Furthermore, eliminating costs associated with previous job advertisements, such as printing, means that the firm not only spends less on advertising, thereby increasing its profits, but can also advertise a lot more frequently. For example, a one day advert in the *Sunday Times* which circulates to approximately 1.7 million people costs \$4,500 whereas a 30-day advert on an online job board with 3.8 million visitors a month costs \$137. These online advertisements are consistently updated, further improving efficiency as workers will not waste valuable job seeking time applying for positions that have already been filled.

Moreover, the ability to access email and company documents online has made labour supply and demand a lot less reliant on local market conditions. Due to increasing amounts of work now possible to do from home, more efficient matches can be made whereas before location was a confining issue.

A further consequence of the internet in the modern labour market is that we now have an abundance of easily accessible and up-to-date information on the labour market itself, enabling the government to implement more effective labour market policies.

Due to the introduction of the internet, we might expect the Beveridge curves of today to be closer to the origin (zero unemployment and vacancy rates) than those of the past. This would support the notion that there has been a significant decrease in both unemployment and job vacancies as a result of the improvement of job matching efficiency in the modern labour market. Further study is warranted. If this is true, perhaps labour markets will someday look as they do in the classical labour market model... or will they?

YOU CAN'T ALWAYS GET WHAT YOU WANT

The classical labour market model presumes that households only care about utility maximisation and firms only care about profit maximisation. These may not be realistic assumptions in today's modern labour market.

Faced with public pressure, various firms are endeavouring to go 'green' despite increases in marginal costs and therefore reduced profits. Moreover, many practices adopted by workers in firms are concerned with maximising sales as opposed to profits (as the majority of salaries and job perks are determined by sales) while other firms may aim to maximise shareholder wealth. There is also no guarantee that, even if a firm is prioritising profit maximisation, the information utilised is accurate, as many firms rely on estimates and 'rules of thumb' to predict profit-maximising output.

Although economic theory stipulates that utility maximisation is the primary objective for households, it is not always a straightforward exercise. As mentioned previously, employment is not always guaranteed in the modern labour market. A household may have to choose between no income or the social stigma that accompanies receiving welfare benefits, neither of which is appealing to the majority of households. Furthermore, many public issues (such as taxes and the government's rationing of commodities) must be taken into account when making household decisions of utility maximisation. These can be too complex to include into our classical model.

SO WHEN CAN I START?

In conclusion, the simple supply and demand framework of the classical labour market model needs to be considerably modified if it is to be of use to current labour market issues. Although the model suggests a perfectly efficient allocation of labour, thereby maximising social welfare, in the long run its application simply isn't practical.

A minimum wage is necessary in a modern labour market model, despite the consequences of unemployment, as without it the equilibrium wage would most likely not be sufficient for a household's income.

Additionally, the notion of labour supply and demand being equal, or perfect efficiency of matching workers and firms, is incorrect. As far as we can infer from past Beveridge curves, unemployment and job vacancies have always coexisted. We can assume, however, that as technology improves so will the job-matching efficiency of the labour market, reducing both job vacancy and unemployment rates, *ceteris paribus*.

Lastly, we are incapable of determining the collective primary objective of all firms (to maximise profit?) and all households (to maximise utility?). These are the two main concepts that the classical labour market is built on.

The relevance of the conclusions derived from the classical model of the labour market is undermined by the many different, and contradicting, aspects of the modern labour markets. It appears that in order to develop a more accurate understanding of the behaviour of modern labour markets, we need to continue to improve our models so that we can account for past and future observations.

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A NOTE FROM MOLLY BENSON

When I first "took my place in the world" at the University of Otago, I intended to study physics and maths, however by my second year I couldn't resist the stimulating and diverse department that is Otago Economics. The subjects themselves are incredibly interesting and welcomingly challenging at times, while the lecturers, as well as being passionate and exceptionally intelligent, are also extremely down to earth and enthusiastic in their teaching. I'm currently studying both natural resource and labour economics and haven't quite decided yet between pursuing environmental preservation or constructing effective labour policies to help the less wealthy. Either way, I hope to use my degree to make a positive difference.





Universities are many things: science factories, knowledge repositories, training facilities. Those in charge of operating universities have adopted a more practical label: *businesses*. Running a research and learning institution like a business is not a bad idea. After all, businesses strive to increase the value of their outputs while minimising waste... not a dishonourable endeavour at all. In business, however, customer satisfaction is paramount. And who are those customers? The biggest purchasers of university services are, of course, students. When it comes to learning, student satisfaction is measured via *student evaluations of teaching* [SETs]. Lecturers use SETs to work towards improving learning outcomes and to justify their adopted teaching practices when applying for tenure or promotion. University managers use SETs to fine-tune academic programmes in a way that influences enrolment trends ("retaining customers and recruiting more" in business-speak). SET outcomes are taken quite seriously at all levels in the organisation, but what sort of information do they really provide?

Often, the big question students are asked on SETs that lecturers look to when evaluating their performance is either "Is Lecturer X an effective teacher?" or "Were you satisfied with this course?". But what does "effective" mean to the student? And what factors go into being "satisfied"? On the production side, quite a lot goes into a class: topics must be chosen, lectures must be fabricated and given, assessments must be constructed, grading schemes must be developed and papers must be marked... all the while keeping track of the level of difficulty, clarity and style of presentation, applicability to the real world, fairness in marking and cohesion with the rest of the classes taught in the department. Students may be evaluating their lecturers on only a fraction of these tasks when they answer this question on the SET, if any at all. Research does show that there is one thing that lecturers are graded on when it comes to satisfaction and efficacy: *personality*.

A person's personality can be measured on five domains (called 'the Big Five' – see Patrick (2011) for a review):

- ~ Neuroticism (measures emotional instability, anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability).
- ~ Extraversion (measures interpersonal skills, warmth, assertiveness, and excitement).
- ~ Openness (measures interest in new experiences, fantasy, aesthetics, feelings and values).

- ~ Agreeableness (measures interactions with others, trust, straightforwardness, altruism, modesty, sympathy and compassion).
- ~ Conscientiousness (measures control over impulses, organisation, order, dutifulness, self-discipline and deliberation).

A student's perception about their lecturer's personality, based on the Big Five, correlates strongly to their evaluation of teaching effectiveness and course satisfaction on the SET. Instructor neuroticism is negatively correlated with ratings, while the other personality traits are positively correlated (see Clayson & Sheffet (2006) or Patrick (2011) to find out how much). What's alarming is that students form these perceptions *within the first 5 minutes of meeting the instructor!* In the study conducted by Clayson & Sheffet (2006), students were asked to assess lecturers on the Big Five personality traits after only a small introduction (before any information about the course was given). They used the student's responses to construct a positive personality index, which was shown to be positively related to the lecturer's teaching evaluations 16 weeks later.

Different manifestations of a lecturer's personality have different impacts on the student's satisfaction. As shown by Gruber, Reppel & Voss (2010), *humour and friendliness* tend to excite students. They won't be dissatisfied if the instructor does not exhibit these, but they will be delighted if they do. *Enthusiasm, approachability, courtesy, empathy and reliability* tend to be one-dimensional. The more of these a lecturer exhibits, the more students will be satisfied. These findings suggest that simply projecting a light-hearted, caring, amenable persona can win effectiveness points on the SET for a lecturer (actual teaching abilities notwithstanding).

We can't say that personality is *all* that matters and that actual teaching aptitude is not assessed on the SETs. Gruber, Reppel & Voss (2010) also show that expertise, fostering teamwork, coverage of real-world topics, good communication skills, logical structure of lectures and helpfulness do play a strong role in student satisfaction. All that we know is that personality *also* matters. Furthermore, there's no reason to believe that instructor personality and teaching effectiveness are mutually exclusive. Students who find their learning environment warm, inviting, accepting and relaxed may become more motivated to study, delve further into the course material and seek advice when they have questions (see Faranda & Clarke (2004) for more on the interlink between instructor rapport and willingness to learn). A lecturer whose personality supports that environment would, therefore, also be effective.

Personality traits are hard to change. Does this mean that lecturers with acrid dispositions are doomed to a career littered with poor teaching evaluations? We don't know for sure. Nonetheless, the best motto for business-minded university administrators and instructors to adopt when interfacing with students might just be: "service with a smile".

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Fighting fires: The rise of Keynesian thinking

Shanae Sherriff²

The Task: Briefly outline key turning points in Keynesian macroeconomic theory from the 1930s to today. Start by defining 'Keynesian' economics and describing how it differs from 'classical' economics. Identify the central causes of the turning points and any resolutions that came to pass. Hypothesise the future of Keynesianism in an increasingly complex economic environment.



What causes business cycles? This topic has been a source of much controversy in Macroeconomics. Competing schools of thought have emerged and re-emerged, each revolution and counter-revolution precipitated by key historical events. One such turning point was the Great Depression. The persistent high unemployment that followed the 1929 Wall Street Crash posed a serious challenge to the conventional assumption that markets are flexible and settle into a state of equilibrium quickly, setting the scene for the rise of an alternative school of thought. This alternative approach took the form of *Keynesian Macroeconomics*, named after the British economist John Maynard Keynes whose ideas were popularised by his 1936 book *The General Theory of Employment, Interest and Money*. Keynes criticised the conventional economic theory of the time, taking aim at the seemingly wishful assumption of instantaneous market clearing.

A SLOW FLICKER

"Classical" theory held that while capitalist economies were subject to periodic shocks, market forces would quickly restore production to full capacity. According to classical theory, when an event occurs that leads to substantial amounts of unemployment in the economy, those without jobs start to accept lower wage offers to get back into work. Full employment is restored quickly, but at a reduced wage rate. In other words, wages adjust rapidly to restore equilibrium in the labour market (Snowdon *et al.*, 1997). Keynes's theory differed from this in that it assumed that prices and wages were "sticky" or slow to adjust. As a result, markets do not clear quickly but could actually be in disequilibrium for a relatively long time.

Keynes maintained that economic slowdowns were started and worsened by insufficient demand in the economy. When spending is low, unemployment rises. Rising unemployment reduces the demand for goods and services further, which in turn increases unemployment even more: a vicious cycle (Weitzman, 1982). Thus the main thrust of Keynes's argument in *The General Theory* was that in times of economic depression, governments should boost economic activity through

stimulus spending (Beaud & Dostaler, 2005) to break the cycle. Capitalist economies were therefore viewed as inherently unstable, but could be helped by government intervention.

To a generation of economists, these ideas were a revelation. As Keynes's influence spread in the late 1930s, economists like Joan Robinson set to the task of extending his theory. Others, such as John Hicks and Franco Modigliani attempted to formalise it in a macroeconomic model (Mankiw, 2006). In the post-war period, Keynesian macroeconomics remained influential, and not just in academia. In the 1940s the policy objective of full employment was adopted by many Western governments (Beaud & Dostaler, 2005).

Nonetheless, Keynesian theory and policy still had its detractors. One of the most prominent critics at the time was Friedrich Hayek, who argued that a strong role for the government in the economy would lead to central planning and the destruction of individual liberty (*The Economist*, 2014). However, "the voices of Hayek and other opponents...were largely muffled in the post-war period by those advocating economic policy... To the extent that they [economic policies] contained the management of demand as the main lever for increasing or slowing down economic activity, these policies were frequently described as Keynesian" (Beaud & Dostaler, 2005, p.48). Such policies were still common in the industrialised countries in the 1950s and 1960s. Full employment was maintained and rapid economic growth took place in the West during this period. However, in the 1960s the candle lit by Keynes started to flicker. The heyday of early Keynesianism was nearing its end.

PARAFFIN ON THE FLAMES

To understand why the popularity of Keynesian theory began to fade, it is necessary to have some knowledge of the post-1960s world economy. After World War II, new industrial developments made many of the largest economies in the world reliant on one particular commodity: oil. At the beginning of 1973, oil was pretty cheap at US\$ 2.12 per barrel. During 1973, however, several members of the Organization of Petroleum Exporting Countries (OPEC – a cartel

² Shanae Sherriff is a third-year University of Otago student pursuing a Bachelor of Commerce [BCom] degree in Economics with a Minor in Accounting.

of the largest oil producers, many of which are located in the Middle East) agreed to reduce the quantity of oil they produced. This was in response to political tensions between the Middle East and some Western countries. As a result, oil prices increased severely. By the end of 1973, it had increased to US\$ 7.61. At the close of the decade, it was nearing US\$ 40 per barrel (Miller, Benjamin & North, 2003). This was due in part to the Iranian Revolution in 1979; Iran is a large oil exporter and OPEC member. Sharp increases in oil prices in the early and late 1970s led to production cuts and high unemployment. At the same time, the rising costs of making oil-related products led to increases in inflation rates. Suddenly there were two problems: high inflation and high unemployment, a situation known as *stagflation*.

Simultaneously high inflation and unemployment was troublesome for Keynesianism. In Keynesian models, the relationship between the inflation rate and the unemployment rate was assumed to be negative and stable; a relationship known as the *Phillips Curve*. When the labour market is hot and unemployment is low, firms must offer higher wages to attract new workers and hold on to current employees. Production costs rise, forcing the firm to increase the prices for their products at a faster rate. Exploiting this trade-off was incorporated into Keynesian policy: government intervention could reduce unemployment at the expense of inflation, and vice versa. The Keynesian view had difficulty explaining the stagflation of the 1970s, casting doubt on its validity.

But doubt was already there. The first wave of “New Classical” theories in the form of Monetarism started to gain prominence in the late 1960s (Johnson, 1971). Monetarists believed that changes in the supply of money (by the central bank) could influence people’s spending. When the money supply expanded, people would gain excess money balances beyond what they want to hold. They would then spend the excess cash, increasing aggregate demand and economic output. In stark contrast to the Keynesian view, Monetarism held that capitalist economies were normally stable unless there was erratic growth in the money supply, and pointed to monetary policy as a tool for influencing the economy.

Monetarists objected to the Keynesian idea that in times of low inflation, unemployment will necessarily be high and vice versa. One of the most prominent advocates of this view was Milton Friedman. He argued that the trade-off between inflation and unemployment showed in data because a large part of inflation in the short-run is often *unanticipated*, and unanticipated inflation is negatively related to unemployment. It is

possible, however, to add a low level of unanticipated inflation (when unemployment is high) with a high level of *anticipated* inflation to produce a high overall inflation rate, explaining why the trade-off seemed to break down during the oil shock years. Due to this emphasis on expectations, Friedman’s work paved the way for the second wave of New Classical macroeconomics – the rational expectations revolution (Mankiw, 2006).

The leading figure in the rational expectations movement was Robert Lucas, a former student of Friedman. Building upon Friedman’s work, he argued in his seminal 1976 paper that the mainstream Keynesian models were not useful for policy analysis because they ignored the role of expectations. For this reason, the estimated relationships in the models might break down if a new policy was implemented. This was because a change in policy (or an *anticipated* change in policy) would change people’s expectations about inflation, employment and other Macroeconomic phenomena, and would therefore change the way that these phenomena related to each other (Britton, 2002).

Despite the hostility that Lucas and other New Classical economists showed towards Keynesianism, their contributions would ultimately prove influential to the further development of Keynesian macroeconomics. Under what’s called the “Neoclassical Synthesis”, many Keynesians came to accept that the classical theory of market clearing was right in the long run. On the other hand, they still believed that Keynesian theory was more realistic in describing the economy in the short run if prices could be reasonably assumed to be slow to adjust (Mankiw, 2006). However, the traditional Keynesian models had been criticised because there was insufficient theoretical explanation as to why prices and wages were so slow to adjust. They were also only very loosely related to the behaviour of individual households and firms. These criticisms formed the basis for the coming revolution in Keynesian thought: “New Keynesianism” (Weitzman, 1982).

RE-LIT

In the 1980s and 1990s, “New Keynesian” economists attempted to explain why wages and prices failed to clear markets (Gordon, 1990). A few potential explanations were explored: one was that firms face additional costs when they choose to change their prices, and therefore if these costs were substantial enough firms would change their prices infrequently (Williamson, 2008). Another was that firms pay their employees “efficiency wages” above the market-clearing level to boost worker productivity (Mankiw, 2006). As a result of this body of research, Keynesian Macroeconomics became more strongly tied to theories of individual consumer and firm behaviour.

Throughout the 1990s, there was a broad shift in focus in Macroeconomics in general away from business cycle research to the issue of long-run economic growth. Part of the reason for this was that short-run fluctuations in economic activity became less volatile in the period from the mid-1980s up until the mid-2000s, now referred to as the “Great Moderation” (Krugman, 2009). The relative economic stability of the time meant that for many economists, the business cycle was no longer a pressing issue (Mankiw, 2006). Despite the New Keynesian revival, Keynesianism seemed to be dimming once again. However, the chaotic events of 2007-2009 would soon change this.

MELTDOWN

The recession that followed the Global Financial Crisis put stimulus spending back on the political agenda, prompting Keynes biographer Robert Skidelsky to proclaim the “return of the master” (*The Economist*, 2013). In a piece for the New York Times, Paul Krugman (2009) argued that Keynesian Macroeconomics “remains the best framework we have for making sense of recessions and depressions”. On the other hand, he noted the failure of New Keynesian economists to predict the crisis: “standard New Keynesian models left no room for a crisis like the one we’re having, because those models generally accepted the efficient-market view of the financial sector.” Thus Krugman appears to be prescribing only a partial return to the Keynesianism of old.



However, before we re-embrace Keynes, we need to remain mindful of the limitations of his theory. *The General Theory* was very much a product of the 1930s, written in the context of a specific historical situation (the Great Depression). In Keynes's own words: "...my suggestions for a cure, which, avowedly, are not worked out completely... They are not meant to be definitive, they are subject to all sorts of special assumptions and are necessarily related to the particular conditions of the time" (Keynes, 1937, pp.121-2). Early Keynesian ideas therefore may have limited relevance in an increasingly complex modern economy.

LIGHTING THE WAY

There is naturally some uncertainty in predicting the future of Macroeconomics in our increasingly complicated environment. One aspect of the modern world economy that is likely to have an impact on Keynesian theory is the prevalence of e-commerce. Because the costs of changing prices on the internet are generally less than in a traditional retail setting (Lunnemann & Wintr, 2006), we might expect to find less stickiness in online retail prices. However, in a comparative study of internet price flexibility in four European countries (France, Italy, Germany and the UK) and the US, Lunnemann and Wintr (2006) found that prices on the internet are not necessarily less rigid than retail store prices. In the US specifically, internet prices across several product categories actually went unchanged for longer on average than off-line prices reported in other research. Therefore the idea that significant costs for firms of changing prices lead to price rigidities appears to be of limited relevance, especially now that technology has made these costs negligible for internet-based businesses. The implication of this is that more coherent theories explaining price rigidities need to be developed.

One theory that may prove influential in this area is psychological pricing-point theory, which proposes that firms "attach great psychological importance to the price point thresholds, such as \$9 or 9¢, which consumers may misperceive, not round up etc., for different cognitive reasons" (Kauffman & Lee, 2005, p.18). Where such pricing points are common, rigid prices will likely result due to consumer inattention to the rightmost digits of individual prices (Kauffman & Lee, 2005).

Another aspect of today's culture that is likely to have an impact on Keynesian theory is widespread concern about the environment. Some environmentalists see a role for government in addressing climate change by spending on 'green' technologies and infrastructure, and they also tout the possible economic benefits (i.e. increased employment and growth) of doing so – a seemingly Keynesian position. However, Keynesian theory has paid little attention (until very recently) to the environment and has also mostly neglected limits to economic growth imposed by finite natural resources (Spash & Schandl, 2009). In the present political climate, this is an area for potential change.

Despite its deficiencies, Keynesian macroeconomics is most likely here to stay. In the form of New Keynesianism, Keynes's ideas continue to provide the economists of today with an avenue for conducting research and making policy recommendations.

A NOTE FROM SHANAE SHERRIFF

My original plan was to major in Accounting, but I later realised that I was more interested in Economics and changed my major. Studying Economics has been rewarding because it is intellectually stimulating and relates to real-world issues affecting peoples' quality of life. Next year I intend to undertake Honours study and hope to get an interesting and challenging job afterward. At this stage, I am thinking potentially in public policy, but I am keeping an open mind to job opportunities in the private sector as well.

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In 2013, Anna Robinson graduated from the University of Otago with a Bachelor of Science (BSc) degree in Economics with Honours. She shares her experience with us in this Highlight.

Last year I completed the Honours programme in Economics at the University of Otago. At the end of my studies, I felt like I'd wandered onto a CIA black site, such was the extent of the sleep deprivation I experienced and witnessed around me. After a few months of recovery however, I'm beginning to look back on my student days more fondly; so much so, in fact, that I agreed to write this article. Here are some of my thoughts on studying Economics and being an Economics graduate, and some words of advice for newcomers.

LESSON #1: BE PREPARED TO BE MISUNDERSTOOD

A lot of 'outsiders' think that studying a subject which sometimes involves money and interest rates means that you're about as compassionate as a cardboard box, and just as lively. And even if they don't think you're directly to blame for the Global Financial Crisis, they'll still assume that you live and breathe interest rates... and you'll often disappoint people with your inability to predict the exchange rate. Of course, in reality Economics is a lot broader, a lot more interesting and a lot more important than it appears from the side-lines, and most economists – but certainly not all – are actually quite normal (promise!).

LESSON #2: ECON101 – A DANGEROUS WEAPON IN THE WRONG HANDS

The introductory Microeconomics courses are where you'll see all the headline acts – opportunity cost, efficiency, competitive equilibrium – but you'll spend so much time extolling their virtues that you might not notice their major limitations. These fundamental tools and results in Microeconomics are really powerful, and they're almost all you need to be able to analyse a policy or issue. But the other thing you need is a large grain of salt: you can go seriously astray if you take these ideas at face value without heeding their many caveats. For example, just because someone is willing to pay more for something doesn't mean they value it more than the next person (as "Econ101" would have you believe) – they might just have more money. And a lot of the time, an efficient policy is also an unfair one.

There's probably less potential to go off course in introductory Macroeconomics, one of the most useful things I studied at university. It's where you become fluent in the economics jargon you hear in the news – GDP, the current account, the OCR – and you get some idea of what causes recessions and what policymakers can do about them. You'll also get an introduction to the economics of growth, and the perennial question of why some countries grow rich while others stay poor.

For the next generation of Otago students, BSNS 104 and ECON 112 are the introductory Economics papers to take. Each contains a mix of Microeconomics and Macroeconomics.

LESSON #3: HURRAH FOR ECONOMIC IMPERIALISM

Conventional Economics has something to say about just about everything, from health and education to crime to saving the African elephant. More recently, Economics has (somewhat arrogantly) taken it to the next level, invading and looting previously separate disciplines such as Sociology, Geography, History, Psychology, and even Neuroscience. From the perspective of an Economics student, this is pretty awesome because there is guaranteed to be an angle in Economics that really interests you. If you get the chance, you should definitely take a paper in Behavioural Economics, a relatively new field that is a case in point: it calls into question some of the assumptions and methods of standard Economics and brings in ideas from Psychology and Evolutionary Biology.

LESSON #4: WITH HONOURS COME HONOURS

I found the Honours year very stressful (to put it mildly) but I'm glad I put myself through it. For one, after you've spent some time doing your own research, tutoring, going to seminars and so on, you finally start to get an idea about what economists actually do. You'll also study topics in a lot more depth than in previous years, which is a mixed blessing. I found myself up to my eyeballs in maths in the theory papers, and it was easy to lose sight of the big picture. On the other hand, I really enjoyed some of the topics in our Growth and Development course, such as inequality, microfinance and conditional cash transfer schemes in developing countries, and the role of institutions in growth. The Labour Economics course was also packed with interesting discussion on subjects like measuring the quality of teachers and schools; the effects of migration (on the migrants as well as the destination country); the reasons behind rising inequality in the US; and the effectiveness of family planning policies in developing countries.

The Honours year also involves a healthy dose of Econometrics (Statistics for Economics), including both the theory behind the statistical techniques and how to use the software that puts it all in motion. Econometrics can be a little dry, but I've come to the sad realisation that it's really important. In my current job I spend about half my time battling through Econometrics textbooks to figure out what to do and the rest of the time running the software I learnt how to use last year. And even if you don't plan to be a researcher, some knowledge of how statistical 'facts' are generated is a valuable eye-opener: whether you intend to or not, it's very easy to mislead people with statistics.

Last but not least there's the dissertation, the main cause of my sleep deprivation over the year. You're free to choose just about anything you like provided someone is willing to supervise it, and I studied the gender pay gap in Russia alongside Professor Steve Stillman. In Soviet Russia, women made up the majority of professionals in prestigious fields like Medicine, Law, Accounting and the Natural Sciences, yet the pay gap was basically the same as in Western countries. I was interested to see what had happened to the pay gap and the jobs men and women chose after Russia moved to a market economy. I didn't quite get to the bottom of it all last year, but Steve and I have been (slowly) building on the project in spare moments over the last few months.

MY LIFE AFTER OTAGO

There are plenty of doors open to Economics graduates. I'm currently working as a research analyst at Motu Economic and Public Policy Research, a not-for-profit research institute based in Wellington. Some of my classmates have ended up at the Treasury, the Reserve Bank, the Commerce Commission and Landcare Research. At Motu I've been working for Dr Arthur Grimes to examine the role of infrastructure, geography and other factors in explaining the growth of New Zealand towns over the 20th century.

With Motu's support, I've also been taking some papers at Victoria University while I've been working. Last semester I took a paper on Asian Economic Development, where we discussed the competing explanations for the 'miracle' growth of the East Asian economies and the role the World Bank and the IMF had to play in the Asian Financial Crisis. I also did some individual research on the British colonial legacy in India, and the effectiveness of India's self-help group microfinance programme in fighting poverty. My next project is to brush up on my maths skills (as part of my ongoing struggle with Econometrics), and I'm currently taking a Linear Algebra class.

Eventually, I hope this will all lead to some post-graduate study overseas and one day becoming a bona fide development economist. Someone's already mistakenly addressed me "Dr Robinson" in an email, so I hope that means I'm on the right track.

From Anna, with love.

Steering the ship or rocking the boat? Monetary versus fiscal policy for economic stabilisation

Rajvir Singh³

The Task: Compare and contrast the roles of monetary policy and fiscal policy in economic stabilisation. Begin by describing the nature of these tools and the objectives of those who control them. Use the Great Depression and the most recent economic downturn (the Great Recession) to assess the efficacy of each in improving economic well-being. Develop an argument as to which should be relied upon to control fluctuations in the modern economy.



When a country finds itself in the midst of an economic disaster there are two macroeconomic tools that it can use to achieve economic stabilisation: monetary policy and fiscal policy. Monetary policy generally refers to how the quantity of money in the economy is managed and is implemented by the central bank (the Reserve Bank of New Zealand in our country). Fiscal policy is the set of public spending plans and tax policies implemented by the government. When used appropriately these policies can reinvigorate, sustain and strengthen the economy. When used inappropriately they can oppress, cripple or bring the economy to its knees.

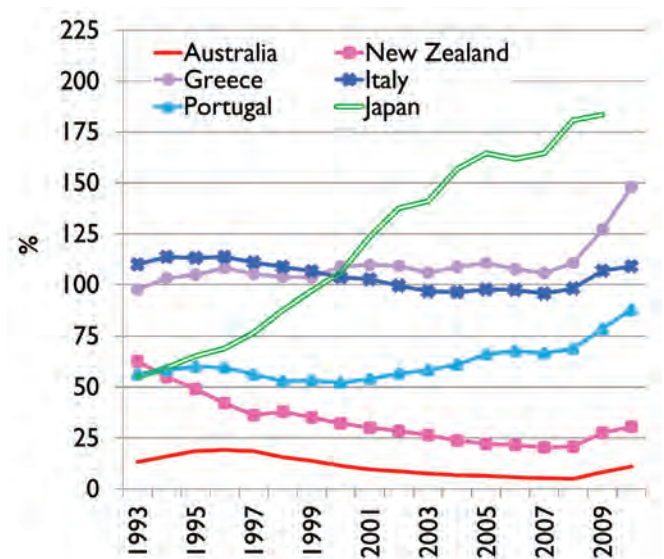
AT THE HELM

Fiscal Policy

Ronald Reagan once said, "The most terrifying words in the English language are: I'm from the government, and I'm here to help." If he was talking about the consequences of fiscal policy on the economy, he may have been onto something. Changes in these policies can spill over and influence the rest of the economy. Theoretically, expansionary fiscal policy (increasing expenditure and/or decreasing taxation) will promote recovery from recessions by encouraging consumers to spend, finding bread-winners jobs and giving producers a greater incentive to manufacture goods. This can come at a price. If the government spends more than they collect in taxes (deficit spending), they must incur debt. This debt must eventually be repaid with interest. If a country cannot make good on its public debt obligations, the financial sector and therefore the economy as a whole can weaken. Many such sovereign

debt crises have appeared in the news recently (e.g. Greece) and people have started to take notice of how large the central government debt is relative to GDP in some countries (see Figure 1).

Figure 1 – Central government debt as a percentage of GDP (1993–2010)



Source: OECD (2014)

³ Rajvir Singh is a third-year University of Otago student pursuing a Bachelor of Commerce [BCom] degree in Economics.

Monetary Policy

The US Federal Reserve Bank [Fed] was born out of the Panic of 1907. Otto Heinze was an American businessman who tried to make hefty sums of money by aggressively buying stocks of USD Cooper. The plan was to drive up the price of the stock and force short sellers to buy the stock back at incredibly high prices. Unfortunately for Heinze, this plan did not work and he was ruined. Heinze's folly created a series of bank runs which the US Congress was adamant to avoid in the future; hence the Fed was created as a "lender of last resort" so banks had a safe haven to borrow from when they struggled to pay back depositors (Miller & Benjamin, 2012b).

Nowadays, the Fed uses monetary policy to control the money supply in the US economy. The Fed is able to control inflation in both the long-run and short-run; however, it can only influence employment and output in the short-run. Since 1977, a key objective of the Fed has been to stabilise inflation which is achieved with open market operations [OMOs] (FRBSF, 2013).

OMOs are when the central bank purchases or sells government bonds. For example, to execute expansionary monetary policy (i.e. increase the money supply), the Fed would purchase government bonds from banks. It pays for the bonds by increasing the banks' reserves held at the Fed.⁴ With more in their reserve accounts, banks start to issue a greater number of loans to increase their profits. More money is circulated through the economy as a result (more than the initial bond purchase by the central bank, in fact). This increase in money supply causes interest rates to decrease, which encourages spending and results in higher aggregate demand, higher output, and lower nationwide unemployment.

In New Zealand, banks hold reserves at the Reserve Bank of New Zealand [RBNZ] to settle transactions with each other. The RBNZ pays interest on these deposits. If a bank doesn't have enough in its account, it can borrow money from the RBNZ for a short time (called *overnight borrowing*). The interest rates on these deposits and loans are related to a rate set by the central bank called the *official cash rate* [OCR]. This rate also serves as a base rate for the wider financial market. If the central bank were to lower the OCR (an expansionary policy), banks would have less incentive to hold reserves with the RBNZ and more incentive to lend money out. More money circulates through the economy, interest rates in general would decrease and spending would increase (Mankiw et al., 2009). Although different central banks may have different tools, their ability to influence the economy is strong. But is it always strong enough?



ALL HANDS ON DECK

On the heels of the notorious 1929 stock market crash of "Black Tuesday", America was drowning in the worst depression in recorded history. An economic depression is a sustained, long-term downturn in economic activity. Although technically correct, this definition does not even begin to explain the dystopian economic conditions of the Great Depression. Unemployment skyrocketed so high that three in every dozen workers were unemployed. International trade took such a severe nose dive that no country's import or export sector escaped unscathed. The personal income of American citizens was so minimal that people often said that they were living "hand to mouth". There wasn't just depression... there was despair!

What did the government and central bank do to rescue America from the clutches of the depression? President Franklin D. Roosevelt launched the "New Deal." A prime feature of this policy was an expansion of government spending on infrastructure (roads, bridges, dams, etc.). The idea here was to provide people with enough income to jump-start spending in the economy by employing them to do public works projects. Americans dared to hope that the promise of "relief, recovery and reform" would come true, which to a certain extent it did. The New Deal did increase employment, GDP, and the overall spirit of the country to some extent.

Balancing the government's budget and keeping spending in check was also part of the New Deal. John Keynes argued that this made Roosevelt too cautious. He was adamant that larger budget deficits were the way to go. After the Second World War Keynes was entitled to a big "I told you so" as the large budget deficits accrued during the war were responsible for the much-awaited revival of the economy (Fishback, 2010).

In contrast, the Fed was proclaimed as "a weak reed for a nation to lean on in times of trouble" by President Herbert Hoover (Wheelock, 1992). The Fed's choice of a contractionary monetary policy during the Great Depression was a poor one, as it discouraged spending in a country where GDP was already plummeting. Several studies have concluded that the poor monetary policy at the time was responsible for 20-70% of the decrease in GDP during the depression (Fishback, 2010). An expansionary monetary policy would have encouraged spending, boosted employment, and saved the day.

The Fed also failed as a "lender of last resort" multiple times. In 1930, numerous banks were in dire need of loans; however, the Fed chose to do nothing and allowed 20% of commercial banks to shut down (Friedman and Schwartz, 1971). There were several other opportunities in 1931 and 1933 for the Fed to save the day, but it again did nothing. The Fed's unwillingness to take action is a prime example of monetary policy being used inappropriately (Miller & Benjamin, 2012b).

HARD TO STERN

When the real estate bubble burst in 2008, America was in the midst of another economic crisis. Banks had issued mortgage loans to risky borrowers who could not repay their debts, leaving banks in a precarious position. Homes were suddenly worth less than the large sums of money that homebuyers had paid. Consumers, now with limited credit, decreased their spending severely. This decrease in aggregate demand caused approximately 700,000 people to become unemployed each month from 2008 to 2009 (Hamilton Project, 2011). These people turned expectant eyes towards the government and central bank for help.

The Economic Stimulus Act of 2008 provided lump sum tax rebates to all Americans. From an approximate tax rebate of \$80 billion, citizens saved 80-90%. Therefore the government increased their debt by \$80

⁴ These accounts are typically used by banks to settle transactions they have with each other – if you make a cheque or EFTPOS payment to someone, your bank transfers the funds to their bank via these accounts as part of settling the transaction.

billion to directly increase consumer spending by only a fraction of that amount (*The Economist*, 2008). This extra spending then rippled through the economy and amplified as money changed hands (called a *multiplier effect*). Economists testifying before the Senate Finance Committee in 2010 estimated the multiplier effect associated with the lump-sum tax rebates ranged from 1.0–1.26 (Zandi, 2010). The exact number is a matter of debate, with many predicting a much smaller value (*The Economist*, 2009). In a best-case scenario, these numbers imply that the \$80 billion tax cut increased spending in the economy by approximately \$90 billion (= 90% of \$80 billion \times 1.26). This particular policy seemed to make relatively small progress towards recovery given the amount that overall spending had decreased (\$2.9 trillion). Although *marginal* tax cuts had been successful in the past for Presidents Kennedy and Reagan, the Obama administration chose lump-sum tax cuts instead (Miller & Benjamin, 2012a). This suggests that President Obama perhaps used fiscal policy to increase his popularity, rather than stimulating the economy.

In response to the \$2.9 trillion decrease in aggregate demand, the Obama administration also initiated a \$789 billion expansionary fiscal policy: the 2009 American Recovery and Reinvestment Act. This extra spending also rippled through the economy and amplified. Economists in the Obama administration predicted a multiplier effect of approximately 1.6 on government purchases, meaning the spending plan would benefit the economy by about \$1.26 trillion. Again, the actual value of this multiplier effect is debated, with many predicting smaller effects (*The Economist*, 2009). This amount of additional government spending still seems too small. Furthermore, local governments were given little funds due to political negotiations. This slowed down local plans, such as construction and other projects, and sped up layoffs for council related jobs (*Knowledge at Wharton*, 2009). How efficiently did the government actually get the extra money to the hands of the people? Political motives may have clouded the vision of the fiscal policy and inhibited the tool's full ability to stimulate the economy.

On the bright side, the Fed had learnt from their mistakes in the Great Depression. Although a report from Bloomberg has painted the Fed in a somewhat infamous light for their \$7.77 trillion bailout as the lender of last resort, the actions of the Fed had significantly lessened the severity of the recession. The Fed helped prevent the world's largest banks, such as Goldman Sachs and Morgan Stanley, from having to shut down. Although there is some speculation that banks took these 'no-strings-attached' loans to make profit on the below market rates, the fact remains that if the Fed had failed to act as a lender of last resort, there would have been a run on banks similar to the Great Depression (*The Week*, 2011).

ALL SPEED AHEAD

Monetary policy should be used to control short-term economic fluctuations, as a central bank can more easily control real variables such as employment and GDP in the short run. Although the central bank has limited power in long-term crises via tools like OMOs, it is still able to save the economy as the lender of last resort. Fiscal policy should perhaps be used for long-term economic crises due to the time lag associated with establishing these types of policies. Fiscal policy can be distorted by political motives, which inhibits its usefulness in times of economic downturn. Rather than seeking the greater good, politicians may be tempted to forgo long-term economic prosperity in favour of short-term results that will boost their chances of re-election. To overcome this, perhaps the government should create a sub council that is not affiliated with different political agendas. This neutral entity will have the power of the government and sole objective of economic prosperity, and could improve the quality of the tools that rescue the economy when disaster strikes.

A NOTE FROM RAJVIR SINGH

Studying Economics at the University of Otago has been both challenging and rewarding, and has sparked a life-long interest in the subject. I hope to pursue a career in policy making or something similar so that I can use the theoretical knowledge I have learned at university in the real world.

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Every university student must eventually travel down the rocky road stretching from the ivory tower to the concrete jungle. This perilous path is the "job market". Unfortunately, it's easy to get lost. Students rarely give much thought to precise job titles or the exact duties they entail during their first two years at university. Soon-to-be graduates often feel confused and frustrated when they start flipping through employment ads in their final year of study; either the tasks in the job description are unfamiliar, or the student finds they are unqualified for the post having never taken the time to sharpen the skills needed to apply. Universities do provide relief by offering programmes that tie together coursework and on-the-job experience: *internship programmes*.

The term "internship programme" is often used to describe any programme where a student takes up a job at a third-party organisation and receives course credit for their experience. There are two common types of these programmes: one where students work part-time (with or without pay) while concurrently enrolled in classes (the exact meaning of "internship programme"), and one where students put their studies on hold and work full-time for pay (called *cooperative education programmes* or co-ops). In both, students gain valuable insights into how a business operates, how an industry is structured and what skills are most in demand (so they can master them before they graduate).

For example, the Business Internship Programme [BIP] at the University of Otago is a cooperative education programme centred in the Otago Business School. Like the real world, the BIP requires students to apply for job postings and interview with prospective employers. To prepare, BIP participants first take part in a training programme where they learn the tips, tricks and must-knows of the concrete jungle: how to write a CV, how to impress during an interview, what employers expect from their interns and more (we can't give all the secrets away). Those who are hired then work in paid employment for a fixed period (6–12 months). During and after their employment, students reflect on their experiences through weekly logs and business research projects for course credit which they can apply towards a Bachelor of Commerce [BCom] degree.

Programmes like the BIP have great benefits. Many of these benefits go to students. Studies show that commerce students who have completed an internship have higher starting salaries (about 9% higher according to Gault et al. (2000)), have more job satisfaction, receive employment offers sooner and receive more employment offers in total (see Gault et al. (2000) or Callanan & Benzing (2004)). These are likely due in part to the special sort of knowledge that students gain while on the job (including better knowledge of the job market to enhance their employment search, job-specific experience to enhance their resume, improved professional communication skills for interview success and better job networking).

Employers benefit largely as well. If the firm needs a temporary worker, they can find a willing intern more easily than someone from the wider labour market. If the firm needs a permanent worker, they can work towards customising their intern's skills to suit their particular needs. This can be more cost-effective than trying to find someone in the labour market with those skills already. By investing in the intern pool, the commercial sector as a whole gets a better selection of future employees with more practical experience, reducing hiring and turnover costs while simultaneously increasing productivity for everyone later on.

Universities also benefit. The university builds networks with private firms and the wider community through its students. Doors to additional forms of funding and support open for the university, and opportunities for practical research projects flood in. The university can seek outside consultation more easily to improve the quality and efficacy of their education programmes. They also build a better record

for alumni employment success. All of these contribute to increasing the quantity and quality of student recruiting.

So if everybody is a winner, why aren't internships a mandatory part of a student's education? As it happens, developing and coordinating an effective internship programme takes quite a bit of effort. Julie Pearce, manager of the BIP at Otago, outlines some of the challenges associated with growing a co-op:

"First, we need employers with good reputations. Those employers need to be willing to pay the intern the right wage, and provide the intern with tasks that build high-value, marketable skills. These firms don't need to be massive international conglomerates; our students are keen to learn about all sorts of businesses, including small/medium enterprises. They also needn't be geographically centred in Dunedin; our students love to travel. Nor do they need to be in a specific industry; a business student's skills should fit in anywhere. It can be hard finding these firms; some have never given any thought at all to using an intern, others maybe thought our students wouldn't be interested in their organisation, and others still maybe don't know where to come for more information. Getting the right students is a challenge too. The student needs to be ambitious, self-motivated, ready to jump into an unfamiliar situation and succeed, and able to represent the University of Otago to a high standard. The matching process is yet another thing; the firm needs to find the right intern. This takes time and there are no guarantees. However, we've seen the most amazing results from the matches we've had. The students come back transformed into the most inspired, focused and confident young workers you could imagine. It's hard, but worth it."

Internship programmes have drawn criticism from some. One argument used against them is that they take students out of the classroom, thus reducing a student's academic knowledge, in return for practical experience. If firms only use interns for low-skill work, the trade-off is a bad one. "The BIP programme is not one of those. Our interns don't just make copies or fetch coffee; businesses that ask for that will be sorely disappointed. Plus, many BIP students come back with renewed interest in their studies; they are more motivated to learn and they do better in their courses," says Julie.

The post-university employment process is a tough journey. Programmes like the BIP are designed by universities to help make the traveling worthwhile.

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Off target? Can four-percent inflation help us avoid the Liquidity Trap?

Edmund Lou⁵

The Task: Briefly outline a key limitation to using monetary policy for economic stabilisation. Describe whether or not the limitation you choose was of concern during the recent Global Financial Crisis. Use New Zealand's central banking system as a case study, and compare your findings to central banking strategies in other countries. Propose possible methods for reducing the impact of the limitation.



AIMING LOW

A central bank manipulates monetary policy primarily through its policy interest rate. For many central banks, this policy interest rate relates to the short-term nominal interest rate on overnight loans (the interest rate charged to private banks who borrow money overnight). When recessions occur, the central bank tends to boost the economy by cutting its policy rate. At lower interest rates, people borrow and spend more. Accordingly, the inflation rate rises – the trade-off. Likewise, if inflation pressure is high then the central bank can cool the economy down by raising the policy rate (in effect, tightening the money supply). The trade-off in this case is less employment. Such operations helped the US Federal Reserve [Fed] end the double-digit inflation in the 1970s, which is often referred to as the Volcker disinflation (Romer & Romer, 2002) or the “conquest” of inflation (Sargent, 1999).

However, a central bank cannot always lower the policy rate as much as it desires when combating an economic slump. It faces a constraint that the nominal interest rate cannot be below zero. This is often referred to as the *zero lower bound* [ZLB]. A negative policy rate means someone deposits money in a bank and receives less a year later. The depositor could avoid this situation by just hoarding cash at home. Banks would therefore have no deposits on hand that they can lend out, meaning there's no way to boost spending through increased borrowing.

Is there absolutely no way to violate the ZLB constraint? Mankiw banteringly recommends a scheme, proposed by his Harvard student, which makes hoarding money risky: “Imagine that the Fed were to

announce that, a year from today, it would pick a digit from zero to 9 out of a hat. All currency with a serial number ending in that digit would no longer be legal tender. Suddenly, the expected return to holding currency would become negative 10%. That move would free the Fed to cut interest rates below zero.” Unfortunately, this policy does not make any political sense even if the central bank has legal independence.

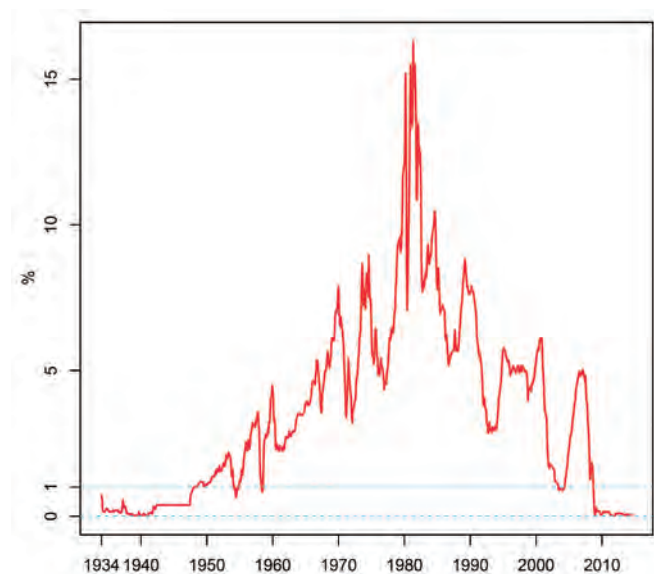
GETTING STUCK

Central banks tend to control their policy rate by changing the money supply. When the central bank floods the banking system with money, private banks find themselves with more funds on hand to lend out. They lower their interest rates to encourage borrowing (and therefore spending). However, there is a point at which further increases in the money supply no longer cause a reduction in interest rates. This situation is known as a *liquidity trap* and can occur when nominal interest rates are extremely low. As a result, the central bank loses its power to influence the economy.

The liquidity trap was first conceived during the Great Depression (Keynes, 1936; Eggertsson, 2008)⁶ and later happened in Japan during the late 1990s (Krugman, 1998). With the long-time challenge of the Keynesian school, most macroeconomists and policymakers view the liquidity trap as a rare case or just a theoretical idea of Keynesian Macroeconomics.

As interest rates approach zero, the tools that the central bank uses to pull the economy out of a recession become increasingly limited and the chances of falling into a liquidity trap rise. Unfortunately, from late 2008 major central banks – including the Fed, the Bank of England and the European Central Bank – have been keeping policy interest rates close to the ZLB. The threat of a liquidity trap seems to have returned.

Figure 1 – United States 3-Month Treasury Bill interest rate (January 1934 – July 2014)

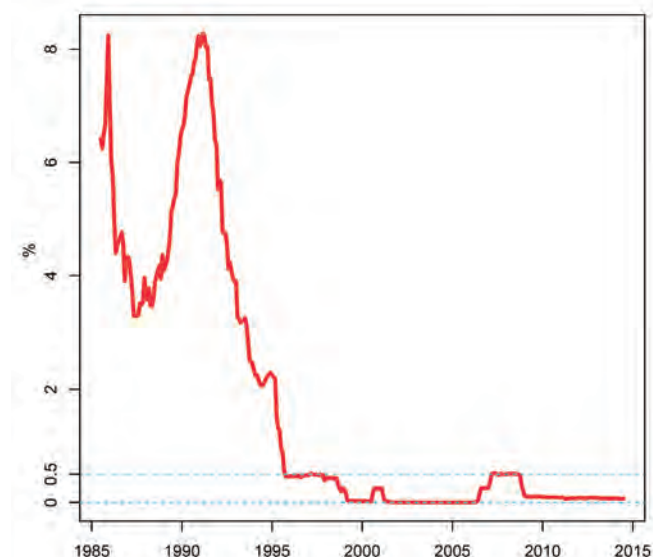


Source: Board of Governors of the Federal Reserve System (2014)

⁵ Edmund Lou is a third-year University of Otago student pursuing a Bachelor of Science [BSc] degree in Economics and Mathematics.

⁶ For the years 1934 to 1942, there were 73 out of 84 months with short-term interest rates lower than 0.25% in the United States (see Figure 1 above).

Figure 2 – Policy interest rate of Japan (MUTAN) (July 1985–July 2014)



Source: Bank of Japan (2014)

LOWER THE TARGET, JUMP OVER THE TRAP

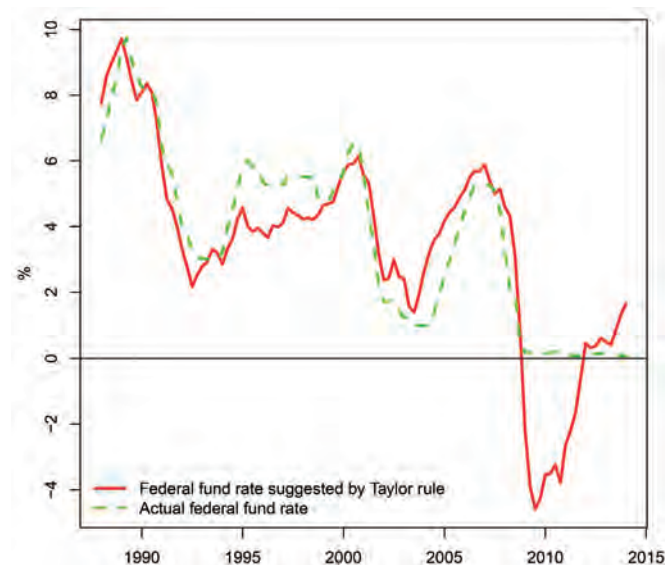
There is a prevailing consensus that choosing a low and stable inflation target (or target band) is an optimal choice for central banks to achieve the goal of price stability.⁷ This consensus is a result of taking lessons from a “rules versus discretion” debate to solve inflation bias. In other words, the effectiveness of monetary policy relies on generating inflation expectations in the direction the central bank desires. To achieve this, central banks choose to clearly announce the rule of conducting future monetary policy to keep inflation low and stable rather than behaving in a discretionary fashion.

With the hope of shaping the right expectations, some countries have officially claimed to adopt an explicit inflation target. The first such policy was adopted by New Zealand in 1989, and it spread rapidly to other countries. As of 2010, there had been about 10 industrialised and 15 developing countries around the world that had adopted inflation-targeting (Svensson, 2010).

The inflation target, explicit or implicit, in advanced economies appears to be 2%. In January 2012, the Fed under Ben Bernanke also announced an inflation target with 2%. One year later the Bank of Japan made the same declaration supporting Prime Minister Shinzō Abe’s gigantic economic revival plan. There is a large literature discussing an optimal rate of inflation. However, the 2% target is not from those scientific results – it is a conventional setting. The formation of the convention is not clear, but a reasonable guess is that it comes from the aim to keep inflation as low as possible.

When the economy faces a large deflationary shock, there may not be enough room for the central bank to cut the policy rate down. The problem of the liquidity trap then arises. Consider the US case during the recent 2007–2009 financial crisis, when aggregate demand fell greatly. The Federal funds rate (the Fed’s policy rate) quickly hit the ZLB in December 2008. In the meantime, the unemployment rate rose from 4.4% in May 2007 to 10% in October 2009. A rough estimate using the Taylor rule (a monetary policy rule that prescribes a change in the nominal interest rate based on the inflation rate, the unemployment rate, and other economic conditions; Taylor, 1993) suggested that the policy rate should have been at -4.6% in the third quarter of 2009 if there were no ZLB (see Figure 3).

Figure 3 – Actual Federal Funds Rate versus the Federal Funds Rate suggested by the Taylor rule (1988–2014, quarterly data)



Sources: Board of Governors of the Federal Reserve System (2014), US Bureau of Labor Statistics (2014), Congressional Budget Office (2014).

Facing the ZLB constraint, the Fed undertook some unconventional monetary policies, referred to as *quantitative easing* [QE], to lower *long-term* interest rates by purchasing long-term government bonds and other private securities. To some extent, this unconventional strategy worked and brought the unemployment rate down to 6.2% in July 2014. But to implement this policy, the Fed had to build an unprecedentedly huge balance sheet. It is no wonder that it kept postponing mentioning the exact date of QE exit – because it is risky and no one knows how risky it is.

Instead, suppose the Federal funds rate recommended by the Taylor rule were at some positive number. Then the Fed would have reduced policy rates quickly, which has proverbially less risk, without taking QE into consideration. This different point of view gives a nice policy implication: raise the inflation target to a higher level. Lenders build expected inflation into the nominal interest rates they set. They do this to compensate for changes in the price level between when they make the loan and when they earn their return (the interest payment). If the expected inflation rate were higher, then nominal interest rates would be higher as well, giving the central bank more room to cut policy rates during an emergency. Because of this, some macroeconomists propose that setting the inflation target at the higher level of 4% during normal times could make the ZLB less likely to bind during crises (Blanchard et al., 2010; Ball, 2013).⁸ But it is sad to say that few macroeconomists and policymakers agree with the 4% proposal.

THE OPPONENTS

There are three major dissenting arguments against the 4% inflation target. The first point is that the liquidity trap does not come very often. It was driven by an unusual financial crisis and happened more than 70 years after the Great Depression (Mishkin, 2011). Ball (2013), however, points out that it is not as infrequent as we might think. The US economy was almost bogged down by the liquidity trap in the 1990–1991 and 2001 recessions. In light of the more intense ‘financial’ movements, it might be better to take some precautionary measures anyway.

⁷ This policy also has a “divine coincidence” (Blanchard and Galí, 2007). As stated by Blanchard et al. (2010), “This [choosing a low and stable inflation target] was the result of a coincidence between the reputational need of central bankers to focus on inflation rather than activity and the intellectual support for inflation targeting by the New Keynesian model.”

⁸ The 4% inflation target is a proposal for advanced economies with inflation targeted at the conventional 2%. For the same reason, this proposal can also work for developing economies with a low inflation target.

The second argument is that moving to a 4% inflation target is destabilising. Bernanke (2010) contends: "If we were to go to 4%, and say we're going to 4%, we would risk I think losing a lot of that hard-won credibility because folks would say, well, if we go to 4, why not go to 6, and if you go to 6, why not go to 8. It would be very difficult to tie down credible expectations at 4." Truly, that is what central bankers believe. But if the central bank's credibility was so weak, then surely they would have trouble stirring the correct expectations at the 2% inflation target. Can a central bank with strong credibility really ruin anything by announcing a new 4% inflation target, especially if they give a clear explanation to the public for doing so? The current situation is similar to the time just before the end of the Bretton Wood system. As Krugman (2013) points out: "we should never forget that there was once a time when almost all central bankers believed that going off the gold standard would mean the end of civilization." There is no need to fear the collapse of the hard-won credibility without good reasons.

The last argument relates to the use of fiscal policy. Fiscal policy can be used to stimulate the economy when the monetary authority faces a liquidity trap, so why not rely on the central government instead of changing the inflation target? Everyone nods. If fiscal stimulus is carried out in a timely manner, the central bank need not make large cuts in interest rates. They are less likely to be near the ZLB as a result. However, this is not always the case. Passing fiscal stimulus plans through the political process is time-consuming, even in the midst of a recession. Plans need to be debated over (what to spend the money on) and voted on by the people's representatives in the government. The move towards more political polarisation means that fiscal policy will never be a punctual partner of monetary policy (Romer, 2013). The fiscal crisis in Greece even reveals that the right fiscal policy could possibly not exist in some places. Raising the inflation target might be an 'optimal' choice.

WINNING THE GAME

Some economists feel sympathetic to the idea of a 4% inflation target. Though others are concerned it may solve the ZLB problem by creating another, the slightly higher inflation may not be a major problem (Romer, 2013). If central banks can explain clearly that taking this precaution is important, people will accept it (even though they might prefer lower inflation rates). As it is, major central banks are still considering when and how to exit the QE, and people are worrying about whether or not this will generate high inflation. In light of this, there is a golden opportunity now to raise the inflation target – 4% is not high based on their current expectations.

A NOTE FROM EDMUND LOU

I am currently doing a variety of papers in Economics, Finance, Mathematics and Statistics. Every faculty member in the Economics department at Otago is friendly and talented. Talking to them will stimulate your interest in every field of Economics. I am especially interested in macroeconomic theory, macro-econometrics and mathematical finance, and am planning to do postgraduate study in the future.

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Commentary on the New Zealand economy

Alan King⁹

alan.king@otago.ac.nz

	Jun 2014	Mar 2014	Dec 2013	Sep 2013	Jun 2013
GDP (real, annual growth rate, %)	3.5	3.2	2.8	2.6	2.2
Consumption (real, annual growth rate, %)	3.1	3.0	2.8	2.5	1.9
Investment (real, annual growth rate, %)	12.4	11.4	8.8	8.3	4.7
Employment: full-time (000s)	1815	1798	1779	1761	1744
Employment: part-time (000s)	517	519	518	509	504
Unemployment (% of labour force)	5.6	5.9	6.0	6.1	6.4
Consumer Price Inflation (annual rate, %)	1.6	1.5	1.6	1.4	0.7
Food Price Inflation (annual rate, %)	1.6	0.8	1.3	0.8	0.2
Producer Price Inflation (outputs, annual rate, %)	2.5	4.0	3.8	4.1	0.8
Producer Price Inflation (inputs, annual rate, %)	1.4	3.1	2.8	3.3	0.0
Salary and Wage Rates (annual growth rate, %)	1.6	1.5	1.6	1.6	1.7
Narrow Money Supply (M1, annual growth rate, %)	8.3	7.6	9.5	9.4	8.0
Broad Money Supply (M3, annual growth rate, %)	5.4	5.0	5.8	7.3	6.2
Interest rates (90-day bank bills, %)	3.52	3.05	2.70	2.64	2.64
Exchange rate (TWI, June 1979 = 100)	80.3	79.7	77.5	76.2	74.0
Exports (fob, \$m, year to date)	51,187	50,028	48,044	46,005	45,704
Imports (cif, \$m, year to date)	49,986	49,230	48,360	47,564	46,524
Exports (volume, seas. adj.)	1259	1330	1318	1208	1227
Imports (volume, seas. adj.)	2032	1961	1909	1907	1814
Terms of Trade (June 2002 = 1000)	1419	1414	1389	1355	1261
Current Account Balance (% of GDP, year to date)	-2.5	-2.7	-3.3	-3.9	-3.7

Sources: Statistics New Zealand (stats.govt.nz), Reserve Bank of New Zealand (rbnz.govt.nz)

Headline inflation has remained below the mid-point of the RBNZ's 1–3% target band through the first half of this year. The annual rate of inflation for non-tradable goods and services (i.e., those that are not traded internationally) had been steadily rising during the year to March, but it dropped in the June quarter (and by more than the RBNZ had anticipated). This, together with the increasing strength of the dollar (which reached a post-float high in July and is keeping tradable goods inflation subdued), has prompted the RBNZ to hold the Official Cash Rate at 3.5% (having raised it from 2.5%) for the time being.

There appear to be several reasons for the benign inflation outcomes (relative to earlier forecasts) so far this year. First, wage inflation has remained at very low levels despite increasing demand for labour and this has helped (along with the strong dollar) to minimise the 'cost-push' pressure on firms' prices. Part of the reason for this is likely to be the high level of net migration into New Zealand, which has added to the supply of labour.

Firms have also been taking advantage of the strong dollar to acquire new machinery and equipment, imports of which have been growing strongly over the last few years. The current rate at which such goods are being imported is almost a third higher than the peak level achieved before the Global Financial Crisis. Hence, it is conceivable that the economy's potential (or full-capacity) rate of output has grown faster than previously thought and so largely kept up with growing demand, which means there has been less 'demand-pull' pressure on firms to raise their prices.

At present, therefore, inflationary pressure is largely confined to the construction sector (and this sector's pressure, in turn, is largely confined to the Canterbury and Auckland regions). This situation, however, is unlikely to last as the economy continues to expand and unemployment continues to fall.

The RBNZ's decision to take a pause was also motivated by the sharp decline in dairy prices over the last six months. It has also observed that the exchange rate has yet to significantly adjust to reflect the fall in commodity prices, calling the dollar's currently level "unjustified and unsustainable". However, the lack of adjustment in the exchange rate could simply be a reflection of the fact that a 'correction' in the extremely high dairy prices of early 2014 was widely anticipated. Even if the actual fall in dairy (and log) prices has turned out to be sharper than many expected, to some extent this has been offset by the recovery in aluminium, meat and wool prices through 2014. Moreover, the sharpness of the recent fall in dairy prices appears to have been because China has a large inventory of dairy products. Once they have run down their inventory, prices should recover to some extent. Hence, although our terms of trade will fall back over coming quarters from their near all-time record level reached in June, they will still be very favourable and may even rebound a little by early 2015. This reasonably positive outlook may be the "justification" for the dollar strength over the short term. However, its recent level is certainly not sustainable over the longer term. What goes up eventually comes down.

⁹ Department of Economics, University of Otago.