Institution: University of Stirling		
Unit of Assessment: 17. Business and Management Studies		
Title of case study: Enabling Underemployment and Post-Recession Monetary Policy		
Period when the underpinning research was undertaken: 2011-2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	**Role(s) (e.g. job title):**	**Period(s) employed by submitting HEI:**
David Bell	Prof of Economics	1990-Sept 2020 (thereafter Emeritus)
David Blanchflower	Prof of Economics	2006-Sept 2020
Period when the claimed impact occurred: 2014-2019		
Is this case study continued from a case study submitted in 2014? No		

1. Summary of the impact

Stirling research by Bell and Blanchflower has played a crucial role in the major shift to the use of broader measures of labour market slack in monetary policy decisions made by the Bank of England and US Federal Reserve over the last seven years.

Pre-2008, central banks regarded the unemployment rate as the main indicator of labour market slack. Interest rate decisions were therefore heavily influenced by unemployment rates. Since 2008, unemployment has not been a reliable measure of labour market slack. Bell and Blanchflower have shown that *underemployment* is a more appropriate measure: acceptance of this by central banks has led to changes in their definition and policy focus of full employment and lowered inflation risk assessment.

The ultimate impacts of this shift have been widespread, positively affecting the health of the UK and US economies, stocks/bonds valuations, and currency stability, therefore benefitting millions.

2. Underpinning research

Stirling's Bell and Blanchflower's research into the 2008 Great Recession revealed the disproportionate and 'scarring' effects of unemployment on those aged 16-24 years old. During the Great Recession unemployment among the young rose at a greater level than any other demographic group, moreover the research (**R1**) showed that the young were far more likely to experience *underemployment*, that is they were willing to work more hours but the market was failing to demand extra working time from them. Because monetary policy was based on mechanisms that focused on a narrow measure of labour market slack (i.e. only unemployment), this policy was increasing underemployment and unemployment by setting interest rates too high. These trends were shown to be amplified for those with a low level of qualifications and those from minority ethnic backgrounds.

These findings led Bell and Blanchflower to further explore the phenomenon of underemployment (**R2**) by developing an 'underemployment index' for the UK context using individual data from the Office for National Statistics Labour Force Survey. The development of this alternative measure of labour market slack was further refined in research commissioned by the Peterson Institute for International Economics in the US (**R3**). This included recommendations on how the index could be developed for the US using the US Bureau of Labor Statistics.

The research continued to develop the underemployment index to account for governments' changing monetary policies and changes to the unemployment rate within the UK (**R4**). The index was applied to European countries using Eurostat Labour Force Survey data (**R6**) and continued to calculate and track the UK index and use it to argue that the Bank of England should not raise UK interest rates (**R5**). Each index uses aggregated data on individuals' desired hours of work to provide an alternative to the unemployment rate to measure labour market slack. The definition of the index ensures that when net desired hours of work are zero, (the number of extra hours desired

by the underemployed equals the reduction in hours desired by the overemployed) the index matches the unemployment rate.

Overall, the key finding (**R1** - **R6**) that relates to the impacts presented below was that there was extensive underemployment of labour within the UK economy during the Great Recession. This took the form of workers wishing to work longer hours without expecting any increase in their hourly wage. But employers were not offering additional hours, leaving workers in a weakened bargaining position. This provided a key explanation of the dramatic slowdown in wage growth during, and after, the recession. Although the economy gradually recovered and unemployment fell substantially, wage growth remained stubbornly low. The indices we developed for European countries (**R6**) showed that unemployment and underemployment in several of these countries followed similar patterns before and after the recession. Thus, compared with past experience, wage growth was stunted, even though unemployment rates, in most countries recovered to their pre-recession levels and in some approached post-war lows.

3. References to the research

R1. Bell, D. N., & Blanchflower, D. G. (2011). Young people and the Great Recession. Oxford Review of Economic Policy, 27(2), pp.241-267. DOI: 10.1093/oxrep/grr011

R2. Bell, D. N., & Blanchflower, D. G. (2013). Underemployment in the UK Revisited. National Institute Economic Review, 224(1), F8-F22. DOI: 10.1177%2F002795011322400110

R3. Bell, D. N., & Blanchflower, D. G. (2013). How to Measure Underemployment? Peterson Institute for International Economics 2013, Working Paper 13-7. https://www.piie.com/sites/default/files/publications/wp/wp13-7.pdf

R4. Bell, D. N., & Blanchflower, D. G. (2014). Labour market slack in the UK. National Institute Economic Review, 229(1), F4-F11. DOI: 10.1177%2F002795011422900108

R5. Bell, D. N., & Blanchflower, D. G. (2018). Underemployment and the Lack of Wage Pressure in the UK. National Institute Economic Review, 243(1), R53-R61. DOI: 10.1177%2F002795011824300114

R6. Bell, D.N.F. and Blanchflower, D. (2019). Underemployment in the US and Europe, Industrial and Labor Relations Review, DOI: 10.1177%2F0019793919886527

4. Details of the impact

The ultimate beneficiaries of our underemployment index have been, and will continue to be, the UK and US population, particularly young people seeking employment. The wider public have benefited because raising interest rates would have increased the risk of further slowing recovery after the Great Recession. Such a slowdown would have adversely affected businesses through falling demand, households through lower incomes and government through falling tax revenues. Benefits to these groups were transmitted through the Monetary Policy Committee (MPC) of the Bank of England which sets UK monetary policy, focusing principally on interest rates; other central banks (including the US Federal Reserve), some taking their lead from a the BoE, have also been benefited from our research through their enhanced understanding of underemployment and its role within their respective labour markets, leading to policy changes and corresponding benefits for populations. In these cases, the ultimate beneficiaries are the populations of the relevant countries.

Adam Posen, President of the Peterson Institute for International Economics, former MPC member, and adviser to numerous central banks including the Federal Reserve, states that the shift toward the inclusion of our measure of underemployment (**R1**-**R6**) represents a monetary policy "revolution" (**S1**). Posen explains that this shift:

"changed the definition and policy focus of full employment; second, it lowered the assessment of inflation risks for the advanced economies for an extended period. This has an effect on a series of policy decisions affecting millions of people, the health of the economy, the valuation of savings in stocks and bonds, and the stability of currencies, with impact on politics, and will continue to do so for some years to come." (**S1**)

These positive economic changes brought about by central banks relied on only a "handful of evidence-based research publications" (**S1**), including **R1** to **R6**. As Posen states, "Without Bell and Blanchflower's ground-breaking research on underemployment … central banks might not have changed their minds on this absolutely critical set of measurements and concepts" (**S1**).

The primary mechanism through which our research entered policy was via its inclusion in debates within central banks. For example, the MPC's minutes of a meeting held in December 2018 make reference to "Net desired hours, an indicator of underemployment, had been about zero since the start of 2018, suggesting little in the way of slack on this margin" (**S2**). Since our index developed the concept of "net desired hours", it is clear that the MPC had considered it as a relevant measure to be taken into account when coming to their decision. The Bank of England's further and regular use of our underemployment index in analysis of the state of the labour market is demonstrated by reference to it in the Bank's quarterly "Inflation Report", which informs members of the MPC prior to them making decisions. Underemployment was mentioned in the Feb 2015 (cites **R3**), Nov 2015 (cites **R3**), Nov 2016 and Nov 2017, Aug 2018 and Nov 2018 inflation reports (**S3**). The Nov 2015 Inflation Report specifically referenced our work citing a paper that we wrote for the Peterson Institute for International Economics which was intended to explain how underemployment might be measured in the USA. Further evidence of impact on the MPC came from a speech (**S4**) arguing for a different interpretation of our data by a hawkish member of the MPC, Martin Weale, which references **R2**. As Posen summaries, our research "materially influenced the public and confidential discussions of monetary policy set by the Bank of England and by the Federal Reserve in the second half of the last decade" (**S1**).

The research continues to have wide-ranging international impacts. For example, the shift in monetary policy underpinned by our research has seen its latest development in the Federal Reserve's August 2020 revised [Statement on Longer-Run Goals and Monetary Policy Strategy](). The essential place of our research in this is testified to by Posen (**S1**).

Our argument that interest rates should not be increased has also entered public debate, as seen by reference to, and support for it, by well-respected journalists. For example, Larry Elliott, in The Guardian wrote:

> "Unemployment is at its lowest since 1975, so earnings growth should be picking up. If it isn't there can only be two realistic explanations: the inflationary surge will eventually happen and has simply been delayed; or there is more slack in the labour market than the headline The Bank goes for the former explanation: two of the world's leading labour market experts – David Blanchflower and David Bell – believe the latter. In two forthcoming papers [i.e. R5 & R6], the pair say that traditional Phillips curve models need recalibrating to take account of underemployment." (**S5**. Guardian July 8th 2018)

The international application of our index has also significantly increased its exposure and role within policy deliberations, with, for example, the Office for National Statistics commenting on its attributes (**S6**). [Redacted from publication at request of stakeholder] (**S7**).

Summary
Bell and Blanchflower's research has undoubtedly been and continues to be crucial in central-bank level debates and civic discourse on underemployment and interest rate decisions in the UK,

Europe, and North America. It has therefore underpinned key national and international policy debates and decisions, with positive benefits for millions across the world.

5. Sources to corroborate the impact

S1. Testimonial from Adam Posen, President of the Peterson Institute for International Economics and former Monetary Policy Committee member.

S2. Bank of England, 'Monetary Policy Summary and minutes of the Monetary Policy Committee meeting ending on 19 December' (Dec 2018). *Includes Reference to "net desired hours" in relation to labour market slack (see para 30).* Available from: https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-summary-and-minutes/2018/december-2018

S3. Bank of England, 'Inflation Reports' (compilation of multiple reports). Available from: https://www.bankofengland.co.uk/inflation-report/inflation-reports
  a. February 2015, *see p.24.*
  b. November 2015, *see p.19.*
  c. November 2016, *see p.10.*
  d. November 2017, *see p.2.*S3e. August 2018, *see p.4.*
  f. November 2018, *see p.20.*

S4. Bank of England News Release, 'Slack and the labour market - speech by Martin Weale' (20 Mar 2014). Available from: https://www.bankofengland.co.uk/-/media/boe/files/news/2014/march/slack-and-the-labour-market

S5. Larry Elliot, 'Carney should heed employment experts before rate decision', *The Guardian* (8 Jul 2018). Available from: https://www.theguardian.com/business/2018/jul/08/carney-should-heed-employment-experts-before-rate-decision

S6. Office for National Statistics, Economic Review Oct 2017, Measuring labour market underutilisation. Available from: https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/articles/economicreview/october2017#measuring-labour-market-underutilisation

S7. Testimonial from [redacted from publication at request of stakeholder].