


Section A		
Institution: University of St Andrews		
Unit of Assessment: UoA16: Economics and Econometrics		
Title of case study: Determining the Pay of NHS Staff in UK		
Period when the underpinning research was undertaken: 2006 – 31 December 2020		
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 T. Ulph	Professor	01/10/2006 – 31/01/2021
Tatiana Damjanovic	Reader	01/09/2004 – 01/09/2011
Felix FitzRoy	Professor	01/06/1990 – 30/09/2013
Period when the claimed impact occurred: 2016 – 31 December 2020		
Is this case study continued from a case study submitted in 2014? No		
Section B		
1. Summary of the impact		
<p>Research on labour markets at the University of St Andrews School of Economics and Finance has influenced the wider community through David Ulph's membership of the NHS Pay Review Body (NHSPRB) from August 2015 to the present. The NHSPRB is an advisory Non-Departmental Public Body which makes recommendations to the Prime Minister and the Secretary of State for Health and Social Care in England (and analogous Ministers in the devolved governments) on the remuneration of Agenda for Change (AfC) staff employed in the NHS – effectively all staff other than doctors and dentists (for whom there is a separate Pay Review Body). Currently, the work of the NHSPRB covers just under 1,500,000 people (NHS staff) and the annual paybill is approximately GBP55,000,000,000.</p>		
2. Underpinning research		
<p>The research listed below reflects the environment centred in St Andrews over a number of years in the area of Labour Economics, where thinking takes place about a range of issues relating to individual behaviour and well-being in the labour market. While much of this thinking is generic its conclusions are as relevant for workers in the NHS as for those in other sectors.</p> <p>[R1] involves a collaboration between David Ulph and Tatiana Damjanovic when the latter was a staff member in St Andrews. The paper considers the implications of having advice on tax avoidance provided by a consultancy industry dominated by a few large companies. It shows that the standard prescription for reducing tax avoidance through reducing tax progressivity may not apply. In deriving this conclusion the paper models the incentives of individuals to acquire a tax avoidance scheme, which in turn impacts on labour supply decisions – particularly of higher-paid workers.</p> <p>[R2] - [R4] were written against the background of findings in the “happiness” literature that individuals compare their income to the average income of some comparator group.</p> <p>[R2] involved a collaboration among Ulph, Felix FitzRoy and two external authors. They provide empirical and theoretical evidence that, while older people feel less happy the higher is the</p>		

income of others, the happiness of the young *increases* with the income of others. This can drive work incentives.

In [R3], individuals compare themselves to others with comparable abilities. By modelling the impact of this on individual decisions as to how hard to work, it is shown that, for a range of low-income earners, individuals on higher wages are *worse off* than those on lower wages because of the pressure to overwork. This new result contradicts standard economic theory but explains the well-established phenomenon of the “squeezed middle”. It is especially relevant to those whose pay is close to the minimum wage.

[R4], written by Ulph with one of his PhD students, examines the implications of the previous paper for the design of income tax schedules. They show that the conclusion by Lord Layard - that happiness considerations driving people to overwork should be addressed by raising income tax rates - is not in general true.

[R5] provides a new model of labour supply in which a population of individuals choose to work in either a caring profession or a non-caring profession. Individuals also choose how hard to work in each profession. The model shows that, for a given wage rate, there could be multiple workforce gaps in the caring profession some of which are unstable, with vicious cycles emerging when the gap is large. By calibrating the model to UK data, the paper shows that: (i) the current UK environment is consistent with a unique stable equilibrium; (ii) while increasing the relative wage of workers in the caring profession has an effect consistent with existing nursing labour supply elasticities, it significantly reduces the workforce gap.

3. References to the research

[R1-R4] are published in international peer-reviewed journals; [R5] is a discussion paper published online by the University of St Andrews.

R1. **Damjanovic, T.** and **David Ulph**, “Tax Progressivity, Income Distribution and Tax Non-Compliance,” *European Economic Review*, 2010, 54(4), 594-607. DOI: [10.1016/j.euroecorev.2009.09.003](https://doi.org/10.1016/j.euroecorev.2009.09.003).

R2. **Felix Fitzroy**, M. Nolan, M. Steinhardt and **David Ulph**, “Testing the Tunnel Effect Comparison, Age and Happiness in German and UK Panels,” *IZA Journal of European Labour Studies*, 2014, 3:24. DOI: [10.1186/2193-9012-3-24](https://doi.org/10.1186/2193-9012-3-24).

R3. **David Ulph**, “Keeping up with the Joneses: Who Loses Out?” *Economics Letters*, 2014, 125, 400-403. DOI: [10.1016/j.econlet.2014.10.029](https://doi.org/10.1016/j.econlet.2014.10.029).

R4. Sean Slack and **David Ulph**, “Subjective Well-being, Consumption Comparisons and Optimal Income Taxation,” *Journal of Public Economic Theory*, 2018, 20, pp. 455-476. DOI: [10.1111/jpet.12281](https://doi.org/10.1111/jpet.12281).

R5. **David Ulph**, “The Drivers of the Nursing Workforce Gap: a Theoretical Framework,” School of Economics and Finance Discussion Paper No. 20-05, University of St Andrews, June 2020. [RePEc:san:wpecon:2005](https://www.repec.org/san/wpecon/2005).

4. Details of the impact

The research by Ulph (with co-authors: Damjanovic, FitzRoy, Nolan, Stienhardt and Slack) described in section 2 represents work in St Andrews in the area of Labour Economics which is policy relevant for any institution that is involved in analysing the pay structure and remuneration of its staff. Based in part on this work, Ulph has been one of seven or eight members involved in the preparation of five NHRB Reports published between 2016 and 2020. Ulph “...is one of two economist members”. [S1, p. 1]

All Pay Review Bodies have economist members. Their role is to assist the Review Body in the interpretation and assessment of economic evidence, particularly that relating to the working of labour markets including the determinants of labour supply. This evidence comes from a range of sources; (i) the three main parties to any pay deal – government departments, staff side and employers; (ii) research by academics and other research institutes.

The 2015 job advert for one specialist Economist post within the NHSPRB provides evidence that the successful candidate (Ulph) needed to demonstrate senior-level experience of economics in the academic or business world, including “*an acknowledged record of achievement as an economist with the ability to apply expertise to labour market issues*”. [S2, p. 6]

The requirement to give particular attention to the functioning of labour markets is evident from the Review Body’s Terms of Reference which state that the NHSPRB should consider: “*the need to recruit, retain and motivate suitably able and qualified staff; the regional/local variations in labour markets and their effects on the recruitment and retention of staff...*” [S3, p. 1] The need to consider labour market factors, in particular labour supply factors, is reinforced in the annual remit letters from the Secretary of State for Health. For instance the 2016-2017 remit letter (dated 6 Nov. 2015, signed by the Parliamentary Under Secretary of State for NHS Productivity (Lords)), states “*...consider how an award might best be targeted to support recruitment and retention...*” [S4, p. 1].

Two key principles govern the work of all PRBs. First, their reports are collectively agreed and no part of the report can be attributed to the contribution of any one member. Second, all evidence received by the NHSPRB has to be perceived to have been treated in a neutral way. It would undermine the work of the NHSPRB if there was any perception that certain evidence was privileged and carried greater weight with the NHSPRB just because of its provenance. For both these reasons, it is impossible to make/support any statement of the form: “this piece of research by that individual led to this piece of advice and that subsequent impact.” However, the choice of Ulph based on his expertise in this role is confirmed by the Director of the Office of Manpower Economics (BEIS), “*While all the views of the Review Body, which are set out in its published reports, are equally those of all its members, it is important that the Review Body has within its membership those with senior level experience of economics in academia or business with the ability to apply this expertise to labour market issues.*” [S1, p. 2]

When given a remit to do so, the NHSPRB makes recommendations to Ministers on the remuneration of AfC staff employed in the NHS. This covers effectively all staff other than doctors and dentists (for whom there is a separate Pay Review Body). Currently, there are just under 1,500,000 people (AfC staff) and the annual Exchequer paybill for employing them is approximately GBP55,000,000,000 per year. Allowing for oncosts such as employer NICS, this translates into a total gross pay for AfC staff of approximately GBP48,000,000,000. Although “*...governments are not bound by the review body’s advice and publish their responses to each report...*”, “*...the UK Government and Devolved Administrations have accepted the NHSPRB’s recommendations and welcomed its observations each year since 2016*”. [S1, p. 2]

The 2016 NHSPRB Report recommended a 1% pay award in line with the government’s maximum 1% public sector pay policy. This recommendation was implemented. [S5, p.1]

While the 2017 NHSPRB Report also recommended a 1% pay award that was subsequently implemented, it noted: “*There is a consensus among all evidence providers that the negative impact on staff morale of a pay award below 1 per cent [1%] is not worth the relatively small financial benefit, even if this flowed through to increases in staffing levels as opposed to*

reducing deficits. A pay award has the virtues of being immediate, visible, uniform and attributable.” [S5, p. xiv]

Looking to the future, it noted:

“The evidence we have received gives us cause for concern about the sustainability of public sector pay policy over the next few years.” [S5, p. xv]. “We believe greater consideration needs to be given to the medium-term supply position of the NHS. The current rigid pay policy could be storing up problems for the future.” [S5, p. xvi]

“There is no people strategy for the NHS linked to the delivery of the Five Year Forward View in England which is leading to workforce issues being neglected, with a piecemeal and short-term approach to the role of pay and inertia at local level.” [S5, p. xii]

“There are shortfalls of professional staff in some occupations, including nursing and paramedics...” [S5, p. xiii] “The gap is also being filled by agency staff, as well as by Bank staff and a higher incidence of paid and unpaid overtime.” [S5, p. xiii]

The government response to the 2017 report stated that: *“The Government is pleased to accept its recommendations for a 1 per cent [1%] increase to all Agenda for Change pay points from 1 April 2017 and the High Cost Area Supplement minimum and maximum payments.” ... “The recommendation that Health Departments should ensure that annual pay awards do not have unintended consequences in reducing the take-home pay of staff whose pay award causes them to cross pension contribution thresholds, will be considered as part of the four yearly valuation of the NHS Pension Scheme.” [S6, p. 1]*

In the subsequent pay round between 2017 and 2018, the then Department of Health negotiated a far-reaching 3-year Agenda for Change pay deal with NHS Employers and Staff, which resulted in a 3% annual increase in the AfC pay bill [S7, p. 112]. As a result, the NHSPRB was not asked to make a pay recommendation in 2018-2020.

The 2019 NHSPRB Report indicates that, between 2017 and 2018, staff satisfaction with pay had increased sharply by 5.5 percentage points [5.5%] in contrast with a sharp fall over previous years [S8, p. 93].

Evidence presented in the NHSPRB 2020 Report indicates that by 2020 the nursing gap in England amounted to 10.7% of the workforce. In the Report, the NHSPRB says *“The Review Body has been struck by the persistence of the Agenda for Change staff workforce gap, in particular for nursing staff. The gap impacts on staff and patient experience, and creates risks for patient services and outcomes. All parties acknowledge the need to front-load initiatives to bridge this gap.” [S9, p. vii].* The Report goes on to say *“We are concerned that once the volume of vacancies reaches a certain level and persist, they are potentially very difficult to address because the impact is to set up two vicious circles. ..We conclude that once the volume of vacancies reaches a certain level they can breed yet more vacancies.” [S9, p. 111].*

The government response to the 2020 NHSPRB report notes that the three-year Agenda for Change pay and contract reform deal *“delivered year on year pay increases for our much-valued NHS staff and as part of this we have increased the starting salary for a newly qualified nurse by over 12% and increased the lowest starting salary within the NHS by over 16%.”* and that *“[t]he upcoming People Plan will seek to address many of the observations made by the NHSPRB”.* [S10]. In July 2020, the NHS published its [Second People Plan](#), an Interim People Strategy having been published in June 2019.

5. Sources to corroborate the impact (indicative maximum of ten references)

S1. Letter from the Director of the Office of Manpower Economics.

S2. Job Advert for Economist Members of the NHSPRB

S3. NHSPRB Terms of Reference

S4. NHSRPB Remit letter 2015

S5. NHSPRB 2017 Report

S6. UK Government Response to NHSPRB 2017 Report

S7. NHSPRB 2018 Report

S8. NHSPRB 2019 Report

S9. NHSPRB 2020 Report

S10. UK Government Response to NHSPRB 2020 Report