



VALUING DIFFERENT WORKPLACE REWARDS

A report for the Office of Manpower Economics



CONTENTS

1.	Executive summary and key findings	2
2.	Methodology	9
3.	Findings	16
4.	Conclusions and recommendations	38
5.	Appendix	43
6.	Bibliography	125

The work described in this report was carried out under contract as part of the Office for Manpower Economics (OME)'s research programme. The views and judgements expressed in this report are those of Economic Insight and do not necessarily reflect those of OME.



1. Executive summary

We have undertaken an extensive review of the existing literature on different workplace rewards in the public sector, with a focus on workforces covered by the pay review bodies.

1.1 Context and research aims

The Office of Manpower Economics (OME) commissioned us to undertake a literature review to help understand the **relative value of different workplace rewards to employees**. The aims of this review are:

- **To collate the existing evidence** on the value and effectiveness of different workplace rewards in a complete and systematic way. The total reward concept underpins our approach, i.e. *“all of the employer’s available tools that may be used to attract, retain, motivate and satisfy employees. This encompasses every single investment that an organisation makes in its people, and everything its employees value in the employment relationship.”*¹
- **To identify what is and is not known** about the value and effectiveness of different workplace rewards, and hence the **desirability of further research** in this area.
- **To identify which research methods** have been used to create the existing evidence, and hence **possible approaches to further research** in this area.

To achieve the research objectives set out above, we have reviewed 73 theoretical, empirical and policy related papers.

In this report, we distinguish between three different types of reward, which together form the total reward package:

¹ *WorldatWork (2000), ‘Total Rewards: From strategy to implementation’.*

- an employee's **remuneration**, such as **base pay** and **performance-related pay** (including bonuses, commissions and profit-related pay);
- **extrinsic benefits**, such as benefits provided by the employer, which have a direct monetary cost to the employer and can be used by the employee *outside* of work (including pension schemes, holidays, sick pay, etc.); and
- **intrinsic benefits**, which do not have a direct monetary cost to the employer and which can be enjoyed by the employee both *at work* and *outside* of work (including work-life balance; recognition, i.e. formal or informal; performance management; and talent development).

1.2 Summary of key findings and recommendations

In the following, we set out our key findings, in terms of what the existing evidence shows and the opportunities for further research.

1.2.1 What is and is not known about the value and effectiveness of different rewards

- We have used keyword searches to identify the relevant literature and supplemented this with a small number of additional papers suggested by the OME. In total, we reviewed 73 papers of relevance to this topic:
 - 26 are from the UK, 30 are from the US and 17 are from elsewhere;
 - all the papers are dated from 1997 onwards, most are dated between 2007 and 2014; and
 - 50 are academic papers (either published in journals or working papers) and 23 are from other reputable sources.
- Most papers focus on the value and effectiveness of different workplace rewards for existing employees and hence are of greatest relevance to retention and productivity, rather than recruitment. For the same reason, there is relatively little evidence on how the *intentions* of *potential* recruits are affected by different workplace rewards.
- The papers tend to measure value and effectiveness through various survey-based techniques, typically by asking how satisfied employees are with different elements of their package (although there are exceptions, as discussed further below). There are two main limitations of these surveys with respect to measuring the relative value of different workplace rewards: first, often the surveys focus on a subset of the available rewards; and second, the surveys measure stated preferences, rather than actual behaviour.
- Even where studies have produced clear significant findings, these are specific to time and place. Furthermore, even statistically significant findings from some studies will be subject to ongoing academic discussion and it was beyond the scope of this project to examine such individual

studies at the depth required to attempt to reconcile such debates. In no area did we find a body of literature of sufficient depth and quality that it was possible to draw firm and fully generalisable conclusions about the value and impact of individual rewards.

- These papers show that the value and effectiveness of different workplace rewards varies by **workforce**. Below, we set out the main findings by workforce.

Armed Forces

- In the UK, remuneration is not one of the main motivating factors to join the Armed Forces, however it starts playing a more important role for retention, along with other intrinsic and extrinsic benefits, such as work-life balance.
 - The UK-based satisfaction surveys tend to demonstrate that salary is not one of the main motivating factors to join the Armed Forces, rather it is “*to keep fit*”, “*to gain skills / qualifications*”, and “*for the challenge and adventure*” (Ipsos Mori, 2016).
 - Moreover, around a quarter of surveyed personnel are satisfied with their recruitment and retention pay (RRP). Yet, 28% believe that the X-factor pay is not commensurate, and satisfaction with pension benefits has dropped (Ministry of Defence, 2016).
 - In the UK, the main reasons for remaining in the Armed Forces are job security, dental provision, healthcare provision, pension, and mental health provision (Ministry of Defence, 2016). The main reasons for leaving are the impact of service life on family and personal life, opportunities outside the service, spouse / partner’s career, service morale and the employee’s own morale (Ministry of Defence, 2016).
- In the US, a need to offer family-friendly allowances, training opportunities and pay commensurate with the civilian sector has been identified as a way of recruiting and retaining able staff for the US military.

Doctors and dentists

- Evidence on the effects of workplace rewards on recruitment and retention is limited, whereas it is more widespread for productivity and regarding performance-related pay.
- Most evidence is centred on the intrinsic motivations of doctors and dentists to follow the profession and how performance-related incentives affect this. There is no conclusive answer as to whether performance-related incentive schemes are effective or not, with examples and cases showing both, a positive impact and no impact at all. Moreover, satisfaction with certain intrinsic benefits, such as work-life balance, is low among the profession.

- Marshall and Harrison (2005) find that performance-related incentives for health professionals in the UK are only valuable once the internal drivers of health professionals are well understood. They also find that overly bureaucratic schemes are more likely to damage professional motivations and that the incentive should be targeted more on the technical aspects and less on the indeterminate aspects of professional practice.

Health workers

- There is limited UK-specific evidence on the impact of different rewards on health workers, however, one study finds that appropriate reward practices and processes can help to build and improve employee engagement for NHS employees.
 - A study by the Institute for Employment Studies (2016) finds that appropriate reward practices and processes can help to build and improve employee engagement for NHS employees, while badly designed rewards can hinder it.
- Evidence from the US and Mexico shows that although intrinsic motivations to be a health worker may be high among the profession, a lack of commensurate remuneration has a negative impact on both recruitment and retention.

Prison services

- Evidence from the UK highlights that inadequate remuneration may potentially lead to recruitment issues, whereas achieving a better work-life balance is an important factor for retention of prison governors.
 - French (2015) conducted a survey with 421 Prison Governors' Association (PGA) members and found that 56.5% of surveyed prison governors experience difficulties in achieving work-life balance. Nonetheless, 66.5% of respondents find their job rewarding and 84.5% enjoy the challenges associated with their job.
- Evidence from the US highlights the importance of providing intrinsic benefits to prison officers - especially an adequate work-life balance - and how this has a positive impact on staff retention.

School teachers

- Some evidence from UK studies suggests that UK teachers react well to performance incentives and that this increased students' performance and led to more effective coordination of school priorities, whereas other UK studies find that there is no relationship between average student performance and the use of performance-based pay schemes.

- Atkinson et al. (2009) reviewed the effectiveness of a performance-related pay policy for teachers in the UK and found that teachers reacted well to financial incentives, improving students' test scores by about 40% of a grade per pupil. However, it was not possible to distinguish between whether this was due to extra effort by the teacher or effort diverted from other professional activities.
- Similarly, OECD (2009) identified the impact of performance-related pay on teachers and finds that in England and Wales, performance-related pay schemes led to more effective coordination of school priorities, rather than a financial incentive to work harder. In other cases, it showed how performance-related pay (PRP) raised student's GCSE performance by about half a grade in lower secondary schools, although not equally for all subject teachers. For example, scores for teachers of mathematics did not improve. This study did not consider differences in teachers' experience and it was undertaken in schools with good performance management and information technology systems, which may not be representative of all secondary schools.
- Evidence from the US and other countries suggests that performance-related pay for teachers in those countries has no effect on student performance and / or on teachers' instruction and hours worked. Some US studies find that US teachers respond to performance-based pay by working less and that reactions vary by both gender and tenure, whereas others find that US teachers react well to performance-based pay.
- Overall, evidence on the effects of performance-related pay on teachers' incentives is mixed and inconclusive.
- Evidence from the US suggests that teachers do not value extrinsic benefits, such as pensions, very highly, but that salaries and working conditions are important determinants for teacher retention.

Senior officials and judges

- Evidence on the value of different workforce rewards to senior officials and judges is very limited and dated. We found one study of relevance from 1997, but have not included in this review.

NCA officers

- We have not been able to identify evidence on the value of different workforce rewards to National Crime Agency (NCA) officers specifically. This is potentially due to the organisation only being recently established. We uncovered some recent responses to the Civil Service People Survey, however this does not address this research question specifically.

Police officers

- Evidence from the UK is centred on the impact of different workplace rewards on retention. Rewards have an impact on police officers' intentions to remain in the workforce, but the existence of outside labour market opportunities also plays an important role depending on region.
 - The IFS (2016) found that better outside labour market opportunities – through higher wages and lower employment rates – are statistically associated with higher resignation rates across police forces.
 - The Police Federation of England and Wales (2016) found that 60% of respondents said they were dissatisfied with their basic pay and around 66% were dissatisfied with their overall remuneration and their pension.
- Evidence from the US shows that remuneration does not play an important role in the decision to join the police force, but that it becomes an important factor when deciding to remain. Intrinsic benefits such as autonomy at the workplace, but also extrinsic ones such as pensions and allowances influence police officers' intentions to stay.

Other workforces

- Evidence on performance-related incentives is seldom conclusive and where it is – for example in Buelens and van den Broeck's (2007) simultaneous regression analyses – it points to differences in seniority of the employee having a greater measurable effect on the outcome of interest (e.g. motivation) than differences in sector / workforce. Innovative (intrinsic) benefits are becoming more widespread, and rewards other than remuneration, such as childcare benefits, appear to be important determinants in job choices for new recruits.
- Interestingly, there were no papers that sought to measure the relative value and effectiveness of remuneration, extrinsic benefits and intrinsic benefits simultaneously. That is, most of the stated preference / satisfaction surveys noted above tend to cover several different workplace rewards together, but never all, and some only look at them in isolation.
- Moreover, only two of the papers sought to quantify the value and effectiveness of workplace rewards on recruitment, retention and productivity in £ salary equivalent terms – either through survey-based valuation techniques or by using labour market data.
 - Lester et al. (2010) found that the abolition of performance-related pay led to a 1.6-3% decrease in outcome measures at a hospital in the USA.
 - Steele et al. (2010) found that offering teachers a US\$20,000 one-off incentive had positive effects on recruitment (28% who would not

have gone to those schools) and retention (74% remained for up to 4 years) at low-performing schools in the US.

Following from the above, we have identified the following evidence gaps:

- There have been no studies / surveys which are UK-based that examine (in detail) the relative value of different workplace rewards to individuals.
- There have been limited studies that use research methods other than surveys and literature reviews to assess the relative value of different workplace rewards to individuals. It would be useful to understand whether some workforces are just more amenable to certain research methods to provide different reward valuations.
- As mentioned previously, there is some evidence in relation to how satisfied employees are with some rewards, however these do not measure the relative value the different rewards in salary equivalent terms. These surveys always tend to cover only a proportion of available rewards in the employers' toolkit.
- There is a considerable amount of literature on the effectiveness of performance-related pay schemes. It would be helpful to bolster the evidence base regarding other workplace rewards, especially intrinsic and extrinsic benefits.
- A high proportion of reviewed literature originates from the US. It would be helpful to understand how comparable the US and UK workforces are and to what extent (if any) it is possible to extrapolate from US studies to the UK context. More specifically, we would need to understand: (i) how the American and British welfare states differ, (ii) how the social and economic situations differ, and (iii) how the different workforces are employed and whether they face similar tasks. For example, for police officers, whether the crime rates in the US are comparable to those in the UK and other factors influencing the way in which a workforce operates, or how the different medical systems operate in the US and the UK, etc.

1.2.2 Desirability and potential methods for further research

It would be desirable to fill the evidence gaps we have identified and there would seem to be various high-level options for doing this.

- First, extending the satisfaction-survey approach to include a greater range of workplace rewards. This approach would be of most value to understanding the effect of different workplace rewards on retention, and potentially productivity. A further extension would be to compare employees' answers to these questions to their actual behaviour relating to retention and productivity.

- Second, undertaking choice-based surveys or experiments (i.e. trade-off exercises) to derive the relative value of different rewards. This could be done by creating a choice-based survey or experiment relating to all the rewards of interest. For example, it could be a general survey which would create trade-offs for all financial and non-financial rewards and could then be distributed across all the different workforces, enabling cross-workforce comparisons. On the other hand, it could be tailored specifically to the different workforces, and specifically tailored to the rewards that are within their remits. For example, if prison services could be considering implementing more flexitime to allow for a better work-life balance, those studies could focus specifically on what prison officers would trade-off to have more flexible working hours.
- Third, undertaking econometric analysis which seeks to relate differences / changes in recruitment, retention and productivity rates to differences / changes in workplace rewards. Here, existing datasets could be explored more and / or in different ways, and policy changes could be harnessed as natural experiments – as many of the US –based studies do. For all workforces, data on recruitment, retention and productivity of the workforce in question would be required, alongside data on the total rewards to enable robust econometric analysis. A more detailed feasibility study of the different methodologies for the different workforces was out of the scope of this literature review.
- Fourth, a final option would involve combining data from satisfaction surveys (the first option above) with data on actual behaviour (the third option above) to help explore the connection between the existence of and satisfaction with different workplace rewards and recruitment, retention and productivity.

These approaches have different pros and cons.

- The main advantages of the third and fourth method are: (a) it can be undertaken without new primary research; and (b) it focuses on measuring changes in actual behaviour.
- The main advantage of the first two methods is that, precisely because they rely on new primary research, they can overcome “missing data” problems that can undermine the feasibility of the third method. The weakness is that they do not focus on measuring changes in actual behaviour.

Our recommendation is that OME considers the feasibility and desirability of these high-level methodologies in further detail.



2. Methodology

In this section, we set out our methodology. We have followed a very simple top-down approach and have used a wide array of search terms.

2.1 Methodology

Our literature review is based on desk-based research. We sought to cover all the workforces under the Review Bodies' remits, as set out in the table overleaf.

Table 1: Summary of Pay Review Bodies' job type coverage

Pay Review Body	Job types covered
Armed Forces' Pay Review Body (AFPRB)	Members of the Naval, Military and Air Forces of the Crown.
Review Body on Doctors' and Dentists' Remuneration (DDRB)	Doctors and dentists taking any part in the National Health Service.
NHS Pay Review Body (NHSPRB)	All staff paid under Agenda for Change (NHS staff pay and grading system) and employed in the NHS, except for doctors, dentists and very senior managers.
Prison Service Pay Review Body (PSPRB)	Governing governors and operational managers, prison officers and support grades in the England and Wales Prison Service; prison governors, prison officers, custody prison officers, prison auxiliaries, night custody officers, and operational support grades in the Northern Ireland Prison Service.
School Teachers' Review Body (STRB)	School teachers in local authority maintained schools in England and Wales. However, while not required to do so, many academy schools also use the national pay and conditions framework for teachers.
Senior Salaries Review Body (SSRB)	Holdings of judicial office; senior civil servants; senior officers of the armed forces; certain senior managers in the NHS; police and crime commissioners; chief police officers; other such public appointments as may from time to time be specified.
National Crime Agency Remuneration Review Body (NCARRB)	National Crime Agency (NCA) officers designated with operational powers. These officers are subject to legislative restrictions on industrial action.
Police Remuneration Review Body (PRRB)	Police officers at or below the rank of chief superintendent in England, Wales and Northern Ireland.

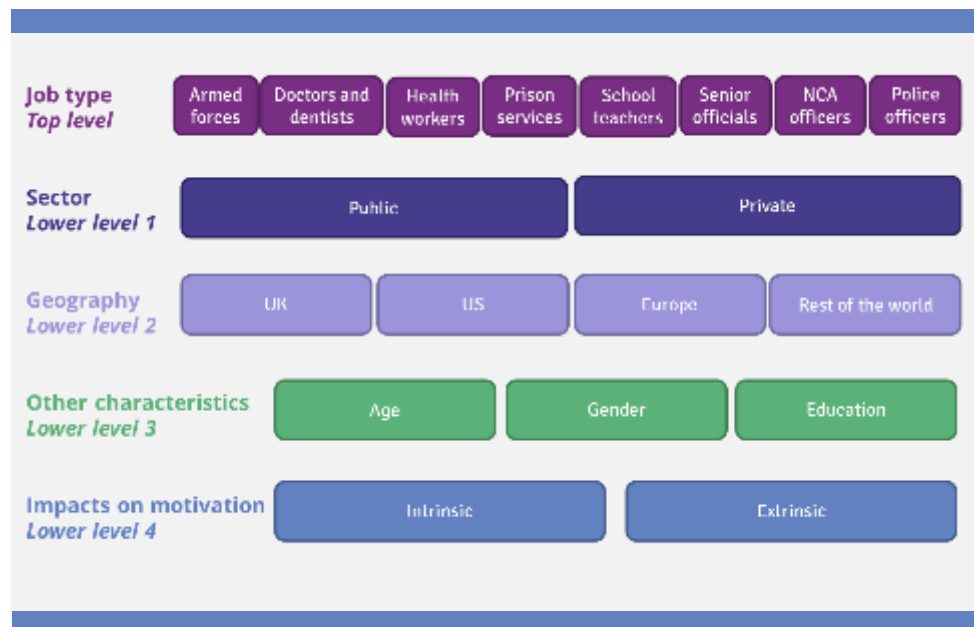
Source: Economic Insight review of OME and Review Body websites

We followed a **top-down approach**, illustrated in Figure 1. For example, we started with broadly analysing how one specific workforce – say teachers – value different workplace rewards. This is our “top level” of analysis. We then assessed whether this varies by public / private sector and then finally whether this varies by location and other characteristics – the “lower levels”. We prioritised finding literature of relevance to public sector jobs in the UK – although we had to ‘cast the net wider’ given the evidence limitations.

For some workforces, such as teachers, it was possible to undertake this analysis from the top level to a lower level. For example, we started our analysis by seeing how public sector school teachers in the UK value performance-related pay, and where this information is not available, seeing whether there is evidence with regards to a different region and / or sector.

For other workforces, we had to start at a “lower level” – for example starting from the different sector and region, i.e. how public sector employees in the UK value certain rewards more generally. For example, there was limited evidence as to how NCA officers value the remuneration element of their rewards. In that case, we started from the level just below, i.e. how public sector employees value the remuneration element of their rewards. Again, where there is no evidence pertaining to the public sector, we looked at evidence with regards to the private sector.

Figure 1: Top-down approach



Source: Economic Insight

Below we set out in more detail our search strategy, our assessment of relevance and our approach to synthesising that underpin this top-down approach.

Search strategy

Our searches were conducted through Google and Google Scholar. We considered literature from the following sources:

- **academic journals** (including economic, management, human resources, sociology, psychology and public policy journals); and
- **grey literature** (including relevant organisations’ websites and articles, such as the OECD, CEP, CIPD, IES, etc. as well as broader newspaper articles and organisations’ own surveys and other materials such as working papers).

Searches were conducted using a combination of the search terms below. We have set out below specific search terms for each of the “levels” set out in Figure 1 above, as well as for the rewards.

Table 2: Search terms

	Search terms
Rewards	reward*; financial reward*; non-financial reward*; financial incentive*; non-financial incentive*; pay; compensation; wage*; incentive*; incentive pay; performance-related pay; bonus*; variable pay; fixed pay; benefit*; pension*; holiday*; childcare voucher*; sick pay; sick leave; leave; dependent care leave; company car; flexible working; flexitime; work from home; remote working; staff discount*; counselling; training; learning; development; car parking; good work environment; work-life balance; effectiveness; recognition; accomplishment*; organisational culture; philosophy; business goal*; organisational success; performance management; talent development; total reward*; clinical excellence award; CEA; payment*; allowance*; salary; unsocial; hours*; dogs*; on-call; locality; regional; supplements; rent; premia; RRP; compens*; weighting; travel; overtime; shift; security; increase; subsidised*; respect; status; family*
Job types	social services; teach*; civil serv*; doctors; physician*; dentist*; nurs*; health*; polic*; judicia*; prison service*; military; armed forces; local authorit*; National Crime Agency officers; NCA officer*; senior official*; GP; judg*; tribunal; investigator*
Sectors	public sector; private sector; public; private; public service; public organisation; government; third sector; voluntary; not for profit; security
Geography	UK; England; Wales; Scotland; Northern Ireland; Ireland; US*; Europe; Germany; Switzerland; France; Canada; Australia; Austria; Belgium; Netherlands
Other characteristics	recruitment; retention; productivity; quality; service delivery; effectiveness; achievement; output; turnover; age; gender; education; ethnicity; disab*
Motivation	motivation; intrinsic motivation; extrinsic motivation; intrinsic; extrinsic; performance; job satisfaction; morale; engagement; satisfied; achievement; challenge; driv*; value*; progression; equity; fairness; promotion; variety; control

Source: Economic Insight

We undertook searches combining these terms, for the relevant aims and objectives set out above. For example, to determine the effects of financial and non-financial rewards on armed forces we undertook searches with the following combinations:

- armed forces & reward;
- armed forces & financial reward* & non-financial reward*;
- armed forces & financial incentive* & non-financial incentive*;
- armed forces & reward & UK;
- armed forces & financial reward* & non-financial reward* & UK;
- armed forces & financial incentive* & non-financial incentive* & UK;
- etc.

Once initial papers had been identified, a further analysis of the references and cross-references was undertaken, to identify further materials to include in our review.

Relevance

Our search strategy already incorporates a sifting strategy, as where our search returned usable results, we scanned the abstracts and decided whether to include the article in the review.

This was based on our assessment as to whether they will be able to help us address our research aims. Ultimately, there will be a certain degree of judgment and subjectivity as to what is and is not relevant.

2.2 Limitations of the methodology and approaches to overcome them

The main limitation of our methodology is that it is unlikely to identify every relevant paper. This could occur for various reasons, including: incomplete search terms; limitations of Google and Google Scholar; the quality of the judgments we make (as set out above); and, of course, the time available to complete the study.

Indeed, OME helpfully provided several papers before and after our draft final report that our search strategy did not identify, the majority of which were in relation to school teachers.

Although it is unlikely that this limitation could be ruled out altogether, there are several approaches that could help future research. These include:

- as in this study, OME providing references to papers before and/or after our draft final report, this worked well;
- to help facilitate this, we would also suggest providing the list of references identified by the search strategy to OME prior to completing the draft final report;
- using other search engines and databases alongside Google and Google Scholar to identify the relevant literature;
- searching for the search terms used by other researchers to supplement our own, where available; and
- potentially, collaborating with expert academic researchers in the field at the outset of the research.

2.3 Structure of the report

The rest of this report is structured as follows:

- findings;
- conclusions and recommendations; and
- appendix, setting out the literature review in more detail.



3. Findings

In this section, we summarise the overarching findings from our extensive literature review. We have organised this section around our first two aims: (i) assessing the completeness of the evidence; and (ii) identifying what is and is not known about the value and effectiveness of different workplace rewards.

3.1 Completeness of the evidence

We have reviewed 73 papers across a multiple range of workforces, following our search strategy set out in the methodology section (see chapter 2). We have used keyword searches to identify the relevant literature and supplemented this with a small number of additional papers suggested by the OME.

Our key findings are as follows in terms of geographic scope, timing and nature of the reviewed papers.

- 26 are from the UK, 30 are from the US and 17 are from elsewhere. The following table illustrates the reviewed papers' geographic coverage.

Table 3: Country coverage of reviewed papers

Number of papers reviewed	Country
26	UK
30	US
6	Diverse countries
4	Not country specific
1 (x7)	Belgium, Canada, France, Mexico, Netherlands, Spain, Switzerland
73	Total

Source: *Economic Insight*

- All the papers are dated from 1997 onwards, most are dated between 2007 and 2014.
- 50 are academic papers (either published in journals or working papers) and 23 are from other reputable sources.
- The papers typically focus on **retention** and **productivity** (35 and 55 papers respectively), with fewer focusing on **recruitment** (23 papers).
- The papers cover all the workforces relevant to the Review Bodies, although the extent of coverage varies:
 - Armed Forces, doctors, dentists, teachers and police officers tend to have greater coverage in terms of both the number of papers available and the number of workplace rewards they consider; whereas
 - little is available specifically for NCA officers, health workers and senior officials.
- In terms of sectors covered:
 - 45 focus on the public sector;
 - 19 on both the public and private sector;
 - 4 on the private sector and four on diverse sectors (i.e. not for profit); and
 - 1 is unspecified (theoretical paper).
- In terms of workplace rewards:
 - there is good coverage of remuneration (base pay and performance-related pay);
 - some coverage of extrinsic benefits (especially pensions); and
 - some coverage of intrinsic benefits.

The table on the following page summarises how complete the evidence base for different rewards is by workforce.

The legend for reading the table overleaf is the following:

- **green dot**: a lot of evidence is available (5+ papers / mentions);
- **yellow dot**: some evidence is available (1-5 papers / mentions); and
- **red dot**: no evidence is available.

Table 4: Assessment of completeness of the evidence

	Remuneration		Extrinsic benefits		Intrinsic benefits				Total papers on workforce
	Base pay	Performance-related pay	Pension	Other benefits	Flexible working	Work-life balance	Recognition	Talent development	
Armed Forces	●	●	●	●	●	●	●	●	6
Doctors and dentists	●	●	●	●	●	●	●	●	16
Health workers	●	●	●	●	●	●	●	●	4
Prison services	●	●	●	●	●	●	●	●	4
School teachers	●	●	●	●	●	●	●	●	16
Senior officials	●	●	●	●	●	●	●	●	1
NCA officers	●	●	●	●	●	●	●	●	1
Police officers	●	●	●	●	●	●	●	●	9
Other sectors	●	●	●	●	●	●	●	●	16
Total mentions of rewards	26	39	13	28	8	15	13	10	

Source: Economic Insight

3.2 What is and is not known about the value and effectiveness of different workplace rewards

Most of papers that we have reviewed focus on the value and effectiveness of different workplace rewards for existing employees and hence are of greatest relevance to retention and productivity, rather than recruitment. They tend to measure value and effectiveness through survey-based techniques, typically by asking how satisfied employees are with different elements of their package (although there are exceptions, as discussed further below).

Our review shows that the value and effectiveness of different workplace rewards varies by **workforce**. Although the evidence on **intrinsic benefits** is weaker, the available papers highlight their importance. Interestingly, there were no papers that sought to measure the relative value and effectiveness of remuneration, extrinsic benefits and intrinsic benefits simultaneously.

Moreover, only two of the papers sought to quantify the value and effectiveness of workplace rewards on recruitment, retention and productivity in £ salary equivalent terms – either through survey-based valuation techniques or by using labour market data, as we set out subsequently.

Motivations for joining different workforces vary – for example one of the main motivators to join the UK Armed Forces is to keep fit, whereas one of the reasons to join the US police force is to help other people.

Finally, intrinsic benefits appear to be important determinants for job satisfaction across all workforces where this has been measured / analysed.

In the following we set out our main findings by workforce.

3.2.1 Armed Forces

We have reviewed six papers to identify how the Armed Forces value different workplace rewards, and our main conclusions are:

In the UK, remuneration is not one of the main motivating factors to join the Armed Forces, however it starts playing a more important role for retention, along with other intrinsic and extrinsic benefits, such as work-life balance.

In the US, a need to offer family-friendly allowances, training opportunities and pay commensurate with the civilian sector has been identified as a way of recruiting and retaining able staff for the military.

- All reviewed papers covered the public sector provision of military services.
- Two of the reviewed papers are from the UK and four from the US. The UK-based papers tend to focus on satisfaction of military employees and

ALL PAPERS COVER THE
PUBLIC SECTOR.

the motivating factors for joining (and leaving) the Armed Forces. American studies focus slightly more on the value of different rewards for its Service members, including how older members value pensions, compared to younger recruits who value training opportunities more.

Evidence on recruitment

- The UK-based satisfaction surveys tend to demonstrate that salary is not one of the main motivating factors to join the UK Armed Forces, rather it is “to keep fit”, “to gain skills / qualifications”, and “for the challenge and adventure” (Ipsos Mori, 2016). Just under a third of surveyed recruits believe that their pay is better or much better than their non-military friends at home (Ipsos Mori, 2016). This survey was conducted on 46% of Phase 1 and 29% of Phase 2 Army recruits, 82% of Phase 1 and 49% of Phase 2 Royal Navy recruits and 95% of Phase 1 and 97% of Phase 2 RAF recruits.
- Moreover, around a quarter of surveyed personnel are satisfied with their recruitment and retention pay (RRP). Yet, 28% believe that the X-factor pay is not commensurate, and satisfaction with pension benefits has dropped (Ministry of Defence, 2016). The target population for this survey were trained UK Regular Armed Forces personnel and it was distributed both electronically and in paper format to 28,119 respondents, with 12,782 responses being used in the analysis.
- On the other hand, the number of employees who are satisfied with their career management has increased (Ministry of Defence, 2016).
- In the US, Asch et al. (2001) compared military and civilian compensation and found that in order to recruit talented people, training and educational opportunities should be promoted, and there should be salary increases for those in the middle and senior ranks. Military pay was measured as the sum of basic pay, basic allowance for housing, basic allowance for subsistence and the tax advantage due to the allowances not being taxable.
- Similarly, Hansen and Kleinman (2005) found that offering pay commensurate with the increasingly attractive opportunities in the US civilian sector was a necessity to recruit US Army personnel. The paper also found that there was a “mismatch” between the workplace rewards that different personnel valued and the rewards they received. For example, the paper found that pension benefits did not have a value to personnel commensurate with its costs for the Department of Defence, because many of its personnel were younger and cared more about training opportunities.

Evidence on retention

- In the UK, the main reasons for remaining in the UK Armed Forces are job security, dental provision, healthcare provision, pension, and mental health provision (Ministry of Defence, 2016). The main reasons for leaving are the impact of service life on family and personal life, opportunities outside the service, spouse / partner's career, service morale and the employee's own morale (Ministry of Defence, 2016).
- Interestingly, US studies tend to focus on specific rewards and their effect on retention and recruitment. Cadigan (2006) finds that military personnel are more likely to have family obligations, and as such a focus on family-friendly allowances could help address recruitment and retention issues. This study used data from the Defence Manpower Database Centre to examine differences in the family status of military personnel and civilians.

Evidence on productivity

- Dunn (2003) assesses how effective combat pay for US Army officers is at maintaining troop strength and concludes that the current levels were adequate to offset any wartime disutility. This study used data from two periods of a large panel survey of officers.

Evidence gap

- A more comprehensive survey of how satisfied the UK Armed Forces are with each different reward would help assess their relative value to the individuals.

Research methods used

- The evidence we have reviewed has deployed mostly surveys as a research method and complements this with statistical analysis.

3.2.2 Doctors and dentists

We have reviewed 16 papers to identify how doctors and dentists value different workplace rewards and how effective they are. Our main conclusions are as follows:

EVIDENCE ON THE EFFECTIVENESS OF PERFORMANCE-RELATED PAY IS WIDESPREAD.

Evidence of the effects of workplace rewards on recruitment and retention are limited, whereas it is more widespread for productivity and regarding performance-related pay.

Most evidence is centred on the intrinsic motivations of doctors and dentists to follow the profession and how performance-related incentives affect this. There is no conclusive answer as to whether performance-related incentive schemes are effective or not, with examples and cases showing both, a positive impact and no impact at all. Moreover, satisfaction with certain intrinsic benefits, such as work-life balance, is low among the profession in the UK.

Evidence on recruitment and retention

- We have not identified many studies that specifically assess the effect of different workplace rewards on doctors' and dentists' recruitment and retention, however many aspects discussed subsequently will ultimately affect both recruitment and retention.
- The NHS Digital (2016) survey of dentists in the UK found that half of all survey respondents said they often think about leaving dentistry. Yet, *thinking* about leaving the profession and *actually* leaving it is not the same thing. The survey was sent to all self-employed primary care dentists in the UK who conducted some NHS / Health Services work in 2014/15 and 2015/16. Moreover, it found that dentists in England and Wales were the most motivated across the UK.

Evidence on productivity

UK

- Campbell et al. (2008) conducted an in-depth exploration of family physicians' and nurses' beliefs and concerns about changes to family health care services, because of a new pay-for-performance scheme (the Quality and Outcomes Framework, QOF) in the UK. The study found that financial incentives had been sufficient to change behaviour to achieve targets. The QOF scheme improved specific processes of patient care, but it also changed the dynamic between doctors and nurses and the nature of the practitioner-patient consultation. For example, it led to some unintended effects such as a decline in personal/relational continuity of care between doctors and patients and resentment by team members not benefitting financially from payments.

- Bloor et al. (2004) explore the variation in NHS activity rates of consultant surgeons and examine whether activity is dependent upon the type of contract held and / or bonus payments, after accounting for age and other consultant and hospital characteristics. The study finds that consultant surgeons who have discretionary salary points undertake significantly more activity than those without.
- Marshall and Harrison (2005) find that performance-related incentives for health professionals in the UK are only valuable once the internal drivers of health professionals are well understood. They also find that overly bureaucratic schemes are more likely to damage professional motivations and that the incentive should be targeted more on the technical aspects and less on the indeterminate aspects of professional practice.

US

- There is some evidence with respect to the effectiveness of performance-related pay for doctors and dentists, particularly in the US. For example, Lester et al. (2010) find that removing pay-for-performance incentives reduced performance by about 1.6-3% respectively for diabetic retinopathy and cervical cancer screening at Kaiser Permanente in California.
- Another trial, conducted by Fairbrother et al. (2001) in the US suggests that performance-related pay appears to provide motivation to achieve the outcomes it is linked to, but is not enough to overcome entrenched behaviour patterns.
- Other studies, reviewed in Himmelstein et al. (2014), find that performance-related rewards could backfire, and reduce performance in outcomes that were not related to financial incentives in both the UK and the US.
- Jha et al. (2012) find that the largest hospital-based pay-for-performance programme in the US did not lead to a decrease in 30-day mortality. The study used Medicare data to compare outcomes between the 252 hospitals participating in the performance-programme and the 3,363 control hospitals participating in public reporting alone.
- On balance, and echoing Scott et al. (2011), there is insufficient evidence to support (or not) the use of financial incentives to improve the quality of primary healthcare – be this in the UK or the US.

Other evidence

- The British Medical Association runs frequent surveys regarding the satisfaction of medical staff with various work-related aspects, including work-life balance. A recent survey (BMA, 2016) it undertook with its panel members consisting of doctors in various departments of the

medical sector suggests that SAS and consultant grade doctors are moderately satisfied with their work-life balance, whereas GPs and Junior doctors are below the neutral point. Similarly, the NHS and NHS Digital undertake regular surveys measuring various attitudinal and motivational factors across all NHS staff (including doctors and dentists), as well as dentists specifically (NHS, 2016; NHS Digital, 2016).

- There were some studies that focused on the intrinsic motivational factors affecting the choice of this profession. For example, Sicsic et al. (2012) find that French GPs' characteristics have significant effects on their intrinsic motivations, and that this affects extrinsic motivators such as pay-for-performance schemes. Relatedly, Marshall and Harrison (2005) also stress the importance of really understanding the intrinsic motivations of the profession, to harness the benefits of financial incentives, rather than stunting them. Nantha (2013) suggests that a lack of initiatives that play to doctors' intrinsic motivations may be at the source of increasing dissatisfaction among the workforce. Finally, Berdud et al. (2016) show that Spanish doctors are intrinsically motivated and that economic incentives could encourage their intrinsic motivations.

Evidence gap

- Following from the reviewed evidence, there appear to be gaps in terms of other rewards for doctors and dentists, especially in terms of extrinsic and intrinsic benefits.
- Evidence on the effects of different workplace rewards on both recruitment and retention also appear scarce, and could warrant further analysis.

Research methods used

- The papers we have reviewed used a mix of literature reviews, surveys, natural experiments and randomised controlled trials to build up the evidence base.

REMUNERATION'S
IMPACT ON
RECRUITMENT AND
RETENTION HAS BEEN
STUDIED ABROAD.

3.2.3 Health workers

Our research identified three new papers. Our main conclusions are set out subsequently:

There is limited UK-specific evidence on the impact of different rewards on health workers, however, one study found that appropriate reward practices and processes can help to build and improve employee engagement for NHS employees.

Evidence from the US and Mexico shows that although intrinsic motivations to be a health worker may be high among the profession in those countries, a lack of commensurate remuneration has a negative impact on both recruitment and retention.

Evidence on recruitment

- We have not been able to identify evidence pertaining specifically to the UK health workers landscape, which focuses on how different rewards impact upon recruitment, although some aspects are covered in IES (2016).
- Bo et al. (2013) find that in Mexico, higher wages have a positive impact on recruitment of health workers.

Evidence on retention

- Again, we have not been able to identify evidence pertaining to the UK specifically on how setting the right level of wages affects both recruitment and retention.
- Regarding US health workers, Morgan et al. (2013) argue that despite intrinsic motivations for frontline healthcare jobs being high – and relatedly job satisfaction, too – the poor value of the extrinsic rewards and remuneration offset these and lead to high staff turnover. This study uses survey and focus group data.

Evidence on productivity

- Here, a study by the IES (2016) finds that appropriate reward practices and processes can help to build and improve employee engagement for NHS employees, while badly designed rewards can hinder it.

Other evidence

- The NHS Staff Survey (2016) also splits results by occupational groups, so there is an additional evidence source to see how satisfied health workers are in the UK with various aspects of their work.

Evidence gap

- Only one of the *newly* reviewed papers was focused on UK workforces – the others covering the United States and Mexico.² As such, further research that is location specific is warranted, as well as covering a wider spectrum of workplace rewards.

Research methods used

- The evidence we have reviewed has deployed mostly surveys as a research method, as well as a literature review.

3.2.4 Prison services

We reviewed four papers, which show that:

Evidence from the UK highlights that inadequate remuneration may potentially lead to recruitment issues, whereas achieving a better work-life balance is an important factor for retention of UK prison governors.

Evidence from the US highlights the importance of providing intrinsic benefits to US prison officers - especially an adequate work-life balance - and how this has a positive impact on staff retention in the US.

WORK-LIFE BALANCE
APPEARS TO BE
ESPECIALLY IMPORTANT
FOR THIS WORKFORCE.

Evidence on recruitment

- For UK prison service staff, it can be inferred from the BBC (2016) article that prison staff believe that they should be allowed to retire at 60, and that the level of remuneration is set at such a level that there are recruitment issues.

Evidence on retention

- In the UK, French (2015) conducted a survey with 421 Prison Governors' Association (PGA) members. He found that 56.5% of surveyed prison governors experience difficulties in achieving work-life balance, with 42.5% considering changing jobs if conditions remain as they are. Notwithstanding the difficulties in achieving work-life balance, the study further demonstrates that surveyed PGA members enjoy their work and derive a sense of achievement from it: 82.9% of respondents claimed that work played an important part of their lives and that they enjoy the challenges associated with their jobs (84.5%), while 66.5% of respondents find their job rewarding.
- There were two studies from the United States, which focused on intrinsic benefits, such as the work environment and work-life balance. Lambert and Paoline (2010) argue that US public jail employees who feel involved

² We have already reviewed the NHS Staff Survey (2016) in the previous section, so we do not repeat our findings here.

in their job and with higher organisational commitment are more likely to stay with the organisation. Similarly, Lambert et al. (2006) find that for US private prison service staff, having a supportive work environment that also respects family and social life is beneficial for staff retention and improvement in staff well-being.

Evidence gap

- We have not been able to identify evidence on motivations for joining the prison services and how to increase their productivity, be this in the UK or in any other jurisdiction.

Research methods used

- The evidence we have reviewed has deployed mostly surveys as a research method.

3.2.5 School teachers

We reviewed 16 papers and have come to following conclusions:

Some evidence from UK studies suggests that UK teachers react well to performance incentives and that this increased students’ performance and led to more effective coordination of school priorities, whereas other UK studies find that there is no relationship between average student performance and the use of performance-based pay schemes.

Evidence from the US and other countries suggests that performance-related pay for teachers in those countries has no effect on student performance and / or on teachers’ instruction and hours worked. Some US studies find that US teachers respond to performance-based pay by working less and that reactions vary by both gender and tenure, whereas others find that US teachers react well to performance-based pay.

Overall, evidence on the effects of performance-related pay on teachers’ incentives is mixed and inconclusive.

Evidence from the US suggests that US teachers do not value extrinsic benefits, such as pensions, very highly, but that salaries and working conditions are important determinants for US teacher retention.

The evidence is evenly spread across improvements in recruitment, retention and productivity. Most of the evidence originates from the US.

Evidence on recruitment

- In the US context, Ingersoll and Smith (2003) suggest that although raising teacher salaries would be an expensive – but easy – way to address recruitment concerns, the long-term retention and recruitment issues could be eased by providing the right work environments for teachers.

EVIDENCE IS EVENLY SPREAD ACROSS ALL AREAS OF WORK FOR TEACHERS, HOWEVER IT IS VERY US-FOCUSED.

This provides for a more cost-effective solution; however, it is harder to implement.

- Relatedly, Steele et al. (2010) find that providing teachers in the US with a one-off high financial incentive (\$20,000) to teach in low-performing schools is very effective, but also very expensive and had to be discontinued for that reason. The study finds that the incentive led to 203 out of 718 teachers who would not have otherwise taught at those schools teaching there, as well as increasing retention rates at those schools, with 75% of 27,106 teachers (both of whom had received and had not received the incentive) remaining at the low-performing schools for up to four years.
- There is limited evidence on the value of pensions to individuals, other than Fitzpatrick (2011), whereby a natural experiment in an Illinois (USA) school is used to determine how much teachers value their pension benefits. The paper finds that teachers are willing to pay (on average) 19 cents for a one dollar increase in the present value of expected retirement benefits. Costrell and Podgursky (2009) find that making pensions actuarially fairer (that is, pensions that better align with current demographic trends, e.g. the population living longer and relatedly working longer, too) for US teachers would be helpful to recruit new teachers.
- Podgursky and Springer (2007) review several studies evaluating the impact of performance-related pay in both developing and developed nations. They put forward that when it comes to hiring teaching professionals, informational deficiencies could be ameliorated by subsequent employee performance assessments, and by tying pay rises more closely to actual productivity. They also put forward that performance-related pay schemes would attract recruits and retain teachers who are particularly good at the activity that is being incentivised.
- A report by the OECD (2009) investigates the impact of both financial and non-financial incentives in recruiting teachers across various countries. It finds that many countries have incentives such as scholarships or stipends to attract new teachers. For example, Australia uses scholarships and stipends to attract people to the profession, however this has had limited success, with only 37% of enrolled students being employed as teachers in schools. Singapore on the other hand, requires teachers who do not complete their required teaching years stipulated in the contract to pay liquidated damages with interest.

Evidence on retention

- Similarly to the Steele et al. (2010) paper, the OECD (2009) study finds that hard-to-staff schools in North Carolina in the US pay a retention

bonus of \$1,800, reducing turnover rates by 10%. It also finds that there is a strong association between teachers' intentions to leave and their views of the quality of support provided to teachers by the school administration, as well as the availability of resources and teachers' ability to have a voice in the school's decisions. Other studies reviewed in this report have shown that the lack of positive work environment is a major determinant in teacher attrition at high-poverty schools.

- Moreover, another US study reviewed by the OECD (2009) finds that salaries and working conditions such as large classes, facilities problems, school schedules based on multi-tracks and a lack of textbooks are strong and significant predictors in teacher turnover, whereas student demographics becomes less important predictors in teacher turnover in their models.
- In the US, Jones (2013) finds that teacher turnover appears to significantly decrease under performance-related pay. This study analyses data from the Schools and Staffing Survey.

Evidence on productivity

- A UK-based study (Atkinson et al., 2009) reviewed the effectiveness of a performance-related pay policy for teachers and found that teachers reacted well to financial incentives, improving students' test scores by about 40% of a grade per pupil. However, it was not possible to distinguish between whether this was due to extra effort by the teacher or effort diverted from other professional activities.
- The OECD (2009) study identified the impact of performance-related pay on teachers and found that in England and Wales, PRP schemes led to more effective coordination of school priorities, rather than a financial incentive to work harder. In other cases it showed how PRP raised student's GCSE performance by about half a grade in lower secondary schools, although not equally for all subject teachers. For example, scores for teachers of mathematics did not improve. This study did not consider differences in teachers' experience and it was undertaken in schools with good performance management and information technology systems, which may not be representative of all secondary schools.
- Goodman and Turner (2009) conducted a randomised policy experiment in a New York City public school exploring the effects of group-based pay schemes. The paper found no significant impact of the bonus programme on student achievement in the first or second year of the programme. However, it found some evidence that the programme reduced teacher absenteeism in schools with a small number of teachers, and that these effects were weakened in larger schools by the presence of free-riding.

- Springer et al. (2012) conducted a three-year study in which middle school mathematics teachers at the Metropolitan Nashville School System (US) were rewarded for students' improved test scores with up to \$15,000 – a considerable increase over their base pay. The results showed that although there was a general upward trend in students' performance over the period of the project, students of teachers randomly assigned to the treatment group (those eligible for the bonuses) did not outperform students whose teachers were assigned to the control group.
- Yuan et al. (2013) draw on teacher survey response from randomised experiments in the US, exploring how different pay-for-performance programmes affect teachers' motivation to improve student outcomes, as well as their impact on teachers' instruction, number of hours worked, job stress and collegiality. Results showed that teachers did not tend to consider their programmes as motivating and that none of the programmes changed teachers' instruction, number of hours worked or job stress, or damaged their collegiality.
- The OECD (2012) study examines the relationship between performance-based pay and student outcomes specifically, considering that about half of OECD countries reward teacher performance in different ways. It finds that overall, there is no relationship between average student performance in a country and the use of performance-based pay schemes. It does find that how well teachers are remunerated overall in comparison to the national income influences student performance. For example, in countries with comparatively low teachers' salaries (less than 15% above GDP per capita) student performance is better with performance-related pay systems. The opposite is true in countries where teachers are relatively well paid (more than 15% above GDP per capita).
- In the US, Jones (2013) finds that teachers respond to PRP by working 12% fewer hours per week and spending more time pursuing other job opportunities. Participation in unpaid cooperative activities also decreased, while participation in paid cooperative activities remained unchanged (outside of Florida). However, the response to PRP is not homogenous, with differences in gender identified: male teachers show no significant decline in work hours, whereas female teachers participate less frequently in unpaid cooperative activities compared to male teachers. Differences across tenure are also noted, with experienced teachers responding to PRP with lower work effort compared to new teachers.
- Another study in the US (Figlio and Kenny, 2007), considering similar effects, finds that teachers respond well to financial incentives.

Other evidence

- Some US studies have assessed the impact of performance-related pay on job satisfaction. Gius (2013) finds that teachers who work in districts that

use merit pay systems are no less satisfied with their jobs than other teachers. It did show that teachers working in those districts were less enthusiastic, did not think teaching was important and were more likely to leave for better pay. Another US study - Belfield and Heywood (2008) – finds that explicit cooperative working arrangements increased the probability of receiving performance pay, and that performance pay increased total compensation, but failed to increase job satisfaction.

Evidence gap

- Many of the US studies are based on natural experiments. It would be useful to understand whether this approach would also be feasible in the UK.

Research methods used

- The evidence we have reviewed has deployed mostly natural experiments and surveys coupled with econometric analysis as a research method.

3.2.6 Senior officials and judges

Evidence on the value of different workforce rewards to senior officials, be this in the UK or elsewhere is very limited and dated.

- We have reviewed one paper (Dowling and Richardson, 1997), which focuses on the effects of performance-related pay for NHS managers, in the Annex.
- We have further come across judicial surveys undertaken in 2014 and in 2016, however as these are more attitudinal, we do not set out their main findings or review them in this study.

Evidence gap

- It follows from the above that there is a significant evidence gap regarding the relative value of workplace rewards to senior officials and judges, across all aspects of work.

3.2.7 NCA officers

We have not been able to identify evidence on the value of different workforce rewards to NCA officers specifically. This is potentially due to the organisation only being recently established (2013).

- The National Crime Agency (NCA) was only established in 2013 as a non-ministerial government department. We have summarised any research of relevance to the NCA under the police officers section below.

THERE IS AN EVIDENCE GAP REGARDING THE VALUE OF DIFFERENT WORKFORCE REWARDS TO SENIOR OFFICIALS AND JUDGES.

THERE IS AN EVIDENCE GAP REGARDING THE VALUE OF DIFFERENT WORKFORCE REWARDS TO NCA OFFICERS.

Evidence gap

- Similarly to the evidence gap identified for senior officials, the way in which NCA officers value different workplace rewards are currently under-researched.

3.2.8 Police officers

We reviewed nine papers and found that:

Evidence from the UK is centred on the impact of different workplace rewards on retention. Rewards have an impact on police officers' intentions to remain in the workforce, but the existence of outside labour market opportunities also plays an important role depending on region.

Evidence from the US shows that remuneration does not play an important role in the decision to join the police force in the US, but that it becomes an important factor when deciding to remain. Intrinsic benefits such as autonomy at the workplace, but also extrinsic ones such as pensions and allowances influence US police officers' intentions to stay.

- There are multiple studies on motivations for joining and remaining in the police force, albeit these studies are often undertaken in the USA.

Evidence on recruitment

- We have not been able to identify literature specific to UK workforces, relating the impact of different workplace rewards on police officer recruitment.
- In the US context, White et al. (2010) find that salary was the least influential motivating factor for joining the police force, whereas important motivators included job security, extrinsic benefits such as medical insurance and pension, early retirement and opportunities for career advancement. Another study by Seklecki and Paynich (2007), focusing specifically on female police officers in the US, finds that their main motivations for joining the police force were similar, i.e. the desire to help people and job security.
- Still relating to the US, Foley et al. (2008) find that the factors motivating individuals to seek a police career in the US have remained stable over time (i.e. from the 80s through to the mid-00s).

Evidence on retention

- The Police Federation of England and Wales Pay and Morale Survey (2016), undertaken every year by the Police Federation and submitted as evidence to the PRRB provides some evidence on important retention factors for UK police workforces. This is an online survey and the

REMUNERATION PLAYS
DIFFERENT ROLES FOR
RECRUITMENT AND
RETENTION.

response rate to this wave was 35% of all federated rank officers in England and Wales:

- 81% of respondents stated that their morale had a major effect on their intention to leave, compared to 69% on the impact of the job on their health and well-being and 57% on the impact of the job on their family / personal life;
 - 67.6% stated that their pay and benefits had a major effect on their intention to leave;
 - 60% of respondents said that they were dissatisfied with their basic pay;
 - 62.5% said they were dissatisfied with their allowances; and
 - around 66% said they were dissatisfied with their overall remuneration and their pension.
- The IFS (2016) found that better outside labour market opportunities – through higher wages and lower unemployment rates – are statistically associated with higher resignation rates across police forces. It also found that there were distinct geographical patterns, with forces close to London experiencing high leaving rates and those in London and most of Wales having lower leaving rates than most other forces.
 - A Canadian study (Otis and Pelletier, 2005) found that the more self-determined police officers were towards their work, the better this would be for retention.
 - Seklecki and Paynich (2007) find that motivations for continuing a career in law enforcement for US police officers include job security and a desire to help people. Most women in this study did not plan to leave law enforcement, but for those who reported intentions of leaving policing, the primary motivations included: personal and / or political reasons and pursuing another career within criminal justice.

Evidence on productivity

- In the US, Johnson (2010), tested whether patrol officer work behaviour is influenced more by officer work attitudes or the management structure under which the officers operated. The findings revealed that each seemed to successfully influence officer work output behaviour, and when both the officers' attitudes and the management influences were in agreement, officers produced the most citations. Supervisors can use informal rewards such as granting days off, shift assignments, training opportunities, and making recommendations for specialty positions to entice officers to comply with their requests.

Other evidence

- A US study (Carlan, 2007) found that social contribution, pay, adventure/excitement, autonomy, peer respect and job security could

increase job satisfaction. The study used 1,114 questionnaires from 16 police departments.

- A Dutch study (van Steden et al., 2013) compared the professional motivations and values of police officers and private security guards. It found that the motivational profile of police officers and private security guards is more alike than is often assumed. For example, police officers perceive private security guards to be “lower level forces”; whereas private security guards look up to police officers.

Evidence gap

- There appears to be an evidence gap regarding different workplace rewards’ impact on recruitment and productivity for UK police officers. Evidence from the US is available for these areas, however a more detailed comparative analysis would need to be undertaken, to understand whether US findings are applicable to the UK context. For example, differences in crime rates between the two jurisdictions, the rewards that police officers in both the UK and US enjoy, and how these differ, the broader welfare systems of both jurisdictions, etc.
- Moreover, a broader coverage of analysed workplace rewards would also be beneficial.

Research methods used

- The evidence we have reviewed has deployed mostly surveys as a research method.

3.2.9 Other workforces

Some literature does not focus on a specific workforce and reviews many workforces and / or rewards at the same time. Findings from that type of research are still valuable, as they cover some of the relevant workforces. As such, we have reviewed 16 studies that cover multiple workforces in both the public and private sectors and conclude that:

Evidence on performance-related incentives is seldom conclusive, but where it is conclusive, it points to differences in seniority of the employee being more important than differences in sector / workforce. Innovative (intrinsic) benefits are becoming more widespread, and rewards other than remuneration, such as childcare benefits, appear to be important determinants in job choices for new recruits.

Evidence on recruitment

- Thompson and Aspinwall (2009) find that childcare benefits were a strong motivator for job acceptance, above flexitime and eldercare benefits for students in the US.

Evidence on retention

- There is some literature which assesses the effectiveness of performance-related pay on employees' motivations. For example, McCausland et al. (2005) find that performance-related pay in the UK is only effective at motivating (very) high-paid workers and Burgess et al. (2011) find that that type of reward is only effective in small teams and ineffective in large teams.
- Peterson and Luthans (2006) find that financial and non-financial incentives in customer services roles in the UK become equally effective over time, with financial incentives having a greater impact "upfront". Both reward types had a positive impact on retention and company profits for a UK fast-food company.
- In Switzerland, Anderfuhren-Biget et al. (2010) find that socio-relational motivators such as recognition by superiors and team relations and support are stronger motivators than financial incentives such as performance-related pay for civil servants.
- Rashid and Rashid (2012) find that public sector employees are motivated by work contents, experience and more work-life balance, compared to private sector employees who they find are motivated by financial rewards, career development opportunities and a supportive environment.

Evidence on productivity

- Markova and Ford (2011) find that non-monetary rewards are stronger predictors for intrinsic motivations (i.e. working longer hours) for US knowledge workers and as such better at leveraging increases in productivity.

Other evidence

- Research tends to focus on performance-related pay. This includes a study by Ladley et al. (2015), which tests the effectiveness of group incentives in a computational social science method, showing that group incentives produce the highest performing individual strategies. Moreover, the Work Foundation (2014) has undertaken a thorough review on the evidence of performance-related pay's effectiveness and use in the public sector. Further research for other reward types would be helpful. PwC (2016) assessed differences in modern pay systems and found that generally, pay structures have remained constant over time, and some innovative benefits are being offered by some companies, such as on-site games rooms or staff cinema.
- The ILM (2013) found that financial incentives are relatively ineffective motivators for most staff and that non-financial rewards such as support

and feedback are much better motivators. Relatedly, Buelens and van den Broeck (2007) postulate that public sector employees in Belgium are less extrinsically motivated than private sector ones. Markova and Ford (2011) find that non-monetary rewards are stronger predictors of intrinsic motivation (manifested through longer working hours) for knowledge workers in the USA. Rashid and Rashid (2012) find that public and private sector employees' motivations for working differ, with the former being more motivated by work contents and work-life balance and the latter by financial rewards, career development opportunities and a supportive work environment. Reichard and van Helden (2015) find that private and public organisations use performance management services for different reasons – the former for internal managerial control and the latter for external accountability reasons.

- These findings appear to be generally applicable to most workforces covered previously, as three studies are UK-based and cover both public and private workforces. Moreover, the only foreign study investigates broader motivational factors, which are more likely to be similar across countries.

Evidence gap

- A better understanding where workforces differ and what different rewards are preferred by whom would potentially be beneficial. For example, the nature of some occupations will not allow for certain rewards to be implementable, e.g. working from home for teachers, whereas for others it will.

Research methods used

- The evidence we have reviewed has deployed mostly survey and performance data as research methods.



4. Conclusions and recommendations

We have found that surveys are a widely used research method, but that evidence gaps remain in terms of UK context-specific studies, reward types and their value to employees. We propose three options to help improve the evidence base in this area.

4.1 Conclusions

Many studies we reviewed concerned themselves with how satisfied employees are with different workplace rewards, as well as how effective these are in inducing certain outcomes at the workplace. Our conclusions as to what these studies set out with respect to the different workforces and with respect to recruitment, retention or productivity are set out in the previous section. Here we set out our main conclusions regarding the different research methods used by the different papers.

The most commonly studied reward type was pay-for-performance, and the most common research method to understand that reward and / or to assess its effectiveness were survey methods.

Table 5: Research methods used

Number of studies	Research method used
36	Survey
14	Literature review
7	Natural experiment
7	Regression / data analysis
3	Comparative analysis
2	Randomised controlled trial
4	Other methods
73	Total

Source: *Economic Insight*

As can be seen from the following table, surveys were employed as a research method across all workforces and literature reviews were used for the doctors and dentists, health workers and teachers workforces.³ In comparison, the use of natural experiments and / or randomised controlled trials (RCTs) and the use of regression and data analysis has been less widespread across the board. Moreover, only one of the natural experiments / RCTs was undertaken in the UK (Chalkley et al., 2010), whereas all the others were undertaken in the US and one in Mexico.

³ Please note that these totals include studies from the US, so some of the surveys or literature reviews and natural experiments etc. may only be relevant in the US context. This also does not account for all the papers reviewed and methodologies used within the literature review papers, so these numbers are an understatement of the methods used to determine the value of different workplace rewards for the different workforces.

Table 6: Research methods used by workforce

Workforce	Survey	Literature review	Natural experiment	Regression / data analysis	Comparative analysis	Randomised controlled trial	Other methods
Armed Forces	3	0	0	1	1	0	1
Doctors and dentists	6	5	2	2	0	1	0
Health workers	1	1	0	1	0	1	0
Prison services	3	0	0	0	0	0	1
School teachers	5	4	4	1	1	0	1
Senior officials	1	0	0	0	0	0	0
NCA officers	1	0	0	0	0	0	0
Police officers	8	0	0	0	0	0	1

Source: *Economic Insight*

In light of the above, we consider that there are a few evidence gaps, which could be filled. Specifically:

- There have been no studies / surveys which are UK-based that examine (in detail) how individuals in the workforces value different rewards.
- There have been limited studies that use research methods other than surveys and literature reviews to assess the relative value of different workplace rewards to individuals. It would be useful to understand whether some workforces are just more amenable to certain research methods to provide different reward valuations.
- As mentioned previously, there is some evidence in relation to satisfaction with certain rewards for certain workforces, however this falls short of knowing how they value the different rewards. These surveys always tend to cover only a proportion of available rewards in the employers’ toolkit.

- There is a considerable amount of literature on the effectiveness of performance-related pay schemes. It would be helpful to bolster the evidence base regarding other workplace rewards, especially intrinsic and extrinsic benefits.
- A high proportion of reviewed literature originates from the US. It would be helpful to understand how comparable the US and UK workforces are and to what extent (if any) it is possible to extrapolate from US studies to the UK context. More specifically, we would need to understand: (i) how the American and British welfare states differ, (ii) how the social and economic situations differ, and (iii) how the different workforces are employed and whether they face similar tasks. For example, for police officers, whether the crime rates in the US are comparable to those in the UK and other factors influencing the way in which a workforce operates, or how the different medical systems operate in the US and the UK, etc.

4.2 Recommendations

It would be desirable to fill the evidence gaps we have identified and there would seem to be various high-level options for doing this.

- First, extending the satisfaction-survey approach to include a greater range of workplace rewards. This approach would be of most value to understanding the effect of different workplace rewards on retention, and potentially productivity. A further extension would be to compare employees' answers to these questions to their actual behaviour relating to retention and productivity.
- Second, undertaking choice-based surveys or experiments (i.e. trade-off exercises) to derive the relative value of different rewards. This could be done by creating a choice-based survey or experiment relating to all the rewards of interest. For example, it could be a general survey which would create trade-offs for all financial and non-financial rewards and could then be distributed across all the different workforces, enabling cross-workforce comparisons. On the other hand, it could be tailored specifically to the different workforces, and specifically tailored to the rewards that are within their remits. For example, if prison services could be considering implementing more flexitime to allow for a better work-life balance, those studies could focus specifically on what prison officers would trade-off to have more flexible working hours.
- Third, undertaking econometric analysis which seeks to relate differences / changes in recruitment, retention and productivity rates to differences / changes in workplace rewards. Here, existing datasets could be explored more and / or in different ways, and policy changes could be harnessed as natural experiments – as many of the US –based studies do.

- Fourth, a final option would involve combining data from satisfaction surveys (the first option above) with data on actual behaviour (the third option above) to help explore the connection between the existence of and satisfaction with different workplace rewards and recruitment, retention and productivity.

These approaches have different pros and cons.

- The main advantages of the third and fourth methods are: (a) it can be undertaken without new primary research; and (b) it focuses on measuring changes in actual behaviour.
- The main advantage of the first two methods is that, precisely because they rely on new primary research, they can overcome “missing data” problems that can undermine the feasibility of the third method. The weakness is that they do not focus on measuring changes in actual behaviour (though could be compared to actual behaviour, as discussed above).

Our recommendation is that OME considers the feasibility and desirability of these high-level methodologies in further detail.



5. Appendix A

In this appendix, we set out detailed summaries of the reviewed literature.

We have organised the literature within each Review Body workforce chronologically (from the most recent to the oldest paper identified).

5.1 Armed Forces

5.1.1 Ministry of Defence (2016), “UK Regular Armed Forces Continuous Attitude Survey 2016”.

The 2016 Armed Forces Continuous Attitude Survey (AFCAS) was distributed to a sample of 28,119 trained UK Regular Armed Forces personnel and had a 45% response rate. It measured the personnel’s satisfaction along a vast number of indicators, such as morale commitment and engagement; work and line management; training development and career; work / life balance; and many others. Of relevance to this study, it measured the following:

- job satisfaction;
- recognition;
- remuneration;
- pension;
- training etc.;
- reasons for staying and leaving;
- work-life balance;

It found that 46% of service personnel are satisfied with Service life. However, this level was 15 percentage points lower than the peak of 61% in 2009. Overall, 56% of personnel were satisfied with their job in general and 48% were satisfied with the sense of achievement they get from their work.

In terms of pay and benefits, 34% of service personnel agreed that pay and benefits were fair for the work done. Around a quarter of personnel were satisfied with their RRP. Service personnel are paid extra to compensate for the differences in lifestyle, working conditions and expectations when compared to civilians, this pay is known as the X-factor. Less than a third (28%) of Service personnel agreed that the level of compensation was enough, which had not changed significantly since 2010.

Satisfaction with pension benefits had dropped two percentage points since 2015 and 25 percentage points since 2010. When compared to 2015, the proportion of RAF and Army Officers who were satisfied with their career management had increased.

The top 5 reasons for staying in the workforce were job security (69%), dental provision (67%), healthcare provision (66%), pension (49%) and mental health provision (48%).

The top 5 reasons for leaving were impact of service life on family and personal life (61%), opportunities outside the service (52%), spouse/partner's career (49%), service morale (41%) and my morale (40%).

Table 7: Main characteristics of reviewed paper

	Description
Job type	Armed Forces
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity and retention
Type of reward	Remuneration: pay and benefits Extrinsic benefits: pension, healthcare provision, dental provision, mental health provision, etc. Intrinsic benefits: family and personal life, career management
Effect on motivation	This survey found that just under half (46%) of Service personnel were satisfied with Service life in general. Overall, morale had remained stable since 2012, 40% of personnel reported high morale. In 2016, job security continued to be the top retention factor, followed by dental and healthcare provision, pension and mental health provision. 48% of personnel cited mental health provision as a retention factor. Among those who had put in their notice, the impact of Service life on family and personal life remained the top reason for leaving the Armed Forces.
Research methods used	The target population for AFCAS 2016 was trained UK Regular Armed Forces personnel. AFCAS was distributed both electronically and in paper format. The total sample consisted of 28,119 personnel. Samples were designed to provide sufficient responses to yield estimates with a margin of error of plus or minus 3% for the main comparison group of Officer/Rank and Service. In the analysis 12,782 responses were used, giving a response rate of 45%.

5.1.2 Ipsos Mori (2016), “Recruit Trainee Survey 2015-16”, Ministry of Defence.

The most important factors in recruits’ decision to join the Armed Forces were:

- 93% to keep fit;
- 92% to gain skills / qualifications;
- 92% for the challenge and adventure.

Only 67% said that salary was an important factor when making the decision to join the Armed Forces. Just over a third of recruits (38%) thought that their pay was better or much better than their non-military friends at home. The most common reasons given by recruits for leaving the Service of their own choice were that they did not like the lifestyle (40%), they missed their family and friends too much (36%) and it was not what they expected (35%).

Table 8: Main characteristics of reviewed paper

	Description
Job type	Army trainee recruits
Sector	Public
Geography	United Kingdom
Area of work analysed	Recruitment
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	<p>The most important factors in recruits’ decision to join the Armed Forces were to keep fit (93%), to gain skills /qualification (92%) and for the challenge and adventure (92%). Only 67% said that salary was important.</p> <p>The least important factors were that there were no other job choices (22%), and a desire to move away from home or their current situation (36%).</p>
Research methods used	Ipsos Mori conducted the survey on 46% of Phase 1 and 29% of Phase 2 Army recruits, 82% of Phase 1 and 49% of Phase 2 Royal Navy recruits and 95% of Phase 1 and 97% of Phase 2 RAF recruits.

5.1.3 Cadigan (2006), “The impact of family-friendly compensation – An investigation of military personnel policy”, Review of Public Personnel Administration.

This research examines the structure of the military labour market and the potential consequences of using family-friendly compensation practices to address recruiting and retention concerns. Dynamic considerations force recruiters to focus on young high school graduates and emphasise the benefits of a career in military service, which include an allowance system that rewards family status. Some key examples of family-friendly compensation practices include: basic allowance for housing, basic allowance for subsistence, family separation allowance and the dislocation allowance. Other examples include, Tricare which is a military health care system that provides free or government subsidised medical and dental services to members of the military and their dependents and child development centres that provide day care at prices substantially lower than what is available off base.

The study finds that after controlling for important demographic characteristics, *military personnel are more likely to be married and have children than their civilian counterparts*. So, to address recruiting difficulties and to stimulate the best and the brightest to seek promotion within the hierarchy, military officials structure compensation packages with an emphasis on the benefits of a career in military service, including family-friendly benefits that raise compensation for service members with dependents, should be promoted.

Table 9: Main characteristics of reviewed paper

	Description
Job type	Military personnel
Sector	Public
Geography	United States
Area of work analysed	Recruitment and retention
Type of reward	Extrinsic benefit: allowances that reward family status
Effect on motivation	The study finds military personnel is more likely to have family obligations than their civilian counterparts in each age group sub-sample. Thus, they suggest that extrinsic benefits with a focus on family-friendliness would be useful to address recruiting difficulties and to attract the best and the brightest army officials.
Research methods used	The study uses data from the Defence Manpower Database Centre to examine differences in the family status of military personnel and civilians. Using two logistic regression, the study tests whether military service has a statistically significant impact on marriage and childbearing while controlling for important demographic characteristics.

5.1.4 Hansen and Kleinman (2005), “Military compensation: When 50-year olds decide what 20-year-olds want”, Center for Naval Analyses.

This paper evaluates the military compensation system and assesses whether it is appropriately structured to support an All-Volunteer Force. The authors discuss whether the goals set by policy makers are met by the current compensation system. They state that the military compensation package could be better aligned with what Service members value. According to the study, potential recruits consistently mention training as one of the most attractive components of the compensation package, even though enlistment contracts obligate them for extended periods of service. However, training is a

targeted benefit, making military service more attractive to those who desire additional training. While training has great value for the youngest Service members, the military retirement package has the greatest value for more senior personnel. They suggest two changes to retirement would increase its value to Service members and improve its efficacy in influencing enlistment and retention. A relatively modest change would be to shorten the amount of time before vesting.

They find that current rotation policies can significantly detract from military service, particularly for married personnel. Frequent rotation has been shown to significantly lower income of military spouses, and these policies ignore the fact that many people enjoy working in certain locations. Programmes that allow personnel choice in their assignments would lower costs and improve the value of the overall compensation package. The Assignment Incentive Pay used by the Navy had been successful, allowing Service members to express their assignment preferences and be compensated for them.

Table 10: Main characteristics of reviewed paper

	Description
Job type	Army personnel
Sector	Public
Geography	United States
Area of work analysed	Recruitment and retention
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	The paper argues that there are strong reasons to believe that the Services are not aligning the compensation package with what personnel most value, for example in training, in rotation and retirement. Training is highly valued by recruits and potential recruits. Frequent rotation can significantly detract value from military service, particularly for married personnel. Programmes that allow personnel choice in their assignments would reduce the cost and improve the value of the overall compensation package relative to the civilian sector. Retirement does not have a value to personnel commensurate with its significant cost to Department of Defence (DoD). In surveys, young people put little value to it.
Research methods used	The study uses a combination of survey results and literature review.

5.1.5 Dunn (2003), “Is combat pay effective? Evidence from Operation Desert Storm”, *Social Science Quarterly*.

This study examines whether combat pay for US Army officers has been adequate to maintain troop strength during wartime in the all-volunteer military. Data from a panel survey of 3,800 officers collected one year prior to Operation Desert Storm and again during the Iraqi engagement are used. The primary economic indicator of work disutility – the marginal rate of substitution (MRS) or trade-off of time for money is estimated; and the MRS-hourly pay relationship in both time periods is determined. The MRS is useful for examining job influences because it summarises in a single number the totality of factors that make a job either more or less attractive and thus cause a person to require either less or more compensation to perform that job. Hence, the study finds that even indirect and hard-to-measure impacts of a war (arising from increased risk, increased working hours, harsh conditions, etc.) which would be difficult to identify directly, should be captured within some tolerable error by changes in the MRS.

The study finds that combat pay was found to be generally adequate to offset increases in wartime disutility. It finds no evidence that a market-oriented volunteer army could not maintain adequate troop strength during wartime, at least in environments similar to that of the early 1990s when these data were collected.

Table 11: Main characteristics of reviewed paper

	Description
Job type	Army personnel
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: combat pay
Effect on motivation	The study finds that during Operation Desert Storm, combat pay - which added 80 cents per hour to basic remuneration - was successful in offsetting the changes in MRS that occurred during the war. Therefore, these results do not support the concern that a market-oriented volunteer system could not maintain sufficient troop strength during a war with a similar environment.
Research methods used	The study utilises a set of data from two periods of a large panel survey of officers, with the first observations taken one year prior to Operation Desert Storm and the second set of observations taken during the Iraqi engagement. The items of interest from the surveys were (1) marginal rates of substitution and (2) differences between marginal rates of substitution and current hourly rates of pay.

5.1.6 Asch et al. (2001), “An analysis of pay for enlisted personnel”, RAND National Defence Research Institute.

This research examines whether military compensation is adequate to enable the military services to meet the manpower requirements year in and year out and whether action to change military compensation is required. The study draws upon both the body of existing research on defence manpower and military compensation and compares the pay of enlisted personnel compared to that of their civilian counterparts and how this has changed over time.

The study finds that educational attainment is strongly related to Armed Forces Qualification Test scores (AFQT). This is important because in a previous controlled study they found that personnel with higher AFQT were more effective in asset defence and killing hostile aircraft on a computer driven simulation. Thus, this relationship is of fundamental importance to the DoD.

This study finds that in order to recruit and retain more able personnel, the DoD must offer educational and training opportunities and pay commensurate with the increasingly attractive opportunities to be found in the civilian sector.

Table 12: Main characteristics of reviewed paper

	Description
Job type	Army personnel
Sector	Public
Geography	United States
Area of work analysed	Recruitment and retention
Type of reward	Remuneration: salary Extrinsic benefits: training
Effect on motivation	The study finds that in order to secure the competitiveness of enlisted pay in response to the rising levels of education among military personnel and the attractive opportunities they have in the civilian sector and the need to recruit high-quality personnel in the future, a pay raise is warranted and it should be graduated, i.e. it should provide larger pay raises to those in the middle and senior grades. Further, it states that the DoD must offer training and educational opportunities.
Research methods used	The authors compared military compensation to civilian one. Military pay was measured as the sum of basic pay, basic allowance for housing, basic allowance for subsistence, and the tax advantage due to the allowances not being taxable.

5.2 Doctors and dentists

NHS / UK studies

5.2.1 BMA (2017), “BMA Quarterly Survey”.

The BMA conducted a survey on its panel members which consists of doctors in various departments of the medical sector. The responses indicate a significant and increasing issue of workplace stress, with 61% of respondents reporting that their stress levels have increased over the past year. Further, they indicate that GPs remain the most likely (52%) to report working outside their regular hours “very often”. Thirty-seven of Junior doctors in training work outside regular hours. In terms of satisfaction of work-life balance, SAS and consultant grades have moderate ratings while GPs and Junior doctors were below the neutral point.

Table 13: Main characteristics of reviewed paper

	Description
Job type	Doctor
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Intrinsic benefits: work-life balance
Effect on motivation	The responses to the survey show that SAS and consultant grade doctors are moderately satisfied with their work-life balance while GPs and Junior doctors are below the neutral point.
Research methods used	BMA sent its survey to 1,000 panel members which consists of doctors and is broadly representative of the main areas of medical practice.

5.2.2 NHS (2016), “NHS Staff Survey 2016”.

The NHS Staff Survey has been undertaken yearly since 2003. Other complementary surveys include the NHS Wales Staff Survey, NHS Scotland Staff Survey, and the Health and Social Care Services in Northern Ireland and NHS Digital surveys. Results can be split by occupational group and by trust. As such, these results are applicable for both doctors and dentists as well as other health workers. The main briefing document only provides aggregate results, as such we present these below. In order to know how the different occupational groups value different rewards, we would need to analyse the survey results, which was out of the scope of this review.

- Thirty-seven percent of staff reported that they are satisfied with their level of pay. This proportion has not changed since 2015.
- Over two-thirds of staff (71%) agreed that they feel valued by their immediate manager, 43% were satisfied with the extent to which their work is valued by their organisation. Improvement is needed in staff recognition, with just over half of staff (53%) reporting that they are satisfied with the recognition they receive for their contribution at work.

Table 14: Main characteristics of reviewed paper

	Description
Job type	All NHS staff
Sector	Public
Geography	United Kingdom
Area of work analysed	Retention
Type of reward	Remuneration: salary Intrinsic benefits: recognition
Effect on motivation	Over half of all staff (59%) reported that they often or always look forward to going to work, with 74% of staff feeling enthusiastic about their job. Seventy-seven percent of staff also felt that time passes quickly whilst they are at work.
Research methods used	The 2016 NHS Staff Survey involved 316 NHS organisations in England. Over 982,000 NHS staff were invited to participate using an online or postal self-completion questionnaire. The response rate was 44%.

5.2.3 NHS Digital (2016), “Dental Working Hours: 2014/15 and 2015/16 Motivation Analysis Experimental Statistics”.

The Dental Working Patterns (DWP) Survey was sent to all dentists in the United Kingdom who conducted some NHS/Health Service work in 2014/15 and/or 2015/16. This survey covers a broad range of motivation questions and respondents had to agree – disagree / very high – very low on a 5-scale answer to the following:

- I feel good about my job as a dentist.
- I receive recognition (spoken recognition or acknowledgement (i.e. not financial) from colleagues) for the work I do.
- I feel my pay (pre-tax income (after all expenses removed) for primary care dentistry) is fair.
- I have all the equipment and resources I need to do my job properly.
- My job gives me the chance to do challenging and interesting work.
- There are opportunities for me to progress in my career.
- I often think about leaving general dentistry.
- How would you rate your morale as a dentist at the moment?

Key findings include:

- Dentists in England & Wales are the most motivated across the UK, followed by those in Scotland and then Northern Ireland.

- The more time dentists spend on NHS/Health Service work, the lower their levels of motivation.
- Half of all survey respondents said they often think about leaving dentistry.
- Apart from Principals in Scotland, reported morale levels have fallen for dentists since the 2014 survey.

Table 15: Main characteristics of reviewed paper

	Description
Job type	Dentists
Sector	Both
Geography	United Kingdom
Area of work analysed	Retention
Type of reward	Remuneration: salary Intrinsic benefits: recognition, career progression
Effect on motivation	Dentists in England & Wales are the most motivated across the UK, followed by those in Scotland and then Northern Ireland. The more time dentists spend on NHS/Health Service work, the lower their levels of motivation.
Research methods used	The DWP Survey was sent to all self-employed primary care dentists in the United Kingdom who conducted some NHS/Health Service work in 2014/15 and/or 2015/16. Information on the relationship between motivation and morale and the following variables is presented: (i) weekly hours; (ii) division of time between NHS/Health Service and private dentistry [NHS/HS Share (%)]; (iii) division of time between clinical and non-clinical work [clinical share (%)]; (iv) weeks of annual leave; and (v) age. The authors use regression analysis to infer results from the survey.

5.2.4 Chalkley et al. (2010), “Incentives for dentists in public service: evidence from a natural experiment”, *Journal of Public Administration Research and Theory*.

This study examines how independent physician contractors are motivated to contribute to public service health care. It considers evidence derived from a natural experiment in the UK publicly funded dental care system, concerning the efficacy of using a contractual mechanism that provides explicit rewards for increased service provision against the alternative of an employment-like relationship. The study finds dentists who were moved from quasi-

employment to an activity-based incentive contract increased their activity in the publicly funded service by 26%. It also finds and quantifies evidence of considerable variation between suppliers, which suggests that factors such as an individual's intrinsic motivation, professional standards, and preferences are important moderators of financial incentives.

Table 16: Main characteristics of reviewed paper

	Description
Job type	Dentist
Sector	Public/Private
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance
Effect on motivation	<p>The study finds that the introduction of the new dental contract in England generated a large and significant increase in activity and that the largest effect was for dentists who transferred between quasi-employment and activity-based pay compared with dentists who switched between fee-for-service and activity-based pay.</p> <p>Overall, it finds that quasi-employed dentists responded by increasing their public service contribution in response to a shift to extrinsic rewards of their profession, and the more general view that health service providers exhibit a degree of self-interest.</p>
Research methods used	<p>This study considers evidence regarding the effect on individual dentists' public service provision of the switch from both fee-for-service and quasi-employment contracts towards the unified activity-based system. The differential treatment of regions in terms of contract changes provides a natural experiment.</p>

5.2.5 Campbell et al. (2008), "The experience of pay-for-performance in English family practice: a qualitative study", *Annals of Family Medicine*.

The authors conducted an in-depth exploration of family physicians' and nurses' beliefs and concerns about changes to the family health care service, because of the new pay-for-performance scheme in the UK. Participants believed that financial incentives had been sufficient to change behaviour to achieve targets. The findings suggest that it is not necessary to align targets to professional priorities and values to obtain behaviour change, although doing so enhances enthusiasm and understanding. Participants agreed that the aims

of the pay-for-performance scheme had been met in terms of improvements in disease-specific processes of patient care and physician income, as well as improved data capture. It also led to unintended effects, such as:

- the emergence of a dual Quality and Outcomes Framework (QOF)-patient agenda with consultations;
- potential deskilling of doctors as a result of the enhanced role for nurses in managing long-term conditions;
- a decline in personal/relational continuity of care between doctors and patients;
- resentment by team members not benefitting financially from payments; and
- concerns about an ongoing culture of performance monitoring in the UK.

Table 17: Main characteristics of reviewed paper

	Description
Job type	Doctors and nurses
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance schemes
Effect on motivation	The study found that financial incentives had been sufficient to change behaviour to achieve targets. It suggests that it is not necessary to align target to professional priorities and values to obtain behaviour change, though doing so enhances enthusiasm and understanding.
Research methods used	The study used a semi-structured format, where they interviewed 21 family doctors and 20 nurses in 22 nationally representative practices across England between February and August 2007.

5.2.6 Marshall and Harrison (2005), “It’s about more than money: financial incentives and internal motivation”, *Quality and Safety Healthcare*.

The size of an incentive does not have a linear relationship with its impact. It also appears that the economic component of what appears to be a financially based incentive scheme is not what motivates professionals. In a local improvement project in the UK, much vaunted as a “successful” example of incentivising quality improvements, the costs to some of the participating general practices of implementing more effective systems of chronic disease management were greater than the resulting financial rewards. Similarly, in a

study conducted in Ireland, incentives to change prescribing behaviour were just as effective in dispensing practices (where there is a countervailing incentive to dispense expensive drugs) as in non-dispensing practices. These examples indicate that something more than personal financial gain is driving professional behaviour.

In reference to a paper by Frank (1989), in which moral motivation is seen as a force which encourages people to behave in ways which have no obvious advantages to the individual and may even prove contrary to their interests.

The author refers to another paper by Frey (1997) which states that external incentives may impair self-determination, resulting in a shift in the locus of control and the resulting loss of professional autonomy. Secondly, external drivers may damage self-esteem, resulting in the perception that professionalism is no longer valued.

The article concludes that financial incentives will continue to play an important role in the armoury of tools available to improve the quality of health care. Their contribution will, however, only be maximised if we understand the impact of financial incentives on the internal drivers of health professionals. It seems likely that financial incentives will be more effective if they are owned by their target audience and aligned to the professional values of the audience. It is also likely that overly bureaucratic schemes are more likely to damage professional motivation and that the incentives should be targeted more on the technical aspects and less on the indeterminate aspects of professional practice. It would therefore be inappropriate to attempt to link financial rewards to complex diagnostic processes or to the psychosocial aspects of care provision.

Table 18: Main characteristics of reviewed paper

	Description
Job type	Doctor
Sector	Public
Geography	UK
Area of work analysed	Productivity
Type of reward	Remuneration
Effect on motivation	The article states that financial incentives will be more effective if they are owned by their target audience and aligned to the professional values of the audience. It is also likely that overly bureaucratic schemes are more likely to damage professional motivation and that the incentives should be targeted more on the technical aspects and less on the indeterminate aspects of professional practice.
Research methods used	Literature review

5.2.7 Bloor et al (2004), “Variation in activity rates of consultant surgeons and the influence of reward structures in the English NHS”, *Journal of health services research and policy*.

The study explores the variation in the NHS activity rates of consultant surgeons, and examines whether activity is dependent upon the type of contract held and/or bonus payments, after accounting for age and other consultant and hospital characteristics. It uses the NHS Hospital Episode Statistics (HES) for England in combination with workforce data in five surgical specialties in 1998/99 and 1999/2000. A multi-level model was used to analyse the relationship between NHS contract and bonus payments, and activity. The interquartile variation shows that the top 25% of consultants have significantly higher activity rates than those with a full-time contract. Consultant surgeons who hold discretionary salary points undertake significantly more activity than those without. Overall, the study finds that ‘maximum part-time contract’ status is associated with higher absolute activity rates among NHS surgeons.

Table 19: Main characteristics of reviewed paper

	Description
Job type	Surgeons
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	The interquartile variation shows that the top 25% of consultants have significantly higher activity rates than those with a full-time contract. Consultant surgeons who have discretionary salary points undertake significantly more activity than those without.
Research methods used	The NHS HES for England with workforce data was used. A multi-level model was used to analyse the relationship between NHS contract and bonus payments, and activity.

US studies

5.2.8 [Himmelstein et al. \(2014\), “Pay-for-performance: toxic to quality? Insights from behavioural economics”, International Journal of Health Services.](#)

This study challenges the traditional economic view that monetary reward either is the only motivator or is simply additive to intrinsic motivators such as purpose or altruism. Studies have shown that monetary rewards can undermine motivation and worsen performance on cognitively complex and intrinsically rewarding work, suggesting that pay-for-performance (P4P) may backfire.

The paper finds that there is little evidence of P4P being successful. The review of P4P studies found mixed evidence on improvement on incentivised, process-based measures; virtually no evidence of global quality improvement; and occasional unintended harms.

It examines the impact of P4P in England and reviews a study which looked at the impact of the largest P4P initiative implemented in 2004 in the NHS. It offered family physicians bonuses that could augment their incomes by 25 percent for meeting 146 quality standards. The early results from this study were encouraging; in the first year, physicians achieved 96.7 percent of all possible bonus points. However, by 2007, improvement had plateaued for incentivised measures, and quality deteriorated for two measures not linked

to incentives. Moreover, although doctors met virtually all P4P hypertension treatment targets, neither population blood pressures nor hypertension complications decreased.

Another study on financial incentives given to British hospitals found worrisome side effects. Incentives to shorten surgical queues worsened heart attack mortality; focusing resources and attention on elective surgery cases may have distracted from emergency care. The study found one case where P4P was a success in a British hospital programme. It allocated all P4P funds for further quality improvement programmes and prohibited paying anyone a bonus.

The paper concludes that thus far, studies have unearthed a variety of bad ways to pay doctors, and no particularly good one. Financing shortcuts cannot circumvent the hard work and commitment needed for quality improvement, and may corrode the indispensable tools of progress: conscientious data collection, honest self-reflection, altruism and creativity.

Table 20: Main characteristics of reviewed paper

	Description
Job type	Doctors
Sector	Public
Geography	UK and US
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance
Effect on motivation	The study finds that financing behavioural change cannot circumvent the hard work and commitment needed for quality improvement, and may corrode the indispensable tools of progress: conscientious data collection, honest self-reflection, altruism and creativity.
Research methods used	Literature review

5.2.9 Jha et al. (2012), “The long-term effect of premier pay-for-performance on patient outcomes”, NEJM.

This study assessed the long-term effect of the Medicare Premier Hospital Quality Incentive Demonstration (HQID) on patient outcomes. It found little evidence that participation in the Premier HQID programme was associated with declines in mortality above and beyond those reported for hospitals that participated in public reporting alone, even when they examined care over a period of 6 years after the programme’s inception. Furthermore, they found no differences in trends in mortality between conditions for which outcomes

were explicitly linked to incentives and conditions for which outcomes were not linked to incentives. Even among hospitals that were poor performers at baseline, there was only a weak and inconsistent association between participation in the Premier HQID programme and reductions in mortality.

Table 21: Main characteristics of reviewed paper

	Description
Job type	Doctor
Sector	Public and private
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance
Effect on motivation	The study found no evidence that the largest hospital-based pay-for-performance programme led to a decrease in 30-day mortality.
Research methods used	The study used Medicare data to compare outcomes between the 252 hospitals participating in the Premier HQID and 3363 control hospitals participating in public reporting alone. The study examined 30-day mortality among more than 6 million patients who had acute myocardial infarction, congestive heart failure, or pneumonia or who underwent coronary-artery bypass grafting between 2003 and 2009.

5.2.10 Lester et al. (2010), “The impact of removing financial incentives from clinical quality indicators: Longitudinal analysis of four Kaiser Permanente indicators”, British Medical Journal.

This study evaluates the effect of financial incentives on four clinical quality indicators common to pay-for-performance plans in the UK and at Kaiser Permanente in California.

In this study incentives for two indicators – screening for diabetic retinopathy and for cervical cancer were removed during the study period.

- During the five consecutive years when financial incentives were attached to screening for diabetic retinopathy, the rate rose from 84.9% to 88.1%. This was followed by four years without incentives when the rate fell year on year to 80.5%.
- During the two initial years when financial incentives were attached to cervical cancer screening, screening rates rose slightly, from 77.4% to 78.0%. During the next five years when financial incentives were

removed, screening rates fell year on year to 74.3%. Incentives were then reattached for two years and screening rates began to increase.

In this study, across the 35 facilities, the removal of incentives was associated with a decrease in performance of about 3% per year on average for screening for diabetic retinopathy and about 1.6% per year for cervical cancer screening.

The study concludes that policy makers and clinicians should be aware that removing facility directed financial incentives from clinical indicators may mean that performance levels decline.

Table 22: Main characteristics of reviewed paper

	Description
Job type	Screening health professionals
Sector	Private
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance
Effect on motivation	The study finds that the removal of incentives was associated with a decrease in performance of about 3% per year on average for screening for diabetic retinopathy and about 1.6% per year for cervical cancer screening.
Research methods used	The study conducted a longitudinal analysis on 35 medical facilities based on a natural experiment. During the study period, incentives were removed for screening for cervical cancer and for diabetic retinopathy. The decisions to remove or add incentives were made by the leadership of this organisation based on priorities for the coming year.

5.2.11 Wynia (2009), “The Risks of Rewards in Health Care: How Pay-for-performance Could Threaten, or Bolster, Medical Professionalism”, *Journal of General Internal Medicine*.

The study states that it isn’t always true that if you pay people to do something, then they will do it more often. It states that a great deal of experimental evidence from both social psychology and econometrics suggests that when an activity is largely driven by internal motivations – such as professionalism or pride in the quality of work one achieves – adding an external (e.g. financial) motivator can backfire, often dramatically.

The study reviews Titumuss' book, 'The Gift relationship', in which the author compared Britain's voluntary, unpaid blood donation system with America's then pay-for-donation system. It states that America's "*rejection of altruism and choice of private market in blood donor systems*", created a blood supply that was less stable, more expensive, and less safe than could be produced through a purely voluntary system. Wynia states what when one undertakes a task – only the reward matters. But when one undertakes a task that can be intrinsically rewarding, such as the altruistic act of donating blood, adding an extrinsic financial incentive might undermine, or "crowd out" intrinsic motivation.

The study highlights three key points from its literature review

- The crowding-out of intrinsic motivation by extrinsic rewards only takes place with interesting activities. When researchers study repetitive, rote work, such as replacing windshields, financial incentives work just as economists predict. In such cases, intrinsic motivation cannot be undermined, since it doesn't exist at the outset.
- The negative effects of incentives can be very strong: not merely undermining motivation, but causing a reverse effect to that intended. The undermining effect is especially strong with small rewards and can presumably be overcome, at least in the short-term, with very large rewards.
- Intrinsic motivation is related to larger themes of social responsibility, public trust, teamwork and civic virtue.

The study states that medical work is exactly the type of work, where external performance-contingent rewards are most likely to backfire. Practicing medicine is intrinsically interesting, difficult and creative, and it demands a strong commitment to professional excellence to do it. In general, it supports the idea that the more cognitive sophistication and open-ended thinking that is required for a task, the worse people tend to do when they have been led to perform that task for a reward.

Table 23: Main characteristics of reviewed paper

	Description
Job type	Physician
Sector	Public and private
Geography	UK and US
Area of work analysed	Productivity
Type of reward	Remuneration, extrinsic and intrinsic rewards
Effect on motivation	The study states that medical work is the type of work where external performance-contingent rewards are most likely to backfire. Practising medicine is intrinsically interesting difficult and creative, and it demands a strong commitment to professional excellence to do it. It supports the idea that the more cognitive sophistication and open-ended thinking that is required for a task, the worse people tend to do when they have been led to perform that task for a reward.
Research methods used	Literature review

5.2.12 Fairbrother et al. (2001), “Impact of financial incentives on documented immunisation rates in the inner-city: results of a randomised controlled trial”, *Ambulatory Paediatrics*.

The study determined the effect of two financial incentives – bonus and enhanced fee-for-service -on documented immunisation rates during a period of observation. The authors gave incentives to 57 randomly selected inner-city physicians four times at 4-month intervals based on the performance of 50 randomly selected children. Coverage from linked records from all sources was determined for a sub-sample of children within physician offices. They found that the number of immunisations given by these physicians did not change significantly, although the number of immunisations given by others and documented by physicians in the bonus group did increase. Thus, the study finds that financial incentives produced a significant increase in coverage levels. However, increases were primarily due to better documentation not due to better immunising practise. The financial incentives appeared to provide motivation to physicians but were not significant to overcome entrenched behaviour patterns.

Table 24: Main characteristics of reviewed paper

	Description
Job type	Doctors
Sector	Private
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: bonus and enhanced fee-for-service
Effect on motivation	The financial incentives appear to provide motivation, but the approach of articulating a standard and giving a financial reward for achieving it does not appear to be sufficient to overcome entrenched behaviour patterns in a short period, even if with a large financial reward.
Research methods used	The study was a randomised controlled trial that tested the effects on documented immunisation coverage of two physician-level interventions – bonus and enhanced fee-for-service with feedback - compared with a control group.

Other studies

5.2.13 Berdud et al. (2016), “Incentives and intrinsic motivation in healthcare”,

This paper is an empirical study of the healthcare sector using methods of qualitative analysis research, which aims to answer the following hypotheses:

- 1) doctors are intrinsically motivated;
- 2) economic incentives and control policies may undermine doctors’ intrinsic motivation; and
- 3) well-designed incentives may encourage doctors’ intrinsic motivation.

The results support hypotheses 1 (intrinsic motivation) and 2 (crowding-out) and suggest the validity of hypothesis 3 (crowding-in). Results also support the idea that in the long-run, investing in workers’ intrinsic motivation is more efficient than using monetary incentives.

Doctors’ reporting that they like and enjoy medical practice confirms that they are intrinsically motivated professionals, a result in line with the classical definition of intrinsic motivation.

Table 25: Main characteristics of reviewed paper

	Description
Job type	Doctor
Sector	Public
Geography	Spain
Area of work analysed	Recruitment, productivity and retention
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	The results from the interviews show that doctors are intrinsically motivated and that economic incentives may encourage doctors' intrinsic motivation.
Research methods used	The authors conducted semi-structure interviews with 16 doctors from Navarre's (Spain) health care service. The questions were based on current theories of intrinsic motivation and incentives to test the hypothesis. Interviewees could respond openly without time constraints.

5.2.14 Nantha (2013), "Intrinsic motivation: how can it play a pivotal role in changing clinician behaviour?", *Journal of Health Organisation Management*.

The paper offers insight about how intrinsic motivation could play a pivotal role in improving the pre-existing healthcare service delivery systems by altering clinician behaviour. The paper argues the case for four salient dimensions worth exploring through the lens of intrinsic motivation – non-financial incentives, positive affective states, organisational culture and prescribing quality.

The scrutiny of the body of evidence leads to the assertion that there is neglect in the initiatives to reinforce intrinsic motivation as a method to address the ailing morale of doctors. This seems to have exacerbated negative outcomes that include job dissatisfaction, compromise in the quality of care and poor patient-doctor relationships. Diminution in positive affective states among doctors, largely controlled by intrinsic motivation, led to strained doctor-patient communication and poor quality of care. Barriers in a healthcare organisational culture that restricts autonomy and empowerment seem to directly undermine job satisfaction.

Table 26: Main characteristics of reviewed paper

	Description
Job type	Doctor
Sector	Public and private
Geography	Diverse
Area of work analysed	Productivity
Type of reward	Intrinsic benefits
Effect on motivation	The author finds that there is neglect in the initiatives to reinforce intrinsic motivation as a method to address the ailing morale of doctors. This seems to have exacerbated negative outcomes that include job dissatisfaction, compromise in the quality of care and poor patient-doctor relationships.
Research methods used	Literature review

5.2.15 Sicsic et al. (2012), “Intrinsic and extrinsic motivations in primary care: An explanatory study among French general practitioners”, *Health Policy*.

This study examines the impact of pay-for-performance (P4P) in primary care in France. It first constructs a composite score for intrinsic motivation (IMCS) and then analyses the main determinants of this score among doctors’ characteristics. It examines the relationship between IMCS and various proxies for extrinsic motivation (EM) and finds that GPs who practice in a group (sharing medical records) have a higher intrinsic motivation (IM) than those in solo practice.

Overall, the study provides mixed results concerning the substitutability between IM and EM. The results differ depending on the type of EM measures. When considering the qualitative EM indicators, the study finds a significant negative relationship with the IMCS: a highly intrinsically motivated GP is less likely to report feeling constrained by patients’ requests with respect to consultation duration or office appointments. Similarly, highly intrinsically motivated GPs are more likely to report being satisfied with their private practice incomes.

Table 27: Main characteristics of reviewed paper

	Description
Job type	Doctor
Sector	Public
Geography	France
Area of work analysed	Productivity and retention
Type of reward	Remuneration: pay-for-performance
Effect on motivation	The study finds that several doctors' characteristics have significant impacts on intrinsic motivation composite score (IMCS) variability, especially group practice and salaried practice. Qualitative EM variables are negatively correlated with the IMCS: GPs who report not being satisfied with their income or feeling "often" constrained by patients' requests in terms of consultations length and office appointments obtain a lower mean IMCS than other GPs.
Research methods used	The study examines 423 GPs practising in France. IM indicator are selected using a multiple correspondence analysis and aggregated from multi-level model. The study conducted a survey on GPs in these practices. The questionnaire is composed of 68 items divided into four parts: GP's practice organisation, GP's working activities, doctors' satisfaction and professional constraints, and socio-demographic questions.

5.2.16 Scott et al. (2011), "The effect of financial incentives on the quality of health care provided by primary care physicians", Cochrane Database of Systematic Reviews.

This study examines the effect of changes in the method and level of payment on the quality of care provided by primary care physicians (PCPs) and identifies: i) the different types of financial incentives that have improved quality; ii) the characteristics of patient populations for whom quality of care has been improved by financial incentives; and iii) the characteristics of PCPs who have responded to financial incentives.

Seven studies were included in this review. Six of the seven studies showed positive but modest effects on quality of care for some primary outcome measures, but not all. One study found no effect on quality of care. Poor study design led to substantial risk of bias in most studies. None of the studies addressed issues of selection bias as a result of the ability of PCPs to select into or out of the incentive scheme or health plan.

Overall, the author states that the use of financial incentives to reward PCPs for improving the quality of primary healthcare services is growing. However, there is insufficient evidence to support or not support the use of financial incentives to improve the quality of primary health care. Implementation should proceed with caution and incentive schemes should be more carefully designed before implementation.

Table 28: Main characteristics of reviewed paper

	Description
Job type	Doctor
Sector	Public and private
Geography	Diverse
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance
Effect on motivation	The author states that the use of financial incentives to reward PCP for improving the quality of primary healthcare services is growing. However, there is insufficient evidence to support or not support the use of financial incentives to improve the quality of primary health care.
Research methods used	Seven studies were included in this review.

5.3 Health workers (except for doctors, dentists and senior managers)

5.3.1 NHS (2016), “NHS Staff Survey 2016”.

See 5.2.2 above in the “doctors and dentists” section.

5.3.2 Brown et al (2016), “The relationship between total reward and employee engagement”, Institute of Employment Studies.

This study by the IES conducts an evidence review in the areas of total reward and employee engagement.

Overall, they find that appropriate reward practices and processes, both financial and non-financial and managed in combination, can help to build and improve employee engagement, whereas badly designed or executed financial rewards can hinder it.

The broader the definition of total reward that is adopted, including a wide range of extrinsic and intrinsic, financial and non-financial rewards, then the more significant the potential impact on employee engagement appears to be.

In a context where employees feel ‘*totally rewarded*’ for their contribution, and valued and recognised by managers, then higher levels of employee engagement and higher levels of performance are more likely to occur, particularly in customer service and care settings.

The evidence gathered makes clear that there is no total reward ‘*silver bullet*’ that will result in employees being automatically engaged and both extrinsically and intrinsically motivated, leading to performance benefits flowing throughout the NHS.

Table 29: Main characteristics of reviewed paper

	Description
Job type	NHS employees
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity: engagement
Type of reward	Remuneration; extrinsic and intrinsic
Effect on motivation	Appropriate reward practices can help to build and improve employee engagement while badly designed rewards can hinder it.
Research methods used	Literature review

5.3.3 Bo et al. (2013), “Strengthening state capabilities: the role of financial incentives in the call to public service”, *Quarterly Journal of Economics*.

This study looks at the impact that financial incentives have on recruitment of health workers in Mexico. The authors screened applicants initially based on their intellectual ability, personality and motivation. They examine

- i. the role of financial incentives in attracting a larger and more qualified pool of applicants;
- ii. the elasticity of the labour supply facing the employer; and
- iii. the role of job attributes in helping fill positions in less attractive municipalities.

They find that higher wages attract more able applicants as measured by their IQ, personality and proclivity towards public sector work. Higher wages also increased acceptance rates. Distance and municipal characteristics strongly decrease acceptance rates, but higher wages help bridge the recruitment gap in worse municipalities.

Table 30: Main characteristics of reviewed paper

	Description
Job type	Health workers
Sector	Public
Geography	Mexico
Area of work analysed	Recruitment
Type of reward	Remuneration
Effect on motivation	The study finds that offering higher wages attracts individuals with higher previous earnings and who have both a higher IQ and more desirable personality traits. Higher wages also increase the state's ability to fill vacancies.
Research methods used	The study was conducted in two stages. In the first stage, two separate wage offers were assigned across recruitment sites allowing them to study how wages affect the applicant pool. In the second stage, eligible applicants for each vacancy were selected at random to be offered a job, creating a random match between municipalities and candidates.

5.3.4 Morgan et al. (2013), "The quality of healthcare jobs: can intrinsic rewards compensate for low extrinsic rewards", *Work, Employment and Society*.

This study examines the influence of extrinsic job characteristics (e.g. wages and benefits) versus intrinsic characteristics (e.g. meaningful tasks) on job satisfaction and intent to stay with one's current employer. The study uses a mixed-methods approach, drawing on survey data collected from frontline workers and organisations in a variety of healthcare settings, as well as interview and focus group data from frontline workers to contextualise and interpret the findings in the multi-level models. The results indicate that both intrinsic and extrinsic characteristics are significant predictors of job satisfaction, but only extrinsic characteristics help explain intent to stay with the employer.

Table 31: Main characteristics of reviewed paper

	Description
Job type	Healthcare workers – including nursing assistants, counsellors and medical transcriptionists.
Sector	Public
Geography	United States
Area of work analysed	Productivity and retention
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	The study tries to explain why frontline health workers report relatively high job satisfaction, yet are also likely to leave their jobs. Low wages and other bad characteristics associated with the jobs of frontline workers might be offset somewhat by the intrinsic nature of many of these jobs. Workers may be relatively satisfied with these jobs when they are structured in a way that supports care work, including having reasonable workloads and supportive supervision. However, employment intentions are primarily driven by extrinsic rewards. Thus, while the nature of care work may be satisfying for frontline healthcare workers, ‘bad job’ characteristics play a stronger role in whether workers will stay with their employers.
Research methods used	The study draws from three data sources to evaluate job quality among frontline health care workers. First, survey data collected from 10,006 frontline workers in 25 health care organisations across the USA. This is supplemented by answers from key informants. Thirty-one focus groups were conducted with a subset of survey respondents. A random effects model was used, as it allows the authors to control for the hierarchical structure of the data.

5.3.5 Brown et al (2003), “Compensation policy and organisational performance: the efficiency, operational and financial implications of pay levels and pay structure, *The Academy of management journal*.

This study investigated the relationship between organisation level compensation decisions and organisational performance. It examined data from the population of short-term-stay, acute care, general hospitals in the state of California.

The study found that pay level is negatively associated with the average length of stay – that is, higher pay levels are associated with greater efficiency – and pay level is positively associated with patient care outcomes.

Overall, the results indicate that pay level practices and pay structures interact to affect resource efficiency, patient care outcomes, and financial performance.

Table 32: Main characteristics of reviewed paper

	Description
Job type	Health workers
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: wages
Effect on motivation	The results indicate that pay level practices and pay structures interact to affect resource efficiency, patient care outcomes, and financial performance.
Research methods used	The study examined data from the population of short-term-stay, acute care, general hospitals in the state of California. To analyse the data, a pooled longitudinal cross-section composed of unbalanced panel data from 333 hospitals was used.

5.4 Prison services

5.4.1 BBC (2016), “Prison officers reject pay and pensions offer”.

Members of the Prison Officers Association in England and Wales rejected an offer on pay and pensions in 2016. The proposed agreement would have allowed prison officers to retire at 65 with an occupational pension even when the state pension age rises to 68. Pay was proposed to increase by between 0.5% and 1% in each of the next three years, with further loyalty payments of up to £1,000. But almost two-thirds of union members who voted rejected the deal.

Part of the reason for rejecting this offer was that the prison staff believe they should be allowed to retire with a full pension at 60, as police officers can do. There were also concerns that pay is still not enough to attract sufficient staff.

Table 33: Main characteristics of reviewed paper

	Description
Job type	Prison officers
Sector	Public
Geography	United Kingdom
Area of work analysed	Retention
Type of reward	Remuneration Extrinsic benefits: pension
Effect on motivation	Prison staff rejected the new pay offer because they believe they should be allowed to retire at 60 just as police officers can do. There are also concerns that the pay is not enough to attract sufficient staff.
Research methods used	N/A

5.4.2 French (2015), “The implications of work intensification for the well-being and effectiveness of PGA members”, Centre for Employment Policy and Equalities, Keele University.

The *Working Hours, Workload and Work-life Balance Survey* of members of the Prison Governors’ Association (PGA) explores the impact of working hours and workload upon PGA members’ work-life balance and their experience of stress and ill-health. The potential impact of significant changes to organisation, staffing and working conditions associated with ‘fair and sustainable’ terms and conditions and prison ‘benchmarking’ are also examined.

In terms of work-life balance, 56.5% of respondents sometimes experience difficulties in achieving a work-life balance, but 32.5% found it difficult to achieve a balance at all; and many work-life balance policies are unavailable to PGA members and support policies, such as stress management, are perceived to be ineffective.

Members identified a range of material improvements to terms and conditions that would be beneficial to them in their job, notably higher pay (76.1%) and better promotion opportunities (56.6%). They also identified more flexible working options (65.3%); more options to work from home (58.4%); more holidays (41.1%); and policies that provide more time to spend with the family (85.1%), reflecting the impact of workload and working hours on private life and family relationships. 43.7% of members also identified improved support services (such as counselling) as important ways of improving the work environment.

Notwithstanding the above, the study further demonstrates the importance PGA members attach to their work and the sense of achievement they feel through it. For example, 82.9% of respondents claimed that work played an important part of their lives and that they enjoy the challenges associated with their jobs (84.5%), while 66.5% of respondents find their job rewarding.

Table 34: Main characteristics of reviewed paper

	Description
Job type	Prison governors
Sector	Public
Geography	United Kingdom
Area of work analysed	Retention
Type of reward	Intrinsic benefits: work-life balance
Effect on motivation	59.9% of respondents are demotivated by the series of changes affecting their jobs; and 42.5% of respondents state they will consider changing jobs if conditions remain as they are.
Research methods used	The <i>Working Time, Workload and Work-life Balance Survey</i> conducted by Keele University was a national internet-based survey, which ran between July and August 2015. In total, 421 PGA members participated in the survey. This represents a 39.9% response rate (out of the 1,055 PGA members).

5.4.3 Lambert and Paoline (2010), “Take this job and shove it: An exploratory study of turnover intent among jail staff”, *Journal of Criminal Justice*.

This study uses survey data to examine the antecedents (i.e. personal characteristics, perceptions of the work environment, and job attitudes) of turnover intent among staff at a large jail. Based on multivariate analysis, the most powerful predictors of jail staff turnover intent were job attitudes. The findings suggest that administrators should concentrate on improving the work environment to boost employee job involvement, job satisfaction and organisational commitment.

Table 35: Main characteristics of reviewed paper

	Description
Job type	Prison staff
Sector	Public
Geography	United States
Area of work analysed	Productivity and retention
Type of reward	Intrinsic benefits: work environment
Effect on motivation	The study finds that job involvement, job satisfaction and organisation commitment had statistically significant negative effects on turnover intent. Those more involved in their jobs were less likely to want to quit. Further, jail employees with higher commitment have stronger bonds with the organisation, and these bonds help ensure that they want to remain part of the organisation. Thus, the authors recommend that administrators focus on making changes in the work environment of their jails to facilitate improved job attitudes.
Method	The study uses data from a survey that was given out to all available staff at the Orange County Corrections Department (OCCD). Research staff conducted seven two-hour focus groups with 48 OCCD employees from different organisational levels and facilities.

5.4.4 Lambert et al. (2006), “The impact of work-family conflict on correctional staff: a preliminary study”, *Criminology and Criminal Justice*.

Work-family conflict (WFC) occurs when the work domain and family domain are incompatible with one another in some manner. A survey of staff at a private Midwestern prison measured four dimensions of WFC: (i) time-based WFC, (ii) strain-based WFC, (iii) behaviour based WFC, and (iv) family on work conflict. Ordinary Least Squares regression results indicate that strain-based conflict was the only form of WFC to have a significant effect on job stress. Both strain-based conflict and behaviour based conflict had a significant impact on job satisfaction. Finally, time-based conflict, behaviour based and family on work conflict all had significant effects on organisational commitment.

Table 36: Main characteristics of reviewed paper

	Description
Job type	Prison staff
Sector	Private
Geography	United States
Area of work analysed	Productivity and retention
Type of reward	Intrinsic benefits: work-family balance
Effect on motivation	The study finds that WFC may help shape the job stress, job satisfaction and organisational commitment of many correctional staff. The authors state that providing a supportive work environment that recognises the importance of the employee's family and social life could aid in reducing WFC. They state that staff should be allowed greater say in scheduling, as well as more flexible use of leave time. In addition, staff need to be provided with counselling to deal with strain- and behaviour based conflict.
Research methods used	The authors surveyed 219 staff at a Midwestern, high security private prison. The respondents represented all areas of the correctional facility except upper management and administration, and included correctional officers, case managers, medical staff, industry staff, food service workers etc.

5.5 School teachers

5.5.1 Gius (2013), "The effects of merit pay on teacher job satisfaction", Applied Economics.

This study examines whether the existence of a district-level merit pay system has any effects on teacher job satisfaction. Using a sample of public school teachers, the results of this study suggest that teachers who work in districts that use a merit pay system are no less satisfied with their jobs than are other teachers. The results also show that although the effect of merit pay on overall job satisfaction was insignificant, teachers in merit pay districts were less enthusiastic, did not think teaching was important, and were more likely to leave for better pay. However, in examining a sample of teachers who worked only in merit pay districts, it was found that teachers who received merit pay were more satisfied overall with their jobs than were teachers who did not receive merit pay.

Table 37: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	<p>This study indicates that teachers who worked in districts that used merit pay were no more satisfied with their jobs than were teachers who worked in districts without merit pay.</p> <p>Further, teachers who worked in merit pay districts were less likely to believe teaching is important, were less likely to be enthusiastic about teaching, and were more likely to leave for better pay than teachers who did not work in merit pay districts.</p>
Research methods used	The study draws conclusions from the Schools and Staffing Survey

5.5.2 Jones (2013), “Teacher behaviour under performance pay incentives”, *Economics of Education Review*.

This study tests the economic theory that performance pay incentive schemes alter teacher work effort, cooperation, and retention. Performance pay schemes were implemented in particular districts in the US. The study uses data from the 2003 and 2007 waves of the Schools and Staffing Survey. The author finds that teachers respond to performance pay incentives by working fewer hours per week. Performance pay also decreases participation in unpaid cooperative school activities, while there is suggestive evidence that teacher turnover decreases. The treatment effects are heterogeneous; male teachers respond more positively than female teachers. In Florida, which restricts state performance pay funding to individual teachers, the study finds that work effort and teacher turnover increased.

Table 38: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United States
Area of work analysed	Productivity and retention
Type of reward	Remuneration: performance-related pay
Effect on motivation	The study finds teachers respond to performance-related pay by working 12% fewer hours per week and spending more time pursuing other job opportunities. Participation in unpaid cooperative activities decreases while participation in paid cooperative activities remains unchanged (outside of Florida). Teacher turnover also appears to significantly decrease under performance pay. However, the response to performance pay is not homogeneous. Male teachers show no significant decline in work hours. Female teachers participate less frequently in unpaid cooperative activities compared to male teachers. Experienced teachers respond with lower work effort compared to new teachers, possibly suggesting the presence of peer effects.
Research methods used	The study analyses data from Schools and Staffing Survey.

5.5.3 OECD (2012), “Does performance-based pay improve teaching?”

This study examines the relationship between performance-based pay and student outcomes. Currently, about half of OECD countries reward teacher performances in different ways. For example, in the Czech Republic, England, Mexico, the Netherlands, Sweden and Turkey, outstanding teaching performance is a criterion for decisions on a teacher’s position on the base salary scale. In the Czech Republic, Denmark, England, Estonia, Finland, Mexico, the Netherlands, Norway, Poland and the Slovak Republic, it is a criterion for deciding on supplemental payments that are paid annually. In Austria, Chile, the Czech Republic, Denmark, England, Estonia, Hungary, the Netherlands, Poland, the Slovak Republic, Slovenia, Turkey and the United States, outstanding teaching performance is used as a criterion for deciding supplemental incidental payments.

The study finds that overall there is no relationship between average student performance in a country and the use of performance-based pay schemes. But the picture changes when considering how well teachers are paid overall in

comparison with national income. In countries with comparatively low teachers' salaries (less than 15% above GDP per capita), student performance tends to be better when performance-based pay systems are in place, while in countries where teachers are relatively well paid (more than 15% above GDP per capita), the opposite is true.

Overall, the report concludes that performance-based pay is worth considering in some contexts; but making it work well and sustainably is a formidable challenge. Pay levels can only be part of the work environment: countries that have succeeded in making teaching an attractive profession have often done so not just through pay, but by raising the status of teaching, offering real career prospects, and giving teachers responsibility as professionals and leaders of reform. This requires teacher education that helps teachers to become innovators and researchers in education, not just civil servants who deliver curricula.

Table 39: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public and private
Geography	OECD countries
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	There is no direct relationship between PRP and student outcomes. However, it is more effective in countries with low teachers' salaries, student performance is better while the opposite is true where teachers are better paid.
Research methods used	The study compares PISA scores and teacher's wages in OECD countries.

5.5.4 Yuan et al (2013), "Incentive pay programs do not affect teacher motivation or reported practices: results from three randomised studies", Educational Evaluation and Policy Analysis.

The study is drawn from teacher survey responses from randomised experiments exploring three different pay-for-performance programmes to examine the extent to which these programmes motivated teachers to improve student achievements and the impact of such programmes on teachers' instruction, number of hours worked, job stress, and collegiality.

The three surveys analysed are:

- POINT: The National Centre on Performance Incentives partnered with the Metropolitan Nashville Public Schools to conduct the Project on Incentives in Teaching, or POINT. The study examines the effects on student outcomes of paying eligible teachers bonuses of up to \$15,000 per year on the student test score gains on the Tennessee Comprehensive Assessment Program.
- The Pilot Project on Team Incentives in Texas's Round Rock Independent School District is a suburban district in Texas with above average achievement on the state accountability tests.
- The School-Wide Performance Bonus Program in New York City Public Schools for high needs K-1 schools as defined by their poverty rates, student demographic characteristics and fourth and eighth grade scores on the state-wide mathematics and English language arts tests.

Results showed that most teachers did not report their programme as motivating. Moreover, the survey responses suggest that none of the three programmes changed teachers' instruction, increased their number of hours worked or job stress, or damaged their collegiality.

Table 40: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public and private
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	Results showed that teachers did not consider their programmes as motivating. First, teachers’ level of goal acceptance was not high due to a lack of understanding of the programme among some teachers and teachers’ concerns about using student test scores to measure teaching performance and the fairness of the programme. Second, teachers did not have high expectancy that their personal efforts would lead to student achievement gains due to concerns about the influence of family environment on student achievement. Third, although teachers would have liked to earn a bonus, they did not see the opportunity as worthy of changing behaviour.
Research methods used	In this study, the authors examined three randomised controlled trials of pay-for-performance programmes, in which the units of accountability were randomly assigned to either the treatment group (who were eligible to receive the bonus) or the control group (who were not eligible to receive the bonus).

5.5.5 Leigh (2012), “The economics and politics of teacher merit pay”, CESifo Economic Studies Advance Access.

This study surveys three sets of data to test whether teachers value merit pay. The surveys examined fall into three categories: (i) impact studies of teacher merit pay schemes, (ii) evidence on teacher attitudes to merit pay, and (iii) surveys of attitudes in the general public to merit pay. The author finds that teacher attitudes are mixed, with new teachers more open to merit pay than their more experienced colleagues. Teachers are particularly hostile to merit pay schemes based on test scores, raising a challenge for the political sustainability of such plans.

The author summarises several surveys of teachers about their attitudes to merit pay. The surveys give a mixed impression regarding teacher’s attitudes towards merit pay. Although the typical survey finds that most teachers are opposed to merit pay, survey results tend to be quite sensitive to the wording

of the question. For example, a 1983 US survey found that 63% of teachers supported larger salary increases for more ‘effective’ colleagues, while a poll the next year found 64% of teachers opposed to ‘merit pay’. In 1987–1988, a US survey found that 71% of teachers supported promotion based on performance, 55% supported merit bonuses, and 66% supported school-wide bonuses.

However, when US teachers are asked in more detail how they think merit pay should operate, it emerges that teachers most dislike merit pay schemes that rely on standardised tests. In an extensive 2007 survey, merit pay based on principal evaluations received 58% support, while merit pay based on test scores received 34% support. Similarly, in a 2006 study of teachers in Washington State, 83% opposed merit pay based on test score gains. Probing further about the concerns that teachers have about merit pay, a 2003 survey uncovered the fact that 63% of teachers think merit pay would be more likely to lead to competition/jealousy than an improvement in effectiveness; 59% say that it’s not fair to hold teachers accountable for student learning; and 52% are concerned that merit pay would cause principals to play favourites.

Table 41: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	The typical survey finds that most teachers are opposed to merit pay but the results are sensitive to the wording of the question.
Research methods used	The study surveys three sets of data to test teachers’ attitudes towards merit pay.

5.5.6 Springer, Hamilton and McCaffrey (2012), “Final report: experimental evidence from the project on incentives in teaching (POINT)”, National Centre on Performance Incentives.

The Project on Incentives in Teaching (POINT) was a three-year study conducted in the Metropolitan Nashville School System from 2006-07 through 2008-09, in which middle school mathematics teachers voluntarily participated in a controlled experiment to assess the effect of financial rewards for teachers whose students showed unusually large gains on standardised tests. The experiment was intended to test the notion that

rewarding teachers for improved scores would cause scores to rise. In POINT, the maximum bonus an eligible teacher could earn was \$15,000 – which was a considerable increase over base pay in this system. To receive this bonus, a teacher’s students had to perform at a level that historically had been reached by only the top five percent of middle school math teachers in each year.

Their results showed that although there was a general upward trend in middle school mathematics performance over the period of the project, students of teachers randomly assigned to the treatment group (eligible for bonuses) did not outperform students whose teachers were assigned to the control group.

Table 42: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	With respect to test scores in mathematics, the study does not find a significant difference overall between students whose teachers were assigned to the treatment group and those whose teachers were assigned to the control group.
Research methods used	Survey analysis

5.5.7 Fitzpatrick (2011), “How Much Do Public School Teachers Value Their Retirement Benefits?”, Cornell University.

It is posited that the public sector attracts high-quality public employees because they receive large fractions of their lifetime income in the form of deferred compensation. An explanation for this is that public sector employees have low discount rates or prefer to trade lower current wages for guaranteed future compensation.

This study estimates the willingness-to-pay for benefits relative to the cost of providing them based on a natural experiment in an Illinois public school. The results show employees are willing to pay 19 cents on average for a dollar increase in the present value of expected retirement benefits. The findings suggest substantial inefficiency in compensation and cast doubt on the ability of deferred compensation schemes to attract employees.

Table 43: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United States
Area of work analysed	Recruitment and retention
Type of reward	Extrinsic benefits: pension
Effect on motivation	On average, employees are willing to trade just 19 cents of current compensation for each expected dollar of future compensation. The employees’ low valuation rules out worker preferences as the main justification for large pensions.
Research methods used	The study uses a natural experiment in an Illinois public school wherein teachers were given the opportunity to purchase extra retirement benefits. By allowing teachers to choose between current dollars and increased pension benefits, the introduction of this product allows the author to estimate employees’ demand for retirement benefits and compare it to the expected present value of the benefits.

5.5.8 Steele et al. (2010), “Do financial incentives help low-performing schools attract and keep academically talented teachers? Evidence from California”, *Journal of Policy Analysis and Management*.

This study examines the effectiveness of financial incentives on retention of teachers in low-performing schools in California. The study is based on a natural experiment that occurred in California between 2000 and 2002 when the state offered a \$20,000 incentive called the Governor’s Teaching Fellowship (GTF), which was aimed at attracting academically talented, novice teachers to low-performing schools and retaining them in those schools for at least four years. It finds that GTF recipients were otherwise less likely to be teaching in a low-performing school, but that receiving the fellowship increased their probability of doing so by 28 percentage points. Examining retention patterns, the study finds that 75 percent of both GTF recipients and non-recipients who began working in low-performing schools remained in such schools for at least four years.

Table 44: Main characteristics of reviewed paper

	Description
Job type	Teaching
Sector	Public
Geography	United States
Area of work analysed	Recruitment and retention.
Type of reward	Remuneration: GTF incentive
Effect on motivation	In terms of recruitment, the study finds that 28% of the GTF holders or 203 teachers who entered low-performing schools who would not otherwise have done so. In terms of retention, 75% of these entrants remained in the low-performing schools for up to four years.
Research methods used	This study makes use of data from a natural experiment in which the state offered a GTF of \$20,000 to attract academically talented teachers to low-performing schools. The sample consists of 27,106 candidates, of whom 718 were GTF recipients.
Other	After the second year of the programme, it had to be discontinued due to high overhead costs and state-wide budget constraints.

5.5.9 Costrell and Podgursky (2009), “Peaks, cliffs, and valleys: The peculiar incentives in teacher retirement systems and their consequences for school staffing”, American Education Finance Association.

This article examines the pattern of incentives for work versus retirement in six state teacher pension systems. They do this by examining the annual accrual of pension wealth from an additional year of work over a teacher’s career. Accrual of wealth is highly nonlinear and heavily loaded at arbitrary years that would normally be considered mid-career. One typical pattern exhibits low accrual in early years, accelerating in the mid- to late fifties, followed by dramatic decline or even negative returns in years that are relatively young for retirement. Key factors in the defined benefit formulas that drive such patterns are identified along with likely consequences for employee behaviour. The authors examine efficiency and equity consequences of these systems as well as options for reform.

Table 45: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public and private
Geography	United States
Area of work analysed	Recruitment and retention
Type of reward	Extrinsic benefits: pension
Effect on motivation	The study suggests that education policy should consider experiments that provide actuarially fair alternatives (that is, alternatives that better align with current demographic trends, e.g. the population living longer and relatedly working longer, too) to traditional defined benefit (DB) plans for new teaching recruits and evaluate their utility in the recruitment and retention of high-quality teachers. Even if most teachers continue to choose the traditional DB option, providing new recruits with a choice may, at the margin, help attract some of the most mobile and academically gifted candidates who have the best nonteaching options.
Research methods used	Literature review

5.5.10 Atkinson et al. (2009), “Evaluating the impact of performance-related pay for teachers in England”, *Labour Economics*.

In 1999 the UK government introduced a performance-related pay policy for teachers, with pupil progress as one of its key criteria. This paper evaluates the impact of this pay scheme on student performance. Using data that matches individual pupils to individual teachers, and contains both test scores and value-added, the study tests whether the introduction of this payment scheme based on pupil attainment increased teacher effort. The evaluation design controls for pupil effects, school effects and teacher effects, and adopts a difference-in-difference methodology. The paper finds that the scheme did improve test scores and value-added increased on average by about 40% of a grade per pupil. The results show that teachers respond to financial incentives. However, it is not possible to distinguish between whether this was due to extra effort by teacher or effort diverted from other professional activities.

Table 46: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	The study finds that the scheme improved test score gains, on average by about 40% of a grade per pupil. The results show that teachers do respond to direct financial incentives.
Research methods used	Difference-in-difference and regression analysis

5.5.11 Goodman and Turner (2009), “Group incentives for teachers: the impact of the NYC school-wide bonus program on educational outcomes”, Columbia University.

This paper uses a randomised policy experiment conducted in the New York City public school system to explore the effects of a group-based pay scheme. It investigates the potential impacts of incentive pay over two academic years (2007-2008 and 2008-2009) on student performance on annual math and reading exams, teacher absences, and responses to environmental surveys of teachers and students. The experiment was conducted in 185 schools from a pool of high-poverty schools to be eligible for school level bonuses.

The study also considers whether the programme had differential outcomes on groups within schools that were especially likely to be targeted, given the incentive structure of the programme. It also explores the relative impacts on the market for teachers by examining end-of-year teacher turnover and the quality composition of newly hired teachers. Overall, the paper finds no significant impact of the bonus programme on student achievement in the first or second year of the programme. However, there is some evidence that the programme reduced teacher absenteeism in schools with a small number of teachers, and that these effects were weakened in larger schools by the presence of free-riding.

Table 47: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	<p>The study finds little evidence that the bonus programme had any effect on student test scores in either the first or second years of the programme, nor did it lead to significant behavioural changes, as measured by student and teacher surveys, teacher absences, teacher turnover, or the selection of new teachers.</p> <p>The study finds little evidence of a small reduction in teacher absences in schools where teachers had relatively strong incentives to increase their effort, as well as some evidence that students in the lowest portion of the test score distribution were negatively impacted by the programme.</p>
Research methods used	Behavioural experiment

5.5.12 OECD (2009), “Evaluation and rewarding the quality of teachers: International practices”.

This paper examines several studies relating to the varying strategies used by different governments to recruit, incentivise and retain teachers.

Financial incentives

Many countries see scholarships or stipends for teacher candidates as an incentive to attract new teachers into the profession, but it may be a wasted expense for a government if students use the funds to complete their education but do not actually enter teaching. As a case in point, in the State of Victoria in Australia, out of every 100 students who applied for teacher education programmes in 1999, 56 were accepted, 41 enrolled, 31 were expected to graduate, 23 were available for employment, and only 15 were employed as teachers in schools. Despite that, several countries, including Australia, have chosen to use this strategy to increase the number of young people preparing to become teachers, especially those pursuing majors in teacher shortage subject areas, such as mathematics, science and technology.

Ross and Hutchings (2003) report that both England and Wales developed several financial incentives for students studying to be teachers, starting in 1986 with grants for students in certain secondary education fields.

Singapore offers free tuition and fees to prospective teachers, along with a monthly stipend for bachelor degree candidates and a monthly salary equal to a college graduate in a civil service position for those entering the postgraduate programme. To ensure, that it does not lose money on students who later choose other professions, Singapore requires that any teacher who does not complete the three to six years of teaching required in the contract for the tuition and stipend support must pay liquidated damages with interest. This is true regardless of whether the individual or the school system determines that the teacher is not a good fit with the system.

Retention bonus - a programme of incentive for teaching in hard-to-staff schools in North Carolina was evaluated. It showed that the USD 1800 annual incentive paid to experienced teachers of mathematics and science in hard-to-staff or low-performing schools reduced teacher turnover rates by 10%.

Marsden and Belfield (2005) surveyed teachers in England before, during and after the move to performance pay based on movement to new upper salary scales based on teacher evaluations. Teachers were eligible to apply once they reached the top of the regular salary scale, which required at least eight years of experience. Over 80% of the eligible teachers applied and over 95% successfully crossed the threshold to the upper salary scales. The survey indicated that teachers grew less negative over time, though remained concerned that the funding for the higher salary levels would not be permanently continued. Teachers saw the plan as promoting more effective coordination of school priorities, rather than a financial incentive to work harder. The greatest benefit they saw was that the plan made teachers more aware of the school's objectives and helped them prioritise their work. However, fewer than half of the head teachers thought that it gave teachers greater incentive to focus on student attainment.

An evaluation of England's performance pay programme found that the eligible teachers did raise student performance on the GCSE by about half a grade in lower secondary schools, although not equally for all subject teachers, e.g. scores for teachers of mathematics did not improve. The authors provided two cautions: since the study applied to teachers this could have been a function of experience. The second caution is that the study was done in schools with good performance management and information technology systems, which could submit extensive data, and those schools may not be representative of all secondary schools.

Non-financial incentives

The authors review a paper by Darling-Hammond (1997) which raises the issue of working conditions as a major source of teacher satisfaction and retention. The paper found a strong association between teachers planning to

stay in teaching and their views of the quality of support provided to teachers by the school administration, as well as the availability of resources and teachers' ability to have a voice in the school's decisions. Other teacher surveys have shown that it is the lack of such positive work environments that contribute to high attrition rates from schools in high-poverty schools and schools with high-minority student populations.

Teachers in England and Wales responded very favourably to the 2003 *Raising Standards and Tackling Workload* agreement. This agreement reduced the amount of administrative/clerical duties assigned to teachers by adding support staff and providing them with better training to assume those responsibilities. Over 97% of teachers surveyed for the Department of Education and Skills in 2004 responded that teaching and learning had improved because of the agreement, and about half reported that teacher workloads had decreased overall.

A study conducted in the US by Loeb, Darling-Hammond and Luczak (2005) examined the connection between teacher attrition and student demographics, working conditions and salary. It found that salaries and working conditions, such as large classes, facilities problems, school schedules based on multi-tracks, and lack of textbooks are strong and significant factors in teacher turnover. Once those factors have been accounted for, student demographics become a smaller factor in teacher's decision to leave a school. Quartz et al (2004) studying graduates of an elite teacher training programme focused on preparation for teaching in inner-city schools found similar results and suggested that student demographics may appear as a proxy for poor working conditions since high-poverty, high-minority schools often provide poor working conditions.

Table 48: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	Varied
Area of work analysed	Recruitment, productivity and retention
Type of reward	Remuneration: scholarships and performance-related pay Intrinsic benefit: work environment
Effect on motivation	<p>The literature review examines both the impact of financial and non-financial incentives. Many countries have incentives such as scholarships or stipends to attract new teachers. In Australia, this had limited success as only 37% (15/41) of the students enrolled were employed as teachers in schools. To circumvent this problem, Singapore requires any teacher who does not complete the three to six years of teaching required in the contract to pay liquidated damages with interest.</p> <p>In the US, retention bonus of USD 1800 reduced turnover rates by 10%.</p> <p>The paper identifies the impact of performance-related pay on teachers. Marsden and Belfield (2005) found that this incentive made teachers more aware of promoting effective coordination of school priorities rather than a financial incentive to work harder. However, a large proportion of head teachers thought it didn't give teachers greater incentive to focus on student attainment. Another study showed that PRP raised student performance on the GCSE by about half a grade.</p>
Research methods used	Literature review

5.5.13 Belfield and Heywood (2008), "Performance pay for teachers: determinants and consequences", *Economics of Education Review*.

This paper test three hypotheses: (i) performance-related pay among teachers is more likely to be observed when there are evident indicators of team production; (ii) teachers receiving performance pay will earn more in total than otherwise equal teachers without performance pay; and (iii) teachers receiving performance pay should have higher job satisfaction. It uses the Schools and Staffing Survey (2000) to test each hypothesis and finds that team production does strongly predict performance-related pay, and that such pay

does boost earning, but that job satisfaction is lower for those who receive such pay rewards.

Table 49: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public and private
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	This study aims to understand the determinants and consequences of performance pay. It finds that explicit cooperative working arrangements increased the probability of receiving performance pay, that performance increases total compensation but failed to find that job satisfaction is generally higher for those receiving performance pay.
Research methods used	The study draws conclusions from the Schools and Staffing Survey.

5.5.14 Figlio and Kenny (2007), “Individual teacher incentives and student performance”, National Bureau of Economic Research.

This paper examines the relationship between individual teacher performance incentives and student achievement. The authors combine data from the National Education Longitudinal Survey on schools, students, and their families with their own survey. They find that test scores are higher in schools that offer individual financial incentives for good performance. This is regardless of the magnitude of the financial incentive. They argue and test that this relationship exists because the incentives elicit more effort from teachers. Their study controls for a rich set of variables to minimise omitted variable bias between teacher incentives and test scores. They control for the student’s eighth grade test score to account for unmeasured ability. They also control for student’s background characteristics and various controls for school inputs.

Table 50: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration: performance-related pay
Effect on motivation	Test scores are higher in schools that offer individual financial incentives for good performance.
Research methods used	The authors use the National Education Longitudinal Survey along with their own survey to undertake this study. The survey has data on frequency and magnitude of merit raises and bonuses, teacher evaluation and teacher termination.

5.5.15 Podgursky and Springer (2007), “Teacher performance pay: a review”, *Journal of Policy Analysis and Management*.

This paper examines the economic case for performance-related pay in American schools. It finds that performance-related compensation schemes in education are very diverse in terms of incentive design, population, type of incentive, strength of study design, and duration of the incentive programme. It states that while the literature is not sufficiently robust, it is sufficiently positive to suggest that further experiments and pilot programmes are warranted. Further, it states that trial and error is likely required to formulate the right set of performance incentives. The study highlights some theoretical arguments for and against performance-related pay programmes.

- The “nature of teaching” hypothesis, which points out that a major argument against merit-based pay programmes concerns the difficulty in monitoring teacher performance. According to this research, teacher performance is more difficult to monitor than performance in many other professions (such as the sales of a salesman or the billable hours of a doctor) because output is not readily measured in a reliable, valid and fair manner. However, the study suggests that this argument is waning because states and districts have developed large databases which permit more precise estimation of value-added contributions. However, there are concerns about the statistical reliability and robustness of these value-added estimates.

- Team production, which is another argument against merit-based pay programmes concerns the idea that teachers work as members of a team. Introducing performance-related rewards might reduce incentives for teachers to cooperate, and, therefore, reduce rather than increase school performance.
- The multitasking problem, which is a problem that arises when the performance of a worker has multiple dimensions, only some of which are measured and incentivised. When there is a structural misalignment between an organisation's overall mission and activity to which incentives are attached, not surprisingly, employees tend to shift work towards the metered, rewarded activity, and away from other important activities.

The paper puts forward that when it comes to hiring teaching professionals, informational deficiencies can be ameliorated by subsequent employee performance assessments and as pay raises become more closely tied to actual productivity. However, this may not be as effective because if only effective teachers have their contracts renewed, then pay based on seniority would tend to align pay and performance.

In terms of labour market selection, this study finds that a performance-related pay programme will tend to attract and retain individuals who are particularly good at the activity to which incentives are attached and repel those who are not. A study by Hoxby and Leigh (2004) found evidence that the migration of high ability women out of teaching was primarily the result of the "push" of teacher pay compression – which took away relatively higher earnings opportunities for teachers, as opposed to the pull of greater nonteaching opportunities. The study states that to the extent that these high ability teachers were more effective in the classroom, a performance-related pay programme likely would have kept more of them in teaching.

This literature review concludes that, although the evaluation literature on the number of teacher incentive pay programmes is small, overall the effect is generally positive and provides a strong case for further policy experimentation in this area.

Table 51: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public
Geography	Varied
Area of work analysed	Productivity, recruitment and retention
Type of reward	Remuneration: performance-related pay
Effect on motivation	<p>The study identifies a number theoretical arguments for and against performance-related pay programmes. This includes the ‘nature of teaching’ hypothesis which concerns the difficulty of monitoring teacher performance. Secondly, the disincentivising effect of merit-based pay programmes to move towards individual reward as opposed to team reward. Finally, the problem of focusing attention on one aspect of teaching which can be measured and ignoring other important aspects that are either not incentivised or difficult to measure.</p> <p>However, the evaluation of empirical studies points out that in aggregate although the number of studies is small, overall the effect of performance-related pay is generally positive and provide a strong case for further policy experimentation.</p>
Research methods used	Literature review examining several studies that evaluate the impact of performance-related pay in both, developing and developed nations.

5.5.16 Ingersoll and Smith (2003), “The Wrong Solution to the Teacher Shortage”, *Educational Leadership*.

Data on new teacher attrition suggest that efforts to recruit more teachers – which have been the focus of much policy will not by themselves solve the staffing problems. The solution must also include teacher retention. Although the data confirm that raising teacher salaries offers one effective way to plug these holes, this strategy would be expensive, especially given the sheer size of the teacher population. The working conditions identified by new teachers as factors in their decision to leave teaching—lack of administrative support, poor student discipline and student motivation, and lack of participation in decision making—may offer a more effective focus for improvement efforts.

Table 52: Main characteristics of reviewed paper

	Description
Job type	Teacher
Sector	Public and private
Geography	United States
Area of work analysed	Recruitment and retention
Type of reward	Remuneration Intrinsic benefits: work environment
Effect on motivation	The study states that efforts to recruit more teachers will not by themselves solve the staffing problems. The solution involves identifying the working conditions of teachers that’s causing them to leave.
Research methods used	Literature review

5.6 Senior officials and judges

5.6.1 Dowling and Richardson (1997), “Evaluating performance-related pay for managers in the NHS”, *The International Journal of Human Resource Management*.

This paper evaluates the scheme of performance-related pay facing NHS managers, using both quantitative and qualitative data from a questionnaire survey. It finds that the scheme was modestly successful. The scheme raised motivational levels, and induced more effort, albeit for only a minority of managers. The motivational and behavioural change was less likely among those who thought that certain aspects of the objective-setting process were done badly, or that assessments were conducted inappropriately, or that the subsequent rewards were unattractive.

Table 53: Main characteristics of reviewed paper

	Description
Job type	NHS managers
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance
Effect on motivation	The results indicate that overall motivation is positively related to the sense of challenge, which people feel from having their objectives set for them by the scheme, and negatively related to inappropriate goals. Motivation is also related positively to the prospects of rewards, both financial and in terms of recognition.
Research methods used	The authors approached six NHS trusts to gather data from individual managers for the questionnaire.

5.7 NCA officers

5.7.1 Civil Service (2016), “Civil Service People Survey”.

The Civil Service People Survey (2016)⁴ captures how satisfied staff are with various aspects of their pay and benefits. From the latest survey, the following emerges:

- 74% of NCA officers strongly agree or agree that their manager recognises when they have done their job well;
- 35% strongly agree or agree that there are opportunities for them to develop their career;
- 58-68% strongly agree or agree that their workload / job-life balance is acceptable; and
- around 20% strongly agree or agree that their salary and total benefits package is adequate.

This demonstrates that in terms of intrinsic benefits, the NCA appears to be satisfactory for employees, however when it comes to remuneration and other extrinsic benefits, NCA officers appear to be less satisfied overall.

⁴ Civil Service (2016), “Civil Service People Survey: 2016”.

Table 54: Main characteristics of reviewed paper

	Description
Job type	NCA officers
Sector	Public
Geography	United Kingdom
Area of work analysed	Retention
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	N/A
Research methods used	Survey

5.8 Police officers

5.8.1 Crawford et al (2016), “Police officer retention in England and Wales”, Institute of Fiscal Studies.

This study shows that better outside labour market opportunities (higher wages and lower unemployment rates) are statistically significantly associated with higher resignation rates across police forces.

There is a distinct geographical pattern in leaving rates by region: those forces close to London have higher leaving rates than other forces – particularly so in the case of Surrey and Bedfordshire – while London, most of Wales and a few other forces have lower leaving rates than most other forces.

Local labour market conditions are also associated with the rates of officers leaving through some routes – in particular those routes that might suggest officers going on to work in another occupation. A one percentage point higher local unemployment rate is associated with 0.1 fewer resignations per 100 officers and 0.04 fewer ill-health retirements per 100 officers. Similarly, in areas where local wages are higher (after controlling for the gender, age, education and ethnic composition of the population), resignation and ill-health retirement rates are higher. In general, the study finds little association between crime rates, the number of crimes per officer and the number of support staff per officer with leaving rates.

Table 55: Main characteristics of reviewed paper

	Description
Job type	Police officers
Sector	Public
Geography	United Kingdom
Area of work analysed	Retention
Type of reward	Remuneration: wages
Effect on motivation	<p>Forces geographically close to London have higher rates of exit through transfers. The study finds no evidence that variation in crime rates and workload affects exit from the police service.</p> <p>A one percentage point higher local unemployment rate is associated with 0.1 fewer resignations per 100 officers and 0.04 fewer ill-health retirements per 100 officers. Similarly, in areas where local wages are higher (after controlling for the gender, age, education and ethnic composition of the population), resignation and ill-health retirement rates are higher.</p> <p>In general, the study finds little association between these factors and leaving rates.</p>
Research methods used	Study of the police officers labour market.

5.8.2 Police Federation (2016), “PFEW Pay and Morale Survey 2016 – Headline Statistics July 2016”.

The Police Federation of England and Wales Pay and Morale Survey (2016)⁵, undertaken every year by the Police Federation and submitted as evidence to the PRRB finds the following, of relevance to this review:

- 81% of respondents stated that their morale had a major effect on their intention to leave, compared to 69% on the impact of the job on their health and well-being and 57% on the impact of the job on their family / personal life;
- 67.6% stated that their pay and benefits had a major effect on their intention to leave;
- 60% of respondents said that they were dissatisfied with their basic pay;
- 62.5% said they were dissatisfied with their allowances; and

⁵ Police Federation (2016), “PFEW Pay and Morale Survey 2016 – Headline Statistics July 2016”.

- around 66% said they were dissatisfied with their overall remuneration and their pension.

Table 56: Main characteristics of reviewed paper

	Description
Job type	Federated rank officers in England and Wales
Sector	Public
Geography	United Kingdom
Area of work analysed	Retention
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	Overall morale is low, with only 11.2% feeling valued by the Police, and only 16.9% feeling that members of the Police are respected by society at large. Nonetheless, 61% feel proud to be in the Police.
Research methods used	Online survey with a response rate of 35% of all federated rank officers in England and Wales. This response rate was reasonably similar to response rates attained in employer-led surveys such as the AFCAS and the NHS Staff Survey.

5.8.3 Van Steden et al. (2013), “Overlapping Values, Mutual Prejudices”, *Administration & Society*.

This study investigated whether it is the sector or the profession that determines profession motivations and values of security operatives. The authors conduct a survey among police officers and private security guards in the Netherlands. Their results show that both groups closely resemble each other in how they prioritise motivations and values, although police officers have a slightly more “missionary” and “crime fighting” work ethic than private security guards. Mutual perceptions, however, reveal contrasts: police officers look down on private security guards, while private security guards look up to police officers.

Table 57: Main characteristics of reviewed paper

	Description
Job type	Police officers and security guards
Sector	Public and private
Geography	Netherlands
Area of work analysed	Recruitment, productivity and retention
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	This study compares the professional motivations and values of police officers and private security guards. It finds that the motivational profile of police officers and private security guards is more alike than is often assumed. The police perceive private security guards to be “lower level forces”. However, private security guards look up to the police.
Research methods used	Survey

5.8.4 Johnson (2010), “Officer attitudes and management influences on police work productivity”, American Journal of Criminal Justice.

This study explores the influence of both officer attitudes and supervisor influences to explain variation in officer traffic citation issuing rates. It used a hierarchical linear modelling with a sample of 312 patrol officers and 60 supervisors from 21 municipal police agencies. The results revealed that both officer occupational attitudes and supervisor influences (through informal rewards and behaviour modelling) significantly influenced the degree to which officers issued traffic citations. The findings emphasise the need for both the supervision of officers and the shaping of officer attitudes in the control of officer discretion.

Table 58: Main characteristics of reviewed paper

	Description
Job type	Police officer
Sector	Public
Geography	United States
Area of work analysed	Productivity
Type of reward	Intrinsic benefits: supervisor influence
Effect on motivation	The study tested whether patrol officer work behaviour was influenced more by officer work attitudes or the management structure under which the officers operated. The findings revealed that each seemed to successfully influence officer work output behaviour, and when both the officers' attitudes and the management influences were in agreement, officers produced the most citations. Supervisors can use informal rewards such as granting days off, shift assignments, training opportunities, and making recommendations for specialty positions to entice officers to comply with their requests. This suggested that both may be used to explain officer behaviour.
Research methods used	The research questions were tested with data primarily collected through a variety of survey of police officers and their immediate supervisor from several suburban municipal police department. The survey questionnaire utilised was designed to investigate many issues related to officer management and productivity in the areas of traffic enforcement, drug enforcement and domestic violence enforcement.

5.8.5 White et al. (2010), “Motivations for becoming a police officer: Re-assessing officer attitudes and job satisfaction after six years on the street”, *Journal of Criminal Justice*.

This study examined motivations among officers from the same NYPD recruit class after six years on the job, and explored both motivation stability and the relationships among motivations and job satisfaction. Results suggested that motivations had remained highly stable over time, regardless of officer race/ethnicity and gender. Findings also suggested that white male officers were most likely to report low job satisfaction, and that there is a link between low satisfaction and unfulfilled motivations. Moreover, dissatisfied officers were much less likely to have expressed strong commitment to the profession through their original motivations, suggesting that low commitment up front may lead to low satisfaction later.

Table 59: Main characteristics of reviewed paper

	Description
Job type	Police officer
Sector	Public
Geography	United States
Area of work analysed	Recruitment, productivity and retention
Type of reward	Intrinsic benefits: job satisfaction
Effect on motivation	<p>This study found that salary was the least influential motivating factor. This may be because an increasing percentage of officers have college degrees which makes them eligible for a whole range of occupations, many of which pay better than policing. As a result, college graduates who enter policing may be, by their very nature, less concerned about salary.</p> <p>White, Black and Hispanic officers agreed on the four most influential items – although in a slightly different rank. The influential items included: job security, job benefits (i.e. medical/pension), early retirement and opportunities for career advancement.</p>
Research methods used	The authors conducted a survey on New York City police officers who started at the academy in July 2001. Six years later, the authors sent a mail survey to the 2001 recruit class.

5.8.6 Foley et al (2008), “Reasons for choosing a police career: changes over two decades”, *International Journal of Police Science and Management*.

The goals of this study were (a) to determine whether the relative importance of reported reasons for choosing a police career had changed; (b) to evaluate how demographic variables may play a role in career choice; and (c) to replicate the factor structure of the original questionnaire to assess its ongoing utility.

Results indicated that the relative importance of reasons changed slightly, with small but significant differences for women and minorities. The factor structure of the original study was essentially replicated, indicating that the factors motivating individuals to seek a police career had remained stable over time.

Table 60: Main characteristics of reviewed paper

	Description
Job type	Police officer
Sector	Public
Geography	United States
Area of work analysed	Recruitment, productivity and retention
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	The study finds that the factors motivating individuals to seek a police career have remained stable over time.
Research methods used	This study compares responses of 131 police recruits and graduates with the results of a study with an earlier cohort of this population conducted in 1983.

5.8.7 Carlan (2007), “The search for job satisfaction: a survey of Alabama policing”, *American Journal of Criminal Justice*.

This study examines police job satisfaction and its association with general occupation attraction. Police officers from 16 municipal departments (n=1,114) across one southern state (Alabama) were found to possess moderate-high overall job satisfaction, with regression analysis supporting the conclusions of prior studies that demographics are of little value to understanding job satisfaction. The findings convey that 25% of job satisfaction variance can be explained from six variables: social contribution, pay, adventure/excitement, autonomy, peer respect and job security. The importance of benefits and community respect was unsupported, as were partner and special operation assignments. The author concludes that a great portion of police satisfaction hinges on the realisation of work environment expectations, and that departments must proactively construct policies to enhance fulfilment of officer aspirations.

Table 61: Main characteristics of reviewed paper

	Description
Job type	Police officer
Sector	Public
Geography	United States
Area of work analysed	Retention
Type of reward	Intrinsic benefits: job satisfaction
Effect on motivation	In this study, the most instrumental elements associated with job satisfaction elevation are social contribution, pay, adventure/excitement, autonomy, peer respect and job security. The study finds that with small commitment from police management, most of these satisfiers are easily attainable, which would derive increased societal benefits.
Research methods used	The study used 1,114 questionnaires from 16 police departments. The survey instrument used a five-point scale to assess officer attitudes.

5.8.8 Seklecki and Paynich (2007), “A National Survey of Female Police Officers: An Overview of Findings”, *Police Practice and Research*.

This study aims to provide information pertaining to employment motivations, experiences, and attitudes of female law enforcement officers and to provide information regarding the low levels of female representation in this field. A total of 531 female officers responded to a survey mailed out to approximately 2,000 randomly selected female police officers. Respondents reported a variety of information concerning their perceptions about working in law enforcement including their reasons for pursuing policing as a career, reasons that would motivate them to leave law enforcement, and how they perceive they are treated at work compared to their male counterparts.

Table 62: Main characteristics of reviewed paper

	Description
Job type	Police officer
Sector	Public
Geography	United States
Area of work analysed	Recruitment and retention
Type of reward	Intrinsic benefits: work challenges
Effect on motivation	<p>The authors find that the main motivations for pursuing a career in law enforcement include: the desire to help people, every day the job is different and the excitement of the job.</p> <p>The motivations for continuing a career include job security and the desire to help people.</p> <p>Most women in the study do not plan on leaving law enforcement. For those women who reported intentions of leaving policing, their primary motivations include: personal and/or political reasons and pursuing another career within criminal justice.</p> <p>A significant percentage of respondents indicated that they felt they were treated worse and were less welcome to the career than their male counterparts.</p>
Research methods used	The authors conducted a survey on a sample population that consisted of females employed at law enforcement agencies listed in the National Directory of Law Enforcement Administrators, Correctional Institutions and Related Agencies.

5.8.9 Otis and Pelletier (2005), “A Motivational Model of Daily Hassles, Physical Symptoms, and Future Work Intentions Among Police Officers”, *Journal of Applied Social Psychology*.

This study tested a motivational model of daily hassles, physical symptoms, and future work intentions with a sample of 122 police officers. In agreement with self-determination theory, path analyses showed that police officers who perceived their immediate supervisor as highly supportive of their autonomy were found to report higher levels of self-determined motivation towards work. In turn, higher levels of self-determined motivation were found to be associated with higher future work intentions and lower levels of reported daily hassles. Finally, daily hassles were found to be positively associated with reported physical symptoms. Contrary to the hypotheses, perception of competence support from supervisors was not found to be significantly

associated with self-determined motivation. Instead, competence support was found to be negatively associated with daily hassles.

Table 63: Main characteristics of reviewed paper

	Description
Job type	Police officers
Sector	Public
Geography	Canada
Area of work analysed	Productive
Type of reward	Intrinsic benefits: determination
Effect on motivation	Consistent with several other studies, self-determined motivation was found to be linked positively to important consequences. First, self-determined motivation was found to be associated positively with future work intentions. The more police officers were self-determined towards their work, the more they reported intentions to continue working as long as they could before their retirement.
Research methods used	A sample of 140 French-speaking police officers participated in the study. Participants were recruited from all the police stations in the Qutaouais region of Quebec, Canada.

5.9 Other workforces and levels of analysis

5.9.1 PWC (2016), “Research into modern pay systems”, Office of Manpower Economics.

This paper provides an analysis of the main changes that have taken place in the reward landscape since the last UK recession, and aims to describe the characteristics of a ‘modern pay system’ in UK organisations. It finds that since 2007, the design of basic pay structures has remained consistent, with individual job rates, broad banding and narrow banding all common. The relative prevalence of these approaches varies significantly by sector, with public sector organisations most likely to utilise pay spines and private sector organisations likely to rely on job specific rates or bands. A quarter of the companies in the case study have attempted to cascade performance-linked variable pay further down their organisation. Over two-thirds have recently made or are planning to make changes to their performance management process. Further, innovative benefits (e.g. such as on-site games room or staff cinema) are becoming part of the reward landscape, primarily for large companies and the technology sector. The results show that younger people

value access to better rate mortgage and subsidised gym membership, while older employees value discounted private healthcare and company car lease scheme than their younger counterparts.

Table 64: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Public and private
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	The study finds that workforces are becoming increasingly diverse in their motivations and needs, a result of both the rising pension age and different expectations of the ‘millennial’ generation.
Research methods used	The study utilised two strategies: a) a literature review and b) case studies. For the literature review, they analysed three surveys. To study the basic pay structures, a review of three major annual surveys was undertaken: (i) reward management conducted by CIPD; (ii) the annual management benchmark pay report produced by IDS; and (iii) XpertHR’s pay and grading structures survey 2015. Along with this key literature that highlighted issues with reward was examined. For the case study review, 19 organisations from a range of industries were interviewed, which were selected to represent the broad current pay landscape in listed companies.

5.9.2 Office of Manpower Economics (2016), “Targeted pay increases in the public sector: theory and practice”.

An employer may be considering awarding a targeted pay increase to those members of its workforce in a certain type of specialist role. Those in the existing workforce who would be targeted may possess largely job specific knowledge that is not easily transferable outside, making it more likely that a pay increase would not have a large effect on their retention. At the same time, recruitment to the same roles may be sensitive to a pay rise, if it makes the job more attractive compared to the outside market. In this case, an employer with this knowledge is unlikely to award a targeted increase solely with the aim of retaining existing employees. However, it may do so to recruit new people.

Retention could be sensitive to pay while recruitment is not. For example, retention in the targeted roles may be improved by a pay rise if the existing workforce does have transferable knowledge because, all other things equal, the current job becomes more attractive relative to alternative ones. On the other hand, there may be limited external recruits available at even the new ‘targeted’ rate. In this instance, a targeted pay rise may be beneficial to the employer in terms of retention, but not recruitment.

Table 65: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Public and private
Geography	United Kingdom
Area of work analysed	Recruitment, productivity and retention
Type of reward	Remuneration: salary
Effect on motivation	<p>The article states that sensitivity to retention and recruitment to pay will depend on the flexibility and mobility of the relevant labour force. Further, it states that a targeted pay rise for specialist posts may boost the motivation of the relevant members of the retained workforce, which could make them more productive. Further, targeting certain posts may make it possible to recruit higher quality or more productive workers than otherwise.</p> <p>Thus, an employer may offer a targeted pay rise to increase the proportion of staff retained in the relevant roles, increase the number of recruited staff or to positively influence the productivity of either group.</p>
Research methods used	Literature review

5.9.3 Ladley et al. (2015), “The impact of individual versus group rewards on work group performance and cooperation: A computational social science approach”, Journal of Business Research.

This study aims to examine the effect of individual versus group evaluation and reward systems on work group behaviour and performance under different task conditions. It employs computational social methods using Agent Based Models to simulate work group interactions as different forms of iterated games. It finds that group-based systems outperform individual based and mixed systems, producing more cooperative behaviour, the best performing groups and individuals in most types of interaction games. Another outcome of this simulation is that a role emerges, the self-sacrificer,

who plays a critical role in enabling other group members and the group to perform better at their own expense. It finds that group incentives produce the highest performing individual strategies in many types of games because they produce and sustain better mixes or ecologies of strategies. The study helps firms to engineer better performing work groups as well as the design of other business systems.

Table 66: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Diverse
Geography	Not specific
Area of work analysed	Recruitment, retention and productivity
Type of reward	Remuneration, intrinsic and extrinsic benefits
Effect on motivation	The findings show that group-based evaluation and reward systems outperform individual based or mixed reward systems for many group situations. Individual based systems outperform group and mixed systems only when individual and group interests are aligned, that is when the action that benefits an individual also benefits the group.
Research methods used	The study employs a computational social science method to simulate key features of the behaviour of work groups and their interactions.

5.9.4 Reichard and van Helden (2015), “Commonalities and differences in public and private sector performance management practices; a literature review”, paper presented at Public Accounting and Accountability of the Annual IRSPM Conference.

This paper examines the commonalities and differences between performance practices in the public and private sector, as shown by 80 publications over the last 20 years. The paper develops a framework, which links the dimensions of the public/private-distinction (ownership, funding, control and type of goals) to the design and use of performance management systems (PMS). The authors find that multidimensionality of the PMS is core in both public and private sector organisations, but many private firms point to a financial focus at the top of the PMS, while in public sector organisations a broad variety of performance indicators, including those on societally relevant goals can be observed. In addition, a link between PMS and strategies can be found in both public and private sector organisations, but this link is more elaborated in the private sector. They also find that performance information

in public sector organisations is primarily used for external accountability reasons, while the main purpose of PMS in private firms is internal managerial control.

Table 67: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Public and private
Geography	Not specific
Area of work analysed	Productivity
Type of reward	Intrinsic benefits: PMS
Effect on motivation	This study finds that performance information in public sector organisations is primarily used for external accountability reasons, while the main purpose of PMS in private firms is internal managerial control. This is comprehensible as performance data in the public sphere is an important source for rendering accountability to external stakeholders, primarily to the legitimised constituencies (e.g. parliament). In contrast, in private firms a PMS is primarily a relevant tool for managerial steering and controlling.
Research methods used	This study collates and examines 80 publications over the last 20 years. It develops a framework, which links the dimensions of the public/private-distinction to the design and use of PMS.

5.9.5 The Work Foundation (2014), “A review of the evidence on the impact, effectiveness and value for money of performance-related pay in the public sector”, Lancaster University.

This study reviews key literature on the effectiveness of PRP in the public sector. To do this, it includes both evidence grounded in the economics literature – which explores PRP through quantitative analysis of the impact of financial incentives on a range of outcomes - and evidence from Human Resources, Sociology of Management and Psychology literature – which places more emphasis on explaining the mechanisms by which PRP may operate - with a focus on organisation context, non-financial motivations and group behaviour.

According to the study, there is some evidence of positive effects from PRP schemes on directly incentivised outcomes across education, health and the civil service. However, overall it finds that the results are mixed and often

context- or outcome-specific, making it difficult to draw overall conclusions about the effectiveness of PRP for a particular public service.

Further, the review also identified some unintended consequences of PRP. In education, for example, there have been cases of outright cheating, where school officials have conspired to alter students’ test scores, as well as examples of low-level strategic behaviour, for example focusing on the performance of ‘borderline’ pupils to achieve higher pass rates. However, conversely, there is also some evidence of ‘positive spill overs’ in health, where non-incentivised aspects of care have improved alongside those directly targeted.

Overall, the review finds that PRP schemes can be effective in improving outcomes across the three public services for which evidence is available, although the main conclusion is that the outcomes are mixed. Where positive effects have been found, effect sizes are small and may be short-lived.

Table 68: Main characteristics of reviewed paper

	Description
Job type	Health, education and civil service
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration: PRP
Effect on motivation	The review found evidence that PRP schemes can be effective across the three public services for which evidence is available (health, education and the civil service), although the central conclusion is still that findings are mixed, where much depends on organisational and occupational context and scheme design and implementation.
Research methods used	The study reviews key literature on the impact of PRP in the public sector. It examines 59 studies in the review: 27 focused on health, 16 on education and 16 on the civil service, which reflects the make-up of the current evidence base.

5.9.6 Institute of Leadership and Management (2013), “Beyond the bonus: Driving employee performance”.

ILM’s research found that the most important motivational factor behind employee performance is related to how much they enjoy their role. Basic salary was the second most effective motivator for all employees, followed by the quality of their relationship with their team and colleagues. Their survey

sample consisted of 1,000 employees. Their sample is broadly representative of the UK workforce, in terms of age, gender and employment sector. The research did not focus on any one particular sector. It showed that financial incentives are relatively ineffective motivators for most staff. Instead, a focus on improving the workplace and developing management relationships is more likely to lead to effective and well-motivated teams. In the survey, 59% of the respondent indicated that enjoying their work was one of the three most important factors motivating them to perform at their peak. While base salary was an important motivator, other financial incentives were shown to be far less effective. Performance-related bonuses was chosen as a top three motivator by only 13% of the sample.

Table 69: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Public and private
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration, extrinsic and intrinsic benefits
Effect on motivation	Financial incentives are relatively ineffective motivators for most staff. The study finds that non-financial reward and support/feedback are both highly motivating and increasingly desired by employees.
Research methods used	A survey on a representative sample of UK population of 1000 employees was conducted.

5.9.7 Rashid and Rashid (2012), “Work motivation differences between public and private sector”, American International Journal of Social Science.

This research aims to identify and discuss the factors that influence employees’ motivation in the banking industry, in both the public and private sector. A survey on 150 employees of public and private sector banks was conducted and found that public sector employees were motivated by work contents experience and more balance between work and family life, whereas, private sector employees are more motivated by financial rewards, career development opportunities, and supportive environment.

Table 70: Main characteristics of reviewed paper

	Description
Job type	Banking
Sector	Public and private
Geography	Not specific
Area of work analysed	Recruitment, retention and productivity
Type of reward	Remuneration, intrinsic and extrinsic benefits
Effect on motivation	The study finds that public sector employees are motivated by work contents while private sector employees were motivated by financial rewards, career development opportunities and supportive environment.
Research methods used	Survey and secondary data methods were used to collect information. The survey was circulated among 150 employees of private and public banks. The questionnaire had two parts: the first part collected biographical information and the second part consisted of five major motivational scales.

5.9.8 Burgess et al. (2011), “Incentives in the public sector: evidence from a government agency”, Institute for the Study of Labour.

This paper examines the relationship between the impact of performance pay in the public sector by evaluating a pilot scheme of incentives in a major government agency. The incentive scheme was based on teams and covered quantity and quality targets, measures with varying degrees of precision. One aspect it examines is whether performance pay matters for public service worker productivity. It shows that the use of performance pay has no impact at the mean, but there was significant heterogeneity in the responses. The study found that the incentive scheme had a substantial positive effect in small teams and a negative response in large teams. Further, it found little impact of the scheme on quality measures. This outcome may be the result of low precision of the outcome measures and of the monitoring technology. Poor outcome measures could lead workers to choose not to exert extra effort on these tasks as mapping their effort on getting a reward is more difficult than in the case of the quantity outcome. Further, poor monitoring might make workers expect that any slack on effort would not be detected.

The estimates suggest that the use of incentive pay is much more cost-effective than a general pay rise.

Table 71: Main characteristics of reviewed paper

	Description
Job type	Different grades from Executive officer to administrative officers.
Sector	Public
Geography	United Kingdom
Area of work analysed	Productivity
Type of reward	Remuneration: PRP
Effect on motivation	The results indicate that incentive schemes have a negligible and insignificant impact on productivity in aggregate. However, they do have a substantial positive effect in small offices and in offices in small districts. In districts with many offices and in large offices, there was a negative effect. This may be because peer monitoring and better information flows are possible in small units but it fails in teams made up of many people, or dispersed across many offices.
Research methods used	Data from the firm’s management information system and from a personnel database is used. Management information recorded performance against five targets. Regression analysis is conducted on the data.

5.9.9 Markova and Ford (2011), “Is money the panacea? Rewards for knowledge workers”, *International Journal of Productivity and Performance Management*.

This study examines the relative effect of various rewards on performance of knowledge workers. It collected data from 288 R&D employees and their supervisors that work in Fortune 500 companies. The results revealed that receiving non-monetary rewards is a stronger predictor of intrinsic motivation manifested by longer work time in comparison to either group or individual monetary rewards. Furthermore, intrinsic motivation was found to fully mediate the relationships between received non-monetary rewards and performance and innovation.

Table 72: Main characteristics of reviewed paper

	Description
Job type	Knowledge workers
Sector	Diverse
Geography	United States
Area of work analysed	Productivity
Type of reward	Remuneration and intrinsic benefits
Effect on motivation	The study finds that employees who received non-monetary rewards reported working longer hours. It did not find such a relationship with monetary rewards.
Research methods used	The data was collected from 288 research and development employees and their supervisors from 30 <i>Fortune</i> 500 industrial companies.
Other	The study controlled for employees with a PhD because it is possible that these workers may have become used to working long hours during their PhD programme.

5.9.10 Anderfuhren-Biget et al. (2010), “Motivating Employees of the Public sector: Does public sector motivation matter?”, *International Public Management Journal*.

The study analyses if - and to what extent - the public service motivation construct has an added value to explain work motivation in the public sector. It examines two explanatory factors: (i) material incentives, such as PRP; and (ii) team relations and support, such as a recognition by superiors. The model is tested with data collected in a national survey of 3,754 civil servants at the Swiss municipal level. The results show that socio-relational motivating factors play an important role, whereas material incentives play an anecdotal role.

Table 73: Main characteristics of reviewed paper

	Description
Job type	Civil servants
Sector	Public
Geography	Switzerland
Area of work analysed	Productivity
Type of reward	Remuneration: pay-for-performance Intrinsic benefits: recognition by supervisors
Effect on motivation	The study finds that ‘public service motivation’ (PSM) is a strong predictor of work motivation in the public sector. Alongside PSM, socio-relational factors such as recognition from colleagues and superiors and good relationships with colleagues are good predictors of work motivation. Finally, the study supports the view that material incentives are poor predictors of work motivation in the public sector.
Research methods used	The primary data for this study was collected from a national survey of civil servants at the Swiss municipal level. The study used a ‘Structural Equation Modelling’ method, which is useful when assessing a causal model with complex constructs.

5.9.11 Levy et al. (2010), “Total reward: pay and pension contributions in the private and public sectors’, *Economic & Labour Market Review*.

This article compares total reward (sum of gross pay and employers’ pension contributions) for the public and private sectors. The study finds that total reward for full-time employees is higher in the public sector than in the private sector, predominantly due to the larger proportion of employees who do not belong to employer pension schemes in the private sector. When this is compared on a like-for-like basis, comparing full-time employees with pensions in both sectors, it shows that total reward is higher in the private sector than the public sector. This is particularly significant for employees at the top end of the distribution.

The employees who received the highest total reward in both public and private sector in April 2009 were employed in the information and communications industry. The industry with the largest difference in total reward was the manufacturing industry, where median total reward in the public sector was £216 per week higher than in the private sector. Similarly, in ‘human health and social work’, employees in the public sector also did better, with a median total reward of £123 per week more than those in the

private sector. However, employees in the private sector were better remunerated than their public sector counterparts in the transportation and storage, financial and insurance, real estate and professional, scientific and technical industries, and in education.

Table 74: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Public and private
Geography	United Kingdom
Area of work analysed	Recruitment, retention and productivity
Type of reward	Remuneration and extrinsic benefits
Effect on motivation	N/A
Research methods used	Based on ONS ASHE dataset. The analysis compares gross pay and total reward of all full-time employees in the public and private sectors. Simple comparisons are made, it does not consider the different compositions of the public and private sectors.

5.9.12 Thompson and Aspinwall (2009), “The recruitment value of work/life benefits”, *Personnel Review*.

This study investigates the influence of four work/life benefits on job choice and examines individual differences that moderate the effects of work/life benefits during recruitment. The findings show that childcare benefits influenced the job choices of 58 per cent of the sample. This exceeded the influence of flexitime (33 per cent), telecommuting (26 per cent) and eldercare benefits (33 per cent). Therefore, the study shows that knowledge of influential work/life benefits can enhance recruitment efforts in a competitive marketplace.

Table 75: Main characteristics of reviewed paper

	Description
Job type	N/A
Sector	N/A
Geography	United States
Area of work analysed	Recruitment
Type of reward	Extrinsic benefits: childcare benefits etc. Intrinsic benefits: work-life balance
Effect on motivation	This study showed that childcare benefits influenced the willingness to accept a job offer more than flexitime, telecommuting and eldercare benefits. While not every participant was drawn to these benefits, a meaningful proportion (26-58%) of the sample were attracted to one or more of the benefits investigated.
Research methods used	125 students from a US university completed the survey. It consisted of 62% juniors and 38% seniors, representing 39 different academic majors. The survey asked participants to read a series of fictitious job descriptions and rate the likelihood they would accept each job if offered to them. The particulars of four of the benefits (childcare, telecommuting, eldercare and flexitime benefits) varied from one job description to the next. A within-subject regression analysis was conducted on each survey.

5.9.13 Buelens and Van den Broeck (2007), “An Analysis of Differences in Work Motivation between Public and Private Sector Organizations”, *Public Administration Review*.

This study examines the differences in work motivation between the public and private sectors. Data from a survey of 3,314 private sector and 409 public sector employees in Belgium strongly confirm previous research showing that public sector employees are less extrinsically motivated. Differences in hierarchical level are more important determinants of work motivation than sectoral differences. In addition, most observed differences can be wholly or partially explained by differences in job content, not by the sector itself. Evidence is presented to show that motivational differences can be explained by a positive choice of work-life balance.

Table 76: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Public and private
Geography	Belgium
Area of work analysed	Recruitment, productivity and retention
Type of reward	Intrinsic benefits: work-life balance
Effect on motivation	<p>The study shows that public sector employees are significantly more motivated by a balanced work – family relationship. Respondents from the non-profit sector were even more motivated by a balanced work-family relationship. However, differences in hierarchical level and in the percentage of part-time versus full-time workers explain many of the observed differences.</p> <p>The study found that civil servants were significantly less motivated by salary.</p>
Research methods used	<p>Data were collected in Belgium through a large-scale survey in the Flemish newspaper Vacature, which specializes in recruitment communication and job advertising and is distributed as a supplement to four national newspapers and two magazines.</p> <p>The authors performed multiple simultaneous regression analyses for seven dependent variables: four motivation scales, reported working hours, total commitment to work, and work – family conflict.</p>

5.9.14 Peterson and Luthans (2006), “The impact of financial and non-financial incentives on business-unit outcomes over time”, *Journal of Applied Psychology*.

This study used a quasi-experimental, control group design to examine the impact of financial and non-financial incentives on business-unit outcomes. The sample consisted of 21 stores in a fast-food franchise corporation. The outcomes examined were profits, customer service and employee turnover over time. Non-financial incentives in this study included social recognition and performance feedback. The results indicated that both financial and non-financial incentives contingently administered to identified performance behaviours exhibited by the work group significantly increased both unit profit performance and customer service measures and decreased turnover rates. These improvements were sustainable over time. Specifically, the average profits rose 30% from pre-intervention to post-intervention (9

months) for the financial condition and 36% for non-financials; drive-through times decreased 19% for the financials and 25% for the non-financials; and turnover improved 13% for the financials and 10% for the non-financials.

The study also found that although financial incentives initially had a greater impact than non-financial incentives on profit and customer service, they became equally effective over time.

Although both the financial and non-financial incentives had a significant impact on turnover over time, the financial incentives had a significantly greater impact than the non-financial incentives over time.

Table 77: Main characteristics of reviewed paper

	Description
Job type	Customer service role (fast-food)
Sector	Private
Geography	United Kingdom
Area of work analysed	Productivity and retention
Type of reward	Remuneration Intrinsic benefits: recognition and feedback
Effect on motivation	The results indicated that both financial and non-financial incentives increased both unit profit performance and customer service measures and decreased turnover rates.
Research methods used	The research was conducted on 21 business units using a quasi-experimental approach and conducted the financial test on three stores, non-financial test on six stores and the control group consisted of 12 stores.

5.9.15 McCausland et al. (2005), “Some are punished and some are rewarded: a study of the impact of performance pay on job satisfaction”, *International Journal of Manpower*.

This study investigates whether significant differences exist in the job satisfaction of individuals receiving PRP compared to those on alternative compensation plans. It uses data from four of the British Household Panel Survey and find that PRP exerts a positive effect on the mean job satisfaction of (very) high-paid workers only. A possible explanation for this is that PRP may be perceived to be controlling for lower paid employees whereas higher paid workers derive a utility benefit from what they regard as a supportive reward schemes. It concludes that using PRP as an incentive device in the UK could therefore be counterproductive in the long-run for certain low-paid

occupations. This study does not focus on any one particular job sector rather it examines a representative sample of the population.

Table 78: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Diverse
Geography	United Kingdom
Area of work analysed	Productivity and retention
Type of reward	Remuneration: PRP
Effect on motivation	The study finds that PRP has a positive effect on the mean job satisfaction of (very) high-paid workers only. A potential explanation for this pattern could be that for lower paid employees' PRP is perceived to be controlling, whereas higher paid employees derive a utility benefit from what they perceive as supportive reward schemes. Therefore, using PRP as an incentive device in the UK could prove to be counterproductive in the long-run for certain low-paid occupations.
Research methods used	Multivariate regression is employed to uncover the influence of the explanatory variables on job satisfaction.

5.9.16 Silverman (2004), “Non-financial recognition – the most effective of rewards?”, Institute of Employment Studies.

This paper states that organisations need to consider reward more broadly. Firms that can strike a balance between extrinsic and intrinsic reward are in a much better position to reinforce the psychological contract they have with their employees, and make the whole experience more positive for all those involved.

Some of the key benefits of a non-financial reward are that:

- it highlights behaviours and actions that the firm would like others to emulate;
- it helps to fulfil organisational objectives at a relatively low cost;
- the impact of the reward is immediate unlike traditional annual rewards;
- it helps with employer branding as it makes a statement about the organisation and its culture further;
- it can help to build affective relationships making it less likely for the individual to leave; and finally,

- it is highly regarded in terms of their ability to enhance motivation and job satisfaction among employees.

Where organisations can gain a thorough understanding of their employees’ expectations in return for their hard work, organisations are able to determine how their reward strategies can help to deliver what is really needed.

However, the report states that organisations must be careful not to fall into the trap of recognising employees by simply giving them ‘stuff’ on an occasional basis. For most employees, it is how they are dealt with by their managers on a daily basis that is the most important factor. Moreover, treating employees right everyday effectively communicates that they are trusted, respected and that they are important.

Table 79: Main characteristics of reviewed paper

	Description
Job type	Diverse
Sector	Diverse
Geography	Not specific
Area of work analysed	Recruitment, retention and productivity
Type of reward	Remuneration and intrinsic benefits
Effect on motivation	This paper emphasises the importance of striking a balance between extrinsic and intrinsic rewards to reinforce a positive attitude between employees. Non-financial rewards provide employees with something tangible that they can remember and so is likely to instil much more positive effect than a sum of money paid into a bank account.
Research methods used	Literature review



6. Bibliography

Below, we set out the bibliography of all the papers we have reviewed.

6.1 Bibliography

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