



MIND THE SKILLS GAP: USING SKILL-BASED PAY TO ADDRESS TECHNICAL SKILLS SHORTFALLS IN UK DEFENCE

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AIM

1. In response to what is identified as the “rapidly evolving character of warfare,” the United Kingdom (UK) Ministry of Defence (MoD) Integrated Operating Concept (IOPC) sets out a new approach for how the UK will utilise its armed forces.¹ This paper recommends the implementation of a skill-based pay (SPB) model to support recruitment and retention of the high-skilled workforce that will be needed to achieve the strategic aims of the IOPC.

INTRODUCTION

2. The future operating environment will see rapid advancements in technology, increased automation and information becoming more central to conflict, enabled by artificial intelligence, quantum computing and a greater range of activities conducted in cyberspace². The IOPC calls for modernisation and an integrated response to these challenges to allow UK Defence to compete in the technologically complex Information Age.³ Realising these strategic aims will require a high-skilled workforce, yet the UK armed forces already face challenges in recruitment and retention, with a consistent net outflow of Regular personnel. More critically, defence is experiencing skills pinch points, assessed as significant or above, in key information and technology areas such as engineering, communications and cyber.⁴

3. In response to the issues of recruitment and retention, the UK MoD commissioned an independent review of the incentivisation of armed forces personnel (the Haythornthwaite Review), which published its findings in June 2023. Within a raft of wider recommendations that considered both the existing personnel challenges as well as the future skills requirements of the IOPC, that review recommended a “skill-based pay element” be incorporated into the armed forces pay model.⁵ This paper argues for the urgent implementation of that recommendation as an essential means for the MoD to address existing skills shortfalls and compete for the talent needed to realise the future ambition of the IOPC. The paper will first examine current recruitment and retention

¹ Development, Concepts and Doctrine Centre, *Integrated Operating Concept* (United Kingdom Ministry of Defence, 2021), 5, <https://www.gov.uk/government/publications/the-integrated-operating-concept-2025>.

² United Kingdom Ministry of Defence, *Global Strategic Trends – The Future Starts Today (6th Edition)* (United Kingdom Ministry of Defence, October 2, 2018), 11-19, <https://www.gov.uk/government/publications/global-strategic-trends>.

³ DCDC, IOPC, 8.

⁴ Esme Kirk-Wade and Zoe Mansfield, *UK Defence Personnel Statistics* (House of Commons Library, July 18, 2023), 4-11, [https://commonslibrary.parliament.uk/research-briefings/cbp-7930/#:~:text=Supporting%20documents&text=On%201%20April%202023%20the,Royal%20Air%20Force%20\(RAF\)](https://commonslibrary.parliament.uk/research-briefings/cbp-7930/#:~:text=Supporting%20documents&text=On%201%20April%202023%20the,Royal%20Air%20Force%20(RAF)).

⁵ Rick Haythornthwaite, *Agency and Agility: Incentivising People in a New Era A Review of UK Armed Forces Incentivisation* (United Kingdom Ministry of Defence, June 19, 2023), 53, <https://www.gov.uk/government/publications/agency-and-agility-incentivising-people-in-a-new-era-a-review-of-uk-armed-forces-incentivisation>.

challenges and the drivers for changing the existing pay model, before defining the different types of SBP and identifying which may be most suitable to address the skills needs of the MoD. Finally, it will describe the benefits of SBP, as well as key considerations in the implementation of this form of pay model.

DISCUSSION

The Need for Change

4. The UK Armed Forces have consistently failed to meet targets for number of trained personnel (see figure 1).⁶ As of 1 October 2023, the shortfall stood at 3,394 full-time trained personnel, or 2.5%. This masks an even greater deficit in the Royal Navy/Marines (RN&RM) of 5% and 9% in the Royal Air Force (RAF).⁷ Critical to the need for a high-skilled workforce, as of 2021/22 there were 48 skills pinch points across the MoD military and civilian workforce, including in engineering, communications, cyber and medical skills,⁸ whilst 48 sustainability pinch points were reported across the MoD, as of 30 September 2022.⁹ With the exception of a two-year period covering the global COVID-19 pandemic, the UK Regular Forces have experienced a net outflow of personnel every year since 2010, with the year to 30 September figure of 5,774 being more than four times that of March 2022 (1,302).¹⁰ These personnel statistics serve to demonstrate the challenge the MoD is already facing in recruiting and retaining the numbers and skills it needs to meet its commitments, with the uptick in outflow indicating an increasingly competitive labour market and a failure of existing recruitment and retention initiatives to meet demand.

⁶ Current targets for RN&RM and RAF full-time trained strength (FTTS) personnel were set by the 2015 Strategic Defence and Security Review as 30,450 and 31,750 respectively. Targets for the British Army (full-time trade trained strength (FTTTS)) were revised down in the 2021 Defence Command Paper from 82,000 to 73,000 personnel. Since 2015, the UK Armed Forces have consistently failed to meet those targets – the exception being immediately after the Army targets were revised down in 2021 but with an immediate downward trend and quick return to deficit in 2023.

Kirk-Wade and Mansfield, *UK Defence Personnel Statistics*, 7-10.

⁷ United Kingdom Ministry of Defence, *Quarterly Service Personnel Statistics: 2023* (UK Ministry of Defence, December 14, 2023), Table 3c, <https://www.gov.uk/government/statistics/quarterly-service-personnel-statistics-2023>.

⁸ Skills Pinch Points are defined as personnel shortfalls in areas of expertise that have significant implications for the delivery of defence outputs.

United Kingdom Ministry of Defence, *Ministry of Defence Annual Report and Accounts 2021–22* (United Kingdom Ministry of Defence, July 14, 2022), 48, <https://www.gov.uk/government/publications/ministry-of-defence-annual-report-and-accounts-2021-to-2022>.

⁹ Sustainability Pinch Points are declared when people shortfalls present a risk to the delivery of a Defence output in the future.

Julian Miller, *Armed Forces' Pay Body Fifty-Second Report 2023* (Armed Forces' Pay Review Body, July 13, 2023), 18-19, <https://www.gov.uk/government/publications/armed-forces-pay-review-body-fifty-second-report-2023>.

¹⁰ UK MoD, *Quarterly Service Personnel Statistics: 2023*, Table 4.

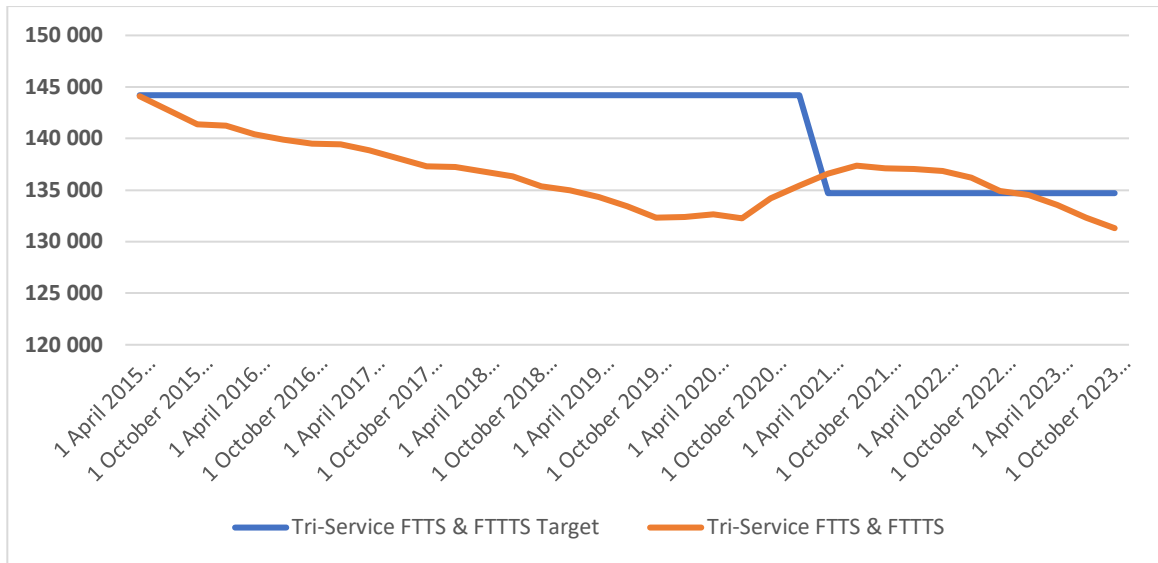


Figure 1 – Full Time Trained Strength (RN&RM and RAF) and Trade Trained Strength (Army) UK Armed Forces Personnel

Data Source: United Kingdom Ministry of Defence. *Quarterly Service Personnel Statistics: 2023*, Table 3c.

5. Assessing drivers for personnel leaving the armed forces, nearly half indicate pay as a factor, the highest level since 2018. This was the fourth highest factor behind only “impact of Service life on family/personal life,” “opportunities outside the Service” and “spouse/partner's career.”¹¹ That opportunities outside the Service was the second highest factor at 59% is further indication of the competition the MoD faces in the labour market. Pay satisfaction has returned to its lowest ever recorded level with only 31% of Service personnel satisfied with their basic rate, whilst just over half of personnel do not agree that the pay and benefits they receive are fair for the work they do.¹² Importantly when looking towards the future, it is the youngest age group surveyed that are the least satisfied with the overall financial offer provided by the Services.¹³

6. Currently, in an attempt to tackle specific recruitment and retention challenges in areas where a specialism is core to the role of an individual or their Unit, the Services provide Recruitment and Retention Payments (RRP) that are in addition to rates of basic pay. Although in 2021/22 there were 18 categories of RRP, these only cover roles within narrow fields of employment that represent particularly hazardous occupations, such as special forces, flying and submariner. This scheme does not cover the more general but increasingly important technical skills areas that will be needed to implement the IOpC or address existing skills pinch points. Furthermore, the MoD has identified that RRP were not effective in some areas.¹⁴

¹¹ United Kingdom Ministry of Defence, *UK Regular Armed Forces Continuous Attitude Survey Results 2023* (National Statistics, June 1, 2023), 13, <https://www.gov.uk/government/statistics/armed-forces-continuous-attitude-survey-2023>.

¹² UK MoD, *Continuous Attitude Survey Results*, 9-13.

¹³ Haythornthwaite, *Agency and Agility*, 17.

¹⁴ Miller, *Armed Forces' Pay Body*, 52-53.

7. The MoD is set to face increasing competition for skills, with the occupations set to see the highest growth in demand being managers, information and communication technology (ICT) specialists, and engineers. These high-skilled areas, for which there is already a talent shortage, could see an average growth in demand of 19% in the UK.¹⁵ The MoD is not immune to this trend, with multiple reports and strategic policy documents highlighting the need for a more highly skilled workforce to meet the technical demands of the future operating environment and strategic ambition of the IOpC.^{16,17,18}

8. The overall picture is one of dissatisfaction with pay and ineffective financial incentives, increasingly driving personnel to seek employment elsewhere and leaving the MoD unable to compete for the talent it needs in what is set to become an increasingly competitive labour market. This is creating shortfalls in total trained strength and pinch points in skills that will be vital to implement the technical requirements of the IOpC. To address these challenges, it is clear that a change in approach to pay must be considered.

A Skill-Based Pay Model

9. The pay system most commonly used by employers is jobs-based pay, where an individual is paid based upon the role they undertake, irrespective of their competency or performance in that role.¹⁹ The military enacts a form of jobs-based pay but where pay is based upon rank within the hierarchy. However, this limits the ability of the armed forces to incentivise individuals to gain new skills or reward them for becoming specialists in fields the organisation needs. As promotion is dependent upon a number of factors, it is not guaranteed that a high-skilled individual will be promoted and therefore access higher levels of pay. Further up the hierarchy, the likelihood of receiving promotion (and therefore reward) decreases, which can have a de-motivating effect on personnel.²⁰

10. In SBP, an individual is paid based upon their acquisition of desired characteristics, or skills, that are useful to the organisation. SBP is defined as:

¹⁵ Tera Allas, "Competition for Talent Will Remain Fierce in the UK despite Economic Uncertainty," McKinsey & Company, last modified February 14, 2023, <https://www.mckinsey.com/uk/our-insights/the-mckinsey-uk-blog/competition-for-talent-will-remain-fierce-in-the-uk-despite-economic-uncertainty>.

¹⁶ United Kingdom Ministry of Defence, *Defence's Response to a More Contested and Volatile World*, (United Kingdom Ministry of Defence, July 18, 2023), 16, <https://www.gov.uk/government/publications/defence-command-paper-2023-defences-response-to-a-more-contested-and-volatile-world>.

¹⁷ Miller, *Armed Forces' Pay Body*, 6

¹⁸ UK MoD, *Annual Report and Accounts*, 48.

¹⁹ Gerald E Ledford and Herbert G Heneman, *Skill-Based Pay* (Society for Human Resource Management, June 2011), 2, https://edisciplinas.usp.br/pluginfile.php/4211613/mod_resource/content/1/7.%20SIOP_SHRM_Skill_Based_Pay.pdf.

²⁰ Beth J. Asch, *Setting Military Compensation to Support Recruitment, Retention, and Performance* (Santa Monica, Calif: RAND Corporation, 2019), 16-18, https://www.rand.org/pubs/research_reports/RR3197.html.

...a compensation system that rewards employees with additional pay in exchange for formal certification of the employee's mastery of skills, knowledge, and/or competencies. Skill is acquired and observable expertise in performing tasks. Knowledge is acquired information used in performing tasks. Competencies are more general skills or traits needed to perform tasks, often in multiple jobs or roles.²¹

11. An important consideration is that there is more than one type of SBP, with three dimensions of skills, knowledge and competency that can be targeted: depth, breadth and self-management, which can be rewarded through a base-pay increase or a bonus.²² The organisational objectives of the SBP system determine which is the most appropriate combination of dimension and reward system.²³

a. Depth-based SBP rewards an individual for the 'depth' of their knowledge in a particular field or speciality. There is reduced emphasis on promotion and greater emphasis on accumulating skills and competency, with employees earning increases in pay as they demonstrate greater levels of expertise. The intent is to attract, build and retain employees with specialist skills, in areas where there is competitive demand. This form of SBP is often used in industries such as aerospace and high technology, and can be rewarded through base-pay increases or bonuses.²⁴

b. Breadth-based and self-management are the most common types of SBP. They reward employee flexibility, encouraging the acquisition of a range of skills that would allow the individual to perform multiple roles and work with minimal supervision. They are most common in the manufacturing industry or other areas where a 'lean' approach is desirable.²⁵

12. The military employs a form of SBP through depth-based bonus pay.²⁶ One-time bonuses may be offered to attract or retain specialist skillsets for which there is a current shortage. This type of SBP appears to generally be limited to the military and is more focused on specialist roles in the way it is implemented, rather than demonstrable

²¹ Ledford and Heneman, *Skill-Based Pay*, 2.

²² Ledford and Heneman, *Skill-Based Pay*, 3.

²³ A blended reward approach can be taken, where a base salary is based upon the job, and a skill-based element is incorporated that further rewards an individual for their skills, aligned with the organisational need and market demand.

Sue Cantrell, Michael Griffiths, Robin Jones, and Julie Hiipakka, "The Skills-Based Organization: A New Operating Model for Work and the Workforce," *Deloitte Insights*, September 8, 2022, 19, <https://www2.deloitte.com/us/en/insights/topics/talent/organizational-skill-based-hiring.html>.

²⁴ Ledford and Heneman, *Skill-Based Pay*, 4-5.

²⁵ Gerald E. Ledford, "Paying for Skills, Knowledge, and Competencies CEO Publication-08 (642)," in *The Handbook of Compensation, 6th Edition*, edited by L. Berger and D. Berger (Los Angeles: Center for Effective Organisations, 2014), 4-8.

²⁶ Whilst RRP rewards specialism through additions to base-pay and therefore has aspects of depth-based SBP, RRP is still based upon the role of an individual, rather than their skills.

specialist skills. It is not always implemented well and has been found not to be cost effective as a recruitment incentive.²⁷

13. Although there may be some applicability of a breadth-based approach, given the existing MoD skills-pinch points in specialist areas and projected future requirement for a more highly skilled workforce, this paper recommends a depth-based, base-pay increase model of SBP, focused on Defence's greatest areas of technical need, as most suitable for the UK armed forces.

Benefits and Considerations of Implementing SBP

14. The primary benefit of depth SBP is the improved ability to attract and retain specialist expertise in fields for which there is long-term competitive demand and long training cycles.²⁸ Where SBP has been implemented, lower turnover has been highlighted as a major benefit, alongside others such as reduced labour costs. This reduction in labour costs occurs despite individual wages generally being higher than in a jobs-based system. In industry, this offset is achieved through the higher performance and reduced staffing also associated with SBP.²⁹ Whilst such factors might be less significant in a military setting, where staff numbers are set and profit is not the goal, reductions in staff costs can also be realised through the sizable return on training investment that SBP offers due to improved retention.³⁰ This return is likely to be particularly strong in a military setting, where employees are fed from the bottom and subject to significant and costly training investment. As military pay increases relative to external civilian pay, retention has been found to improve and therefore a reduction in outflow of experienced personnel can be expected under a SBP system, reducing recruitment demand, training burden and their associated costs.³¹

15. In the commercial sector, additional benefits have been observed in employee attitudes, through strong positive links between SBP plans and workforce flexibility, membership behaviours and productivity when compared with market/jobs-based pay plans, as well as affirmation of the value of SBP in helping to recruit critical skills.³² Surveys of employers and employees have found that organisations with a skill-based approach are "98% more likely to have a reputation as a great place to grow and develop" and "98% more likely to retain high performers", with 66% of employees stating they would be more likely to be attracted to and remain at an organisation that makes decisions based on skills rather than jobs.³³ The additional benefits highlighted by these surveys underline the potential of SBP to improve recruitment and retention through greater overall satisfaction with the work environment.

²⁷ Ledford and Heneman, *Skill-Based Pay*, 8-10.

²⁸ Ledford, "Paying for Skills," 7

²⁹ Ledford and Heneman, *Skill-Based Pay*, 8-12.

³⁰ Ledford, "Paying for Skills," 6.

³¹ Asch, *Setting Military Compensation*, 12.

³² Atul Mitra, Nina Gupta and Jason D. Shaw, "A Comparative Examination of Traditional and Skill-Based Pay Plans," *Journal of Managerial Psychology* 26, no. 4 (2011): 1, 13-14, <https://doi.org/10.1108/02683941111124827>.

³³ Cantrell et al, "The Skills-Based Organization," 4-7.

16. Challenges associated with SBP plans will need to be considered and addressed.

a. Administration of a SBP system is generally more complex and costly than a job-based system due to the need to develop assessment criteria, track skills, monitor and set pay based on market conditions, and manage pay on an individual basis.³⁴ In many respects the MoD is positioned well to tackle some of these challenges, as it already utilises a human resources system that is required to track individual completion and maintenance of competencies. As with higher wages, costs could be offset through reduced workforce turnover.

b. There is potential for an increased training burden to realise a higher-skilled workforce and provide the personal development opportunities for individuals to access higher pay.³⁵ In consideration of retaining existing skillsets, for which training in the MoD is already established, there should be no additional training costs and whilst there will undoubtedly be new or additional training requirements to meet the skills demands of the IOpC, these will have to be incurred irrespective the pay system. It is therefore argued that these should not factor into Service costs of implementing SBP.

c. Changes in technology or the operating environment can make certain skills obsolete, and an organisation may find itself paying employees for skillsets that are no longer required. This can be mitigated through implementing transition periods, where employees have time to replace obsolete skills with new ones.³⁶

d. Whilst SBP negates some of the de-motivating aspects of a promotion-based reward system (discussed earlier) by providing an alternative route for career progression and higher pay, a potential down-side is to encourage too many individuals to stay within a rank, if there is greater incentive to gain skills than seek promotion (as can occur with inter-grade pay in a hierarchy system).³⁷ There is a clear need to balance the incentive to become specialised versus the incentive to gain promotion and fill rank requirements. Incentive based on rank will therefore still form an important part of the overall military reward system.

e. There will need to be a change in mindset of how the Services career manage their personnel. Frequent job moves are counterproductive to the training investment and incentivisation model of SBP.³⁸

17. SBP provides clear benefits that would support the MoD in retaining talent and achieve the high-skilled workforce it needs to meet the technical warfighting challenges set out in the IOpC. Although there are potentially significant costs and complexities

³⁴ Edward E. Lawler and Gerald E. Ledford, "Skill-Based Pay: A Concept That's Catching On," *Compensation and benefits review* 18, no. 4 (1986): 5, <https://doi.org/10.1177/088636878601800406>.

³⁵ Ledford and Heneman, *Skill-Based Pay*, 13.

³⁶ Lawler and Ledford, "A Concept That's Catching On," 6.

³⁷ Asch, *Setting Military Compensation*, 31.

³⁸ Lawler and Ledford, "A Concept That's Catching On," 5.

associated with implementing such a reward system, where implemented SBP has demonstrated the ability to provide a return on that investment and deliver an overall reduction in labour costs. Nevertheless, it is recommended that the MoD conduct a cost-benefit analysis to understand the extent of the benefits and savings that could be achieved, against the increased administrative and wage costs likely to be incurred, to demonstrate value for money and confirm affordability.

CONCLUSION

18. The UK Defence White Paper of 2023 acknowledged the recommendations of the Haythornthwaite Review and whilst it has committed to take forward as a priority a Total Reward Approach, it does not commit to a SBP element but instead recognises an incentive package that is “often much more than their [Service personnel] core salary.”³⁹ This report has shown that dissatisfaction with pay is a key driver of why personnel are choosing to leave the UK armed forces and therefore must form a key element of any initiatives to improve recruitment and retention of a high-skilled workforce. Although administratively more complex and requiring mindset changes in career management and approach to rank, SBP offers a potentially affordable means to compete for and retain talent in what will be the most competitive area of the UK labour market, whilst also delivering benefits in overall workforce satisfaction and productivity. The Haythornthwaite Review makes numerous further recommendations to improve recruitment and retention, and highlights that a blend of approaches is the best way to address the issue. However, this paper has identified that in the particular case of high-skill and technical specialism, SBP offers many advantages and could be pursued as an independent means for the UK armed forces to address the skills shortfalls of today and meet the future workforce requirements of the IOpC.

RECOMMENDATIONS

19. It is recommended that the UK MoD:
- a. Immediately enact recommendation 19 of the Haythornthwaite Review to incorporate a SBP element into the reward package for UK military Regular personnel in order to support the recruitment and retention of the high-skilled workforce needed to meet strategic objectives and address existing critical shortfalls in skills pinch points.⁴⁰
 - b. Specifically, implement a depth-based form of SBP, that rewards individuals for development of technical skills through a base-pay increase.
 - c. Conduct a cost benefit analysis of implementing a SBP system to demonstrate value for money and confirm programme cost.

³⁹ UK MoD, *Defence's Response*, 19-20.

⁴⁰ Haythornthwaite, *Agency and Agility*, 53.

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