



# The Role of Digital Transformation in Advancing Sustainable Human Resource Practices: Evidence from the Public Sector in the United Kingdom

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## ABSTRACT

This paper examines the role of digital transformation in advancing sustainable human resource management (HRM) practices within the public sector in the United Kingdom. As governments increasingly adopt digital technologies to improve efficiency and reduce environmental impact, the integration of digital HR systems has become essential for promoting sustainability. This research explores how digital tools such as e-recruitment, remote working platforms, and electronic performance management systems contribute to reducing resource consumption and enhancing organizational effectiveness. Using a quantitative approach, data were collected from employees working in public sector organizations. The findings reveal that digital transformation significantly supports sustainable HRM practices by minimizing paper usage, reducing operational costs, and improving transparency and accessibility. The study contributes to the literature by linking digitalization with sustainability in HRM and offers practical implications for policymakers and public sector managers.

دور التحول الرقمي في تطوير ممارسات مستدامة لإدارة الموارد البشرية:

أدلة من القطاع العام في المملكة المتحدة

## الكلمات الداله:

*إدارة الموارد البشرية المستدامة،  
القطاع العام، التحول الرقمي، إدارة  
الموارد البشرية الإلكترونية، الكفاءة  
التنظيمية.*

## الملخص

تناول هذا البحث دور التحول الرقمي في تطوير ممارسات إدارة الموارد البشرية المستدامة في القطاع العام بالمملكة المتحدة. فمع تزايد اعتماد الحكومات على التقنيات الرقمية لتحسين الكفاءة والحد من الأثر البيئي، أصبح دمج أنظمة الموارد البشرية الرقمية ضرورياً لتعزيز الاستدامة. يستكشف هذا البحث كيف تُسهّم الأدوات الرقمية، مثل التوظيف الإلكتروني ومنصات العمل

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عن بُعد وأنظمة إدارة الأداء الإلكترونية، في خفض استهلاك الموارد وتعزيز فعالية المؤسسات. وباستخدام منهج كمي، تُجمعت البيانات من موظفين يعملون في مؤسسات القطاع العام. وتُظهر النتائج أن التحول الرقمي يدعم بشكل كبير ممارسات إدارة الموارد البشرية المستدامة من خلال تقليل استخدام الورق، وخفض التكاليف التشغيلية، وتحسين الشفافية وسهولة الوصول. تُسهم هذه الدراسة في الأدبيات من خلال ربط الرقمنة بالاستدامة في إدارة الموارد البشرية، وتقديم تطبيقات عملية لصناع السياسات ومديري القطاع العام.

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## 1. Introduction

Digital transformation has emerged as a critical driver of organizational change, particularly within the public sector. Governments worldwide are increasingly leveraging digital technologies to improve service delivery, enhance efficiency, and promote transparency. In the United Kingdom, public sector institutions have actively embraced digital transformation as part of broader modernization and sustainability agendas. Digital transformation refers to the integration of digital technologies into organizational processes, fundamentally changing how institutions operate and deliver value. Within the field of human resource management (HRM), this transformation has led to the development of electronic HRM (E-HRM) systems, which include digital recruitment platforms, online training systems, and automated performance management tools (Bonderouk, 2022). These systems not only improve operational efficiency but also contribute to environmental sustainability by reducing reliance on physical resources such as paper and energy. At the same time, sustainability has become a central concern for public sector organizations. Sustainable HRM practices aim to balance economic, social, and environmental objectives while promoting long-term organizational effectiveness. Digital technologies play a crucial role in enabling these practices by facilitating flexible work arrangements, reducing commuting-related emissions, and improving resource efficiency (Viail, 2023).

Despite the growing importance of digital transformation, limited research has examined its role in advancing sustainable HRM practices within the public sector, particularly in the UK context. Existing studies tend to focus either on digitalization or sustainability separately, with insufficient integration of both perspectives. Therefore, the research problem lies in the lack of empirical evidence on how digital transformation contributes to sustainable HRM practices in public sector organizations. This gap is particularly relevant in the UK, where digital innovation and sustainability are key policy priorities. Motivated by this gap, the present study aims to investigate the role of digital transformation in promoting sustainable HRM practices in the UK public sector.

## 2. Literature Review

Recent studies emphasize the growing importance of digital transformation in enhancing organizational sustainability. Digital HR systems, such as e-recruitment, virtual training platforms, and remote work technologies, have been shown to reduce operational costs, minimize paper usage, and lower environmental impact (Bondarouk & Brewster, 2023). Moreover, digitalization enables organizations to streamline HR processes, enhance transparency, and improve decision-making through the use of data analytics and real-time information systems. Sustainable human resource management (Sustainable HRM), on the other hand, focuses on aligning HR policies and

practices with long-term environmental, social, and economic objectives. It promotes responsible resource utilization, employee well-being, and organizational resilience. Recent research suggests that integrating digital technologies into HRM functions significantly enhances sustainability outcomes by reducing resource consumption, supporting flexible work arrangements, and encouraging environmentally responsible behaviors among employees (Vial, 2023). Furthermore, digital transformation facilitates the adoption of innovative HR practices, such as paperless documentation, cloud-based HR systems, and virtual collaboration tools. Empirical studies highlight