Title	現代的な人的資源管理のデータ科学への展開：サウジアラムコにおける知識管理との統合
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Abstract

The efforts by Google and Oracle have changed the idea of "modern human resource management (HRM)". Their efforts have reminded us to rethink modern HRM. In addition, the application of artificial intelligence (AI) and data science approaches in modern HRM also influenced us to rethink and reimagine "modern HRM". Therefore, the main purpose of this dissertation is to develop a framework for "evolving modern HRM as a data science through the integration of HRM with KM".

To answer the research objectives, a case study using both qualitative and quantitative approaches of interviews and an online survey was conducted. The qualitative part was carried out by interviewing professionals from Saudi ARAMCO. Furthermore, the interview data were analyzed thematically. In the case of quantitative research, which consisted of both open-ended and close-ended multiple-choice questions, the data were analyzed using SPSS 26.

The results from the qualitative data analysis show that professionals use ShareK platform both traditional and modern HRM. The result reveals that professionals use ShareK platform i.e., training and evaluating, which is broadly considered traditional HRM. On the other hand, the results of this research interestingly show that professionals also use ShareK platform for psychological safety, dependability, and evidence-based decisions which are considered modern HRM in this research. Importantly, the results from interviews show that psychological safety, dependability, and evidence-based decisions—are the most important components of modern HRM which is very important and new findings of this research.

The results from the quantitative analysis show that there are statistically significant differences between HRM and KM professionals regarding traditional HRM and traditional KM, because both groups of professionals namely HRM and KM are different. In addition, they are from two distinctive departments. Furthermore, their job roles are also different. Finally, their educational backgrounds are also different. So, it is expected that there are statistically significant differences between both professional groups of people. Interestingly the results from quantitative analysis also show that there are no statistically significant differences between HRM and KM professionals regarding modern HRM. These are the most unique and significant findings of this research. We also compare our results with the findings from Google's Project Aristotle, Google's Project Oxygen, and People's Analytics (Google, 2022a; 2022b; Duhigg, 2016; Schmidt and Rosenberg, 2014; Vulpen, 2019). Especially, the results from Google's Project Aristotle, Google's Project Oxygen, and People's Analytics showed that psychological safety, dependability, and evidence-based decision—are the component of team dynamics in modern HRM (Google, 2022a; 2022b; Duhigg, 2016; Schmidt and Rosenberg, 2014; Vulpen, 2019). They showed the results qualitatively without comparing among different departments in Google. Therefore, the findings of this research are unique, new, and significant in the HRM and KM community by comparing both professionals regarding modern HRM.

The results were verified by providing evidence. In this research, all professionals supported the results regarding modern HRM and its components. In this phase, the result from the comparison also supports our claims that there are statistically very significant relationships regarding all components of modern HRM. Finally, a framework of harmonization of HRM with KM was developed based on the results of this research which lay down the foundation to evolve modern HRM as a data science. First of

all, the result of this research shows that the movement of acceptance of ShareK for modern HRM was led by HRM professionals. Secondly, the results of this research also show that professionals have changed their THRM system to ShareK based more flexible system for modern HRM. But the result of this research indicates that KM professionals are worried about the flexibility of the ShareK system for modern HRM, because KM professionals feel that there is needed for rigidity in the ShareK. Finally, in the future KM professionals will collaborate more with HRM and ICT professionals to have more flexibility and rigidity in their system. As a result, the concept of "VCS" will help KM professionals to change, update, and re-update the new system more flexibly with rigidity through collaboration with HRM, ICT, and other professionals. Through these collaborative ways, a new system will evolve in which modern HRM will emerge as a data science in the near future with more flexibility and rigidity.

This research provides future research directions. A qualitative study covering more interviewees from different departments of the same organization should be conducted. Secondly, the interview was conducted of Saudi ARAMCO. Therefore, qualitative research covering more departments in Saudi ARAMCO should be conducted which will provide more generalized findings. Thirdly, a comparison among more groups of professionals should be conducted. So, another detailed survey should be conducted by comparing all the departments of Saudi ARAMCO which will provide a more fine-grained generalized version of the comparison. This will eventually help to evolve HRM as a scientific discipline. Finally, our proposed framework of harmonization of HRM with KM was developed based on the results of a case analysis of one company. Therefore, another research should be conducted by covering cases from the United States, Europe, and Japan to develop a more generalized version of modern HRM as a data science.