

Are Managers Making the Right Choice? IT Investment for Smart Work

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ABSTRACT

Smart work has been credited with providing flexible supply capabilities to meet customer demands in service businesses operations. Effective operations of smart work need huge investment of technologies implementations. The authors use Delphi techniques and survey method to identify implementation factors of importance of home-based work which is a representative type of smart work. Seven technologies were identified to be important (Knowledge Management, Real-time monitoring, Remote IT assist, Online testing, Online training, Workforce management, Agent performance management technologies). Different from general expectations, control-based technologies were found not to have positive effects, but support-based technologies to have positive effects to the performance. Smart work technologies in service business affect employees' job satisfaction, and further retention of remote agents. Careful planning of how to implement technologies for smart work is needed in service business in order to identify the best working environment design.

KEYWORDS

Agent Performance Systems, Delphi Method, ICT Implementation, Knowledge Management, Online Testing, Online Training, Real-Time Monitoring, Remote IT Assist, Smart Work, WFM

BACKGROUND

The service industry is the largest and fastest growing sector of the economy (Fitzsimmons & Fitzsimmons, 2010). It is also the basis of global economic growth and employment. However, while the importance of the service sectors is striking, low productivity causes service employees to suffer from low wages and poor quality of work in most service sectors. The low productivity of service sectors makes service jobs unattractive for employees and could result in low productivity of the whole economy (Suh & Kim, 2013).

Smart work has been instrumental in raising productivity in organisations in the service business (Podnar & Golob, 2010). Many authors (e.g. Bloom et al., 2013; Ye, 2012) illustrated the reasons why home-based work which is a representative type of smart work is more productive and efficient than office-based work. More experienced and older employees tend to choose to work remotely. They are usually more skilled at their jobs and can handle the tasks faster than employees in an office. Further, employees who work remotely show less turnover ratio than employees in offices, thereby reducing training and recruitment costs. Companies are also able to reduce costs related to space and equipment in the office.

Still employers are afraid of adopting smart work due to lots of challenges and concerns (Kim, 2013; Suh & Kim, 2012; Pyoria, 2011; Neirotti et al., 2013). Information technology challenges are one of major concern to many employers. Deciding what kind of technologies to purchase, and what

kind of functions do they have to have affects the success of a smart work program (Cha & Cha, 2013; Suh & Kim, 2013).

The authors of this study focus on the following issues to find out whether the managers are making the right choice: (1) What kind of system is required to ensure competent home-based work? (2) What kind of system can improve the performance of employees? (3) How well the managers predict the system's effectiveness and impact on the employee's perception and performance?

The authors will review related articles of home-based work about success and failures in the service business context. Section 2 briefly outlines our methodology. Section 3 introduces success factors of implementing and operating home-based work. Section 4 discusses home-based work technologies of importance through Delphi techniques. Section 5 will verify key factors of home-based work technologies from two perspectives- control based and support based. Section 6 will provide conclusions.

RESEARCH METHODOLOGY

The methodology used in this study combined Delphi technique with survey method. Delphi technique is useful for getting consensus from a group of experts on a specific topic, generate ideas, and extract important factors in the professional domain (Hsu & Sandford, 2007; Okoli & Pawlowski, 2004).

Our study used Delphi technique to extract seven technologies of home-based work implementation that is supported by industry experts. And the authors used survey method to verify key factors of home-based work technologies from two perspectives; control-based and support-based technologies.

Our approach included the following steps:

- review refereed cases of home-based work operations from the published literature
- identify success factors of home-based work operations
- make an initial version of Delphi questionnaire
- get a consensus from industry experts about successful home-based work technology
- synthesize industry expert opinions and frontline employee surveys.

SUCCESS FACTORS OF HOME-BASED WORK IMPLEMENTATION

Smart work is a nontraditional working arrangement in which employee makes changes of where to work by using IT and performs the task under an employment contract (Pyöriä, 2011; Baruch, 2001). Smart work includes home-based work, teleworking, telecommuting, home-working, and remote working. These terms are all interchangeable and have similar meanings (Baruch, 2001). Smart work is usually classified into two categories, home-based work and nomadic mobile work (Neirotti et al., 2013). Nomadic mobile workers have little limit in terms of workplace as they can work anywhere using mobile communication technologies, while the major workplace of home-based workers is likely to be their home. In the study, the authors identified implementation factors of importance of home-based work which is a representative type of smart work.

Though Butcher-Powell (2006) illuminated the concerns of ICT network security, information and communication technology (ICT) will help remote work increase (Boell et al., 2016; O'Sullivan, 2013) and is the enabler that would increase employee engagement and meet customer expectations (Beaumont Pate et al., 2009). Belanger et al. (2001) investigated how three constructs – availability of IT, communication technologies, and communication patterns of remote workers – affect the performance of home-based work operations. The results indicate that technology affects productivity, performance, and employee satisfaction positively. Gupta et al. (2000) identified patterns of computer and communication technology usage by studying IT usage levels. They found that highly educated employees are more likely to use computer and communications technologies, and that individual

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