Analysis of Reasons, Implications and Consequences of Demographic Change for IT Departments in Times of Scarcity of Talent: A Systematic Review

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ABSTRACT

The skill shortage is becoming an ever-increasing challenge for IT departments. Allocation of resources in the best possible way is even more important. The challenge is to improve the enterprise not only on the side of the organizational and process level, but to develop new strategies and approaches in human resource management. Only a symbiosis of the disciplines economics, psychology and information technology will enable relevant and indispensable employees and promote loyalty to the company. A frequent change of the workplace, for a well-trained professional, is so long associated with normality until they find the best environment for fulfilling their needs and expectations. These expectations are no longer just on a financial level. This paper will analyse the previous work on these topics and demonstrate first conclusions regarding a way forward.

Keywords: Demographic Change, Human Resource Management, IT-Management, Psychological Implications on Employees, Skill Shortages

1. INTRODUCTION

In current times, companies are confronted with continuous changes. They have to face new challenges faster and more goal oriented, adapt to new circumstances while maintaining a high level of productivity. The requirements on companies will increase in the coming years due to the scarcity of various goods and resources. The allocation of resources is not a new issue for companies, but in the current situation it becomes more and more important. The rel-
evance of information technology in businesses is due to the pace of change with automation of processes playing an increasingly more important role for companies. Within the IT industry, human resources have been recognized as one of the most decisive and scarce resources (Colomo-Palacios, Casado-Lumbreras, Misra, & Soto-Acosta, 2014). With IT skill shortages projected to reach unprecedented levels, making the right choices for IT human resource management gains higher importance for shaping a firm’s competitive advantage (Colomo-Palacios, González-Carrasco, López-Cuadrado, Trigo, & Varajao, 2014). The complexity associated with the fluctuating demand for IT skills, coupled with dynamic and innovative approaches to short-term and long-term staffing, as well as the inevitable delays in skill acquisition, makes this a challenging task (Choi, Nazareth, & Jain, 2008). It’s no longer a pure support factor, but provides a valuable contribution to the companies’ results. Without a functioning IT department, the production of goods and the provision of services is almost impossible.

Cutting edge software and hardware can be provided relatively easy by financial resources. In comparison to this, the recruiting of appropriate resources is much more difficult. At first the company need to have transparency about their needed profiles (Nilles & Senger, 2012). Standards like the IT Infrastructure Library (ITIL) (Pereira & da Silva, 2010) or the Control Objectives for Information and Related Technology (CObIT) and ISO/IEC 27002 (Sahibudin, Sharifi, & Ayat, 2008), as well as approaches for Cloud Governance (K. Petruh, Stantchev, & Tamm, 2011; Stantchev & Stantcheva, 2012) provide a good framework for this issue but an accurate recording and selection of resource-requirements is still needed. After the relevance was determined, the recruiting of the identified profiles becomes a tough challenge (Colomo-Palacios, Casado-Lumbreras, Soto-Acosta, & García-Crespo, 2013). Because of demographic change, the market for IT professionals developed from a buyer’s to a seller’s market (Buscher, Dettmann, Sunder, & Trocka, 2009; McEwan & McConnell, 2013). This means that applicants can choose the company based on their needs and expectations. The result is a steady loss of competitiveness among enterprises that are not selected by the graduates. Nevertheless, it is important that the companies are aware of their lack of personnel and take the appropriate actions. If possible, the demand can be met through increased remuneration, for example, a rise of salary. This is often not a viable option. Therefore, organizations strive to find other options to compensate this disadvantage. This can be achieved with a consistent number of employees by providing a better productivity and a more rational allocation of staff (Martenson, 2006). A step further is to deploy more sophisticated approaches to manage existing personnel resources in the area of IT (Casado-Lumbreras, Colomo-Palacios, Ogwueleka, & Misra, 2014; Konstantin Petruh, Tam, & Stantchev, 2012; Stantchev, Petruh, & Tam, 2013). Nevertheless, every optimization of an organization or a functioning system has its limits, especially in a fast changing environment like IT-departments. The result is, that also after a nearly impossible perfect optimization, the company needs to look after further possibilities and options to expand their business if it wants to grow or maintain the same level of productivity. This is also due to the fact, that because of an evolving IT, a specialization of the personnel is obligatory (Dayal, 2004). One of the options that many companies are embracing is offshore outsourcing (Casado-Lumbreras, Soto-Acosta, Colomo-Palacios, & Ordoñez De Pablos, 2011; Leeney, Varajão, Ribeiro, & Colomo-Palacios, 2011) although these approaches present a considerable amount of challenges for personnel (Colomo-Palacios, Casado-Lumbreras, Soto-Acosta, García-Peñalvo, & Tovar, 2014; Misra, Colomo-Palacios, Pusatli, & Soto-Acosta, 2013).

One further option is to attract applicants with other measures to compensate them for their financial loss. This can be done with innovative working time models and an improved work-life balance. Satisfied employees are
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