

## **Master of Business Administration**

Dissertation

Are German small & medium sized companies (SMEs) missing out on an opportunity to gain a sustainable competitive advantage by not adopting cloud computing early?

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## SUNDERLAND BUSINESS SCHOOL

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LIST OF ABBREVIATIONS

AM ..... Account Manager  
 BCC ..... Business Communication Company GmbH  
 CPU ..... Computer Processor Unit  
 HW ..... Hardware  
 IaaS ..... Infrastructure as a Service  
 IT ..... Information Technology  
 ICT ..... Information Communication Technology  
 LE ..... Large Enterprise  
 PaaS ..... Platform as a Service  
 QoS ..... Quality of Service  
 SaaS ..... Software as a Service  
 SW ..... Software  
 SME ..... Small Medium Enterprise  
 TCO ..... Total Cost of Ownership  
 VPN ..... Virtual Private Network  
 vDC ..... Virtual Data Center  
 WAN ..... Wide Area Network

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## ABSTRACT

Cloud Computing, the long-held dream of computing as a utility, has the potential to transform a large part of the IT-Industry, making software even more attractive as a service and shaping the way IT hardware is designed and purchased (Armbrust, Fox, Griffith, Josph, & Katz, 2009, p. 1).

Technological change is one of the principle drivers of competition. It plays a major role in industrial structural change, as well as in creating new industries. It is also a great equalizer, eroding the competitive advantage of even well-entrenched firms as well as propelling others the forefront. (Porter, M., 2004, p. 164).

The author intends to investigate the influence of state-of-the-art cloud services on current management and business models in small-to-medium sized organisations.

### **Why is this research important?**

In many ways, technological change has a strong influence on the competitive advantage of a company. A technology is important for competition if it significantly affects a firm's competitive advantage or industry structure. For the management of a company, it could be essential to the survival of the business that their radar is extended to include new technological innovations because identifying emerging and disruptive technologies and how they can be applied is becoming more and more vital.

Furthermore, this dissertation deals with the nature of cloud computing and the technologies behind it, as well as the threat it poses as a technology innovation which in turn, defines how and when applications are deployed.

The impact of changes to companies' business models will be investigated and the added value of this technology will be determined for medium-sized companies. The influence of innovation on the competitive advantage will be derived from a scientific model.

Conclusions can be made based on whether the expectations of added value have been met. This research also intends to investigate the cost advantage of cloud services for a typical user of the technology in a TCO cost model.

The extent to which this technology is already widely used in the industry can be identified by the survey. The research uses 2 ways to investigate the different areas of competitive advantage:

- Direct method through a cost model approach
- Indirect method through market survey and evaluation by using the diffusion-approach

In order to be objective about cost advantages, a **standard cost model** for assessing IT infrastructure and the benefits of a cloud system is required.

In order to achieve the objectives of the research, the author also intends to investigated historical data from other surveys; secondly the hypothesis demarcates the sample unit and thirdly, the dissertation referenced from the sample to all SME companies in Germany by using a statistical correlation.

- **Target group**

The dissertation is aimed at decision-makers in small to medium-sized companies. It addresses service providers and manufacturers of components. The main focus of the paper is to be a strategic guideline for top management when it is right to invest in the new innovation of cloud computing. The results of the research could be interesting for two groups. On the one hand for CIO's of SMEs and, on the other hand, for the marketing and product management departments of ICT-providers.