

# Revenue and Pricing Models for Software Vendors with a Focus on Software-as-a-Service

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**Abstract.** At present the way software is offered to customers is changing. Software vendors expand their product portfolio by providing software that can be accessed via the Internet. These Software-as-a-Service solutions require the (re-)design of existing business models, particularly with regard to revenue and pricing models. The contribution of the research described below is to derive strategies for Software-as-a-Service vendors in terms of revenue and pricing models. The intended approach is twofold and consists of a theoretical and an empirical part.

## 1 Background

The provisioning of software via the Internet, called Software-as-a-Service (SaaS), is a major IT trend [1]. Industry analysts predict rising sales and a constant growth. Moreover, at present there are only few research results on revenue and pricing models for software vendors and for SaaS vendors in particular.

In the **SaaS model** customers are able to access standard software by means of a web browser. The SaaS provider is responsible for the operation and maintenance of the multi-tenancy software. In contrast to traditional revenue models the provider does not generate revenue through software license fees.

SaaS requires a (re-)design of business models, especially **revenue and pricing models** [2]. It is of crucial importance to create pricing models accepted by the customer in order to ensure success from the provider's point of view. Otherwise the non-acceptance among customers can lead to a failure of this form of providing software as it could be seen at the end of the 1990s. At that time service provider could not convince the majority of potential customers to use Application Service Providing (ASP), a concept similar to SaaS. There have been points of criticism regarding the system's infrastructure and the business models for ASP [3].

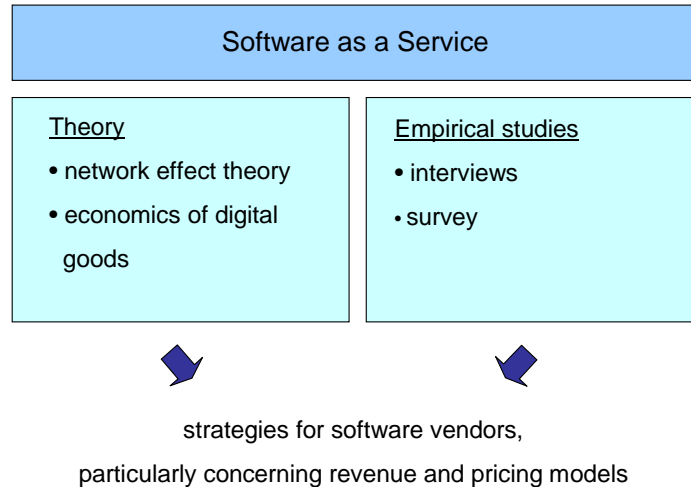
It is worthwhile mentioning that the **software industry** needs to modify their existing business models in order to reach new market segments, particularly the small and midsize enterprises (SME) market. SMEs have completely different IT environment, e.g. lower IT budget and IT know how [4], so current offers on business software are in many cases inappropriate for SME. SaaS could have the potential to address these problems and could be a valid option for SMEs.

The aspects mentioned above will be addressed in the **application scenario TEXO** in the THESEUS research program. TEXO deals with Business Webs in the context of the Internet of Services. The goal of TEXO is to make services tradable over the Internet by means of a platform. In this context software is required to provide a technical infrastructure for services. The project thereby focuses on technical issues such as the creation of infrastructure components for Business Webs as well as the development of future business models for the Internet of Services. This also includes business models for providing software over the Internet such as SaaS.

**Essential aspects** to be considered in the context of revenue and pricing models are the interactions between the stakeholders in the software value chain, the characteristics of services especially concerning cost structure, the form of service offering (e.g. composed services) and the influence of network effects.

## 2 Proposed Solution

The goal of the intended research is to derive strategies for software vendors in terms of revenue and pricing models. As shown in 1 the proposed thesis consists of two parts. The research approach is divided into



**Fig. 1.** Proposed Approach

a theoretical and an empirical part. The **empirical study** focuses on the customer's perspective. Therefore, the first analyses intent to gain an overview of the customers' attitude towards software delivery in form of SaaS. Ten interviews with CIOs in German enterprises have already been conducted and evaluated. The interviews examine the users' perceived advantages and disadvantages of SaaS and assess different pricing

models for software. The majority of respondents considers SaaS to have the potential to improve the current IT situation. Moreover, advantages are identified in the field of revenue and pricing models. The results of this explorative study and the theoretical findings will be used as a basis for an extensive survey in future.

The **theoretical foundation** for the development and formulation of strategies for vendors encloses the network effect theory and the economics of digital goods. Network effects are of crucial importance, especially in software markets [5][6]. On the one hand network effects arise for users of software. Network effects can be described as "the utility that a given user derives from the good depends upon the number of other users who are in the same network as he or she" [7]. The utility for users occurs e.g. in terms of enhanced interaction possibilities between consumers. Besides, there are indirect network effects that can result in more extensive offers of complementary goods. On the other hand, SaaS is usually based on a platform. Thus, the market for SaaS can also be characterized as a two-sided market. Therefore, the strategies of the platform provider influence the strategies of the service providers as well as the customer behaviour and vice versa [5]. Moreover, it is essential to take the special characteristics of digital goods [8] into account, e.g. the fact that the costs for reproduction of digital goods are nearly zero [6][5]. The **PhD thesis** contributes to a deeper understanding of possible revenue and pricing models for software delivered over the Internet and their impact for software vendors. Furthermore the results should provide decision support concerning the selection of revenue and pricing strategies in a concrete situation.

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## Disclaimer

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