Business Opportunities With Web Services in the Case of Ebay

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Abstract

Companies like eBay, Google, or Amazon offer web services that allow third parties to access various data sources and applications. This research contributes to existing literature by analyzing third parties’ business opportunities that result from using eBay web services. Therefore, business models of companies that use eBay web services are studied, and the contribution of eBay web services to strategic business opportunities are analyzed. The classification theme comes from Timmers’ taxonomy for e-business models. Results show that eBay web services give opportunities for start-ups, and that existing companies can use eBay web services in order to obtain strategic business advantages.

1. Introduction

In particular e-Business companies like Amazon, Google or eBay grant their trade partners access to sections of their data and applications via web services. Frequently so-called SDKs (Software Development Kits) are made available that facilitate the use of web services by software developers. They generally contain sample applications, libraries as well as instructions for the integration of services and data.

These offers are usually freely available and create the scope for business opportunities for third parties. In the past, intercompany use of data and applications frequently failed because of complicated integration or confidentiality aspects. By using standardized interfaces on the basis of Web Service Standards the integration of data has become far easier. Diffusion and additional turnover are the reasons for e-business companies opening their data and applications in cases where the available data are not critical to business or confidential, alternatively suitable authorization or authentication mechanisms are integrated.

The kind of business models which typically are realizable by using web service offers by e-business companies is not known. Existing literature includes only a few examples of web services being used by third parties. However, a categorization or classification of those business models which would indicate typical business potentialities created by the use of web services by third parties is missing.

Against this background the paper aims at demonstrating which types of business models can be pursued by utilizing web services for third parties. In the process user potential for bigger and medium-sized companies as well business opportunities for small business and possible start-ups is taken into account.

The analysis is based on the example of eBay web services and is an attempt to categorize all possible business models by means of Timmers’ e-Business models framework [1] which utilizes eBay web services. The analysis is limited to eBay web services. Further analyses of business models using other web services will have to be undertaken in further research projects.

The paper is structured by initially formulating the research question and the research method is described. Then chapters 3 (Timmers’ e-Business models) and 4 (eBay’s Web Services) introduce the fundamentals of the subsequent analysis. Chapter 5 forms the core of the paper, describing and classifying individual business models of companies utilizing eBay web services. In Chapter 6 results of the research are described, their implications for different target

2. Research question and methodology

Since the 80s much research has dealt with conceivable IT-related business models. As soon as new technologies or techno-paradigms arise their possible use for business is analyzed and researched [2-13].

Furthermore research has been conducted in the area of web service technologies. However, the focus
of most research papers rests mainly on operative advantages generated by introducing web service technologies to IT organizations [10, 14-16]. The strategic potential which can emerge when third parties utilize web services has not been taken into account in these analyses. Recently first results of a research project were published which were able to demonstrate strategic business advantages in a case where external web services had been used [17]. The question remains as to what extent other business models that could utilize external web services are conceivable.

The basic research question of the paper is therefore which business models can be realized by utilizing external web services.

In academic literature different methods of describing and categorizing e-business company models are found [1, 8, 19-24]. These theoretical frameworks are aimed at structuring and evaluating the multiplicity of possible business models according to different dimensions. They can form the basis for identifying other possible business models when external web services are utilized.

Generally one can distinguish between specific and generic frameworks. Specific frameworks focus on specific results or activities of e-business models [1, 8, 19-24]. As against that generic frameworks furnish general taxonomies for e-business models [1, 24]. In particular it is Timmers’ model that serves as basis for the research in this paper. Timmers’ framework was the first and it is still valid.

Based on eBay Web Services, possible business models are analyzed. In the course of investigation different companies utilizing eBay web services are analyzed and categorized according to Timmers’ model with regard to strategic business advantages gained by utilizing eBay web services. On the basis of this classification, inferences can be drawn about typical business models utilizing external web services, evidence being restricted to utilization of eBay web services. In order to generalize these findings, further research is needed.

3. Timmer’s e-Business models

Timmers defines a business model as an organization (or architecture) of products, services, information flow as well as sources of revenue and utilization for suppliers and clients. Timmers identifies ten e-Business models:

- Electronic sales: organizations advertising their products or services via the Internet, selling them when appropriate via the Internet and enabling the buyer to pay via the Internet.
- Electronic procurement: Organizations source products or services via the Internet either by tendering or electronic ordering.
- Electronic auctions: Organizations operate and carry out auctions via the Internet, where a number of functions are made available that support auction participants, be it by product description, in bidding, in setting up agreements, making payments as well as organizing deliveries.
- Electronic shopping mall: Organizations combining several Internet shops and offering additional functions, e.g. virtual communities, discount models or further information.
- Electronic marketplaces: Organizations taking over advertising and sales for other organizations in so far as they offer a general front-end as well as transaction support.
- Virtual communities: Organizations forming a platform for virtual communities and offering community-promoting basic functionalities.
- Value chain services: Organizations specializing in running specific net-based business functions, e.g. electronic payment handling or planning, initiating and supporting of logistic processes.
- Value chain integrators: Organizations that integrate several stages of a value chain and make use of the information flow between individual stages in order to generate added value.
- Collaboration platforms: Organizations supplying instruments and information enabling and supporting collaboration of companies.
- Information brokers: Organizations offering a variety of information services via the Internet, e.g. information search, client profiles or investment advice. Timmers regards trust services as provided by certification organizations or other trustworthy third parties as a special category of information brokers.

Figure 1. Timmer’s e-Business models
For these ten e-Business models Timmers carries out a qualitative classification. A matrix with the dimensions of “functional integration” and “degree of innovation” is used. The first dimension differentiates between single and several functions and the second dimension extends from the mere electronic version of traditional business models to innovative, new business models. Figure 1 shows the classification of the ten e-Business models.

4. eBay Web Services

Most eBay members utilize the graphic websurface to buy or sell items. In this they interact directly with the Graphic User Interface (GUI) of the eBay marketplace. This often requires manual steps that frequent users understandably avoid or want to make more efficient.

Applications communicate directly with the eBay servers and the eBay data bank in XML/SOAP format using API. Utilization of API therefore enables the development of custom-made applications with very specific functionalities and adapted processes:
• Automatically placing offers in eBay
• Looking for current offers in the eBay marketplace
• Accessing current category information
• Analyzing information about items offered
• Processing buyers’ details at the end of an offer
• Retrieving lists of eBay sellers’ items
• Incorporating eBay offers into other websites
• Automatically submitting feedback

Altogether the eBay API provides over 120 functions that cover almost the entire functionality of the website.

Apart from API based purely on XML, eBay also offers an interface for communication with the platform based on SOAP-technology. Furthermore the eBay-REST-API that enables interaction by means of simple URL via HTTP is at users’ disposal (see figure 2). Moreover eBay offers a push mechanism (platform notifications) that informs certain external applications about events (e.g. item has been bought, offer has ended, buyer has been outbid). The advantage of this is that an application of a third party supplier does not have to enquire periodically but that they are informed about an event practically in real time.

Within the framework of the eBay developer program utilization, eBay API is offered to any interested developer free of charge. With it every developer can make up to 10,000 web service calls per day. If more are required, the application will be tested for compatibility by eBay’s technical support and after that up to 1.5 million calls are provided.

5. Business models based on eBay Web Services

5.1. Electronic sales with eBay Web Services

Currently more than 216,000 commercial sellers are registered in Germany and there are about 65,000 eBay shops that are used principally by commercial sellers. On eBay.com 53% of all offers are placed via eBay web services. The advantages gained by utilizing eBay web services are the following:
• Reduction of costs: The decision to connect to the eBay marketplace via API in future was the logical consequence for one of the PowerSellers whose eBay selling activities had increased enormously. His IT landscape grew according to the turnover attained by his eBay sales. Over two years, accommodating the special characteristics of trading via eBay, he had developed his own comprehensive supply chain management that included stock control, bookkeeping, invoicing, payments reconciliation and client management. Only in compiling or exporting offer-data and reimporting of sales data did a break occur between his system, the eBay Turbo Lister and the handling of sales via e-mail. Generating offers as well as managing and processing auctions now were handled according to a solution which enabled him – who had in the meantime achieved the distinction of being a Platinum Power Seller – to reduce daily time input by a further 30%,
mainly through fewer e-mails and fewer corrections due to mistakes.
• Additional turnover: One of the leading Internet travel auctioneers developed an application using eBay web services. As a member of the eBay developer program, the firm was able to connect its inventory and order record systems to the eBay marketplace. Integration of the system facilitated auctioning hotel stays, flights and holiday offers via the eBay marketplace, encompassing several million buyers.
• New markets: A big merchant of consumer goods was looking for opportunities to develop new market segments for new products, warehouse products and discontinued lines. After he had started using API he was able to integrate his stock management system and a new order record system. When the products were then sold successfully via eBay, the company discovered that sales could be increased by expanding the business to include high-price products. By synchronizing offers on the company’s own website with those on the eBay marketplace, the number of buyers and profits were increased.

By utilizing eBay web services, all the potential value of electronic sales identified by Timmers could thus be validated. In analyzing the companies that used eBay web services for electronic sales, both traditional business as well as eBay PowerSellers could be identified.

5.2. Electronic procurement with eBay Web Services

Electronic procurement via eBay web services is less common than electronic sales. However, electronic procurement using eBay web services takes place by bidding for the object rather than by tendering, as Timmers had described it.

In this eBay promotes especially trade across borders, offering commercial buyers the chance of obtaining their goods directly from producers if they are offered on the eBay marketplace. For instance, numerous wine and delicatessen traders purchase their products directly from the producer, via eBay. In this way savings potential can be realized, as the produce does not have to be obtained in the traditional manner of distribution by an importer or wholesaler. In the USA, eBay operates a marketplace (reseller.ebay.com), established for this particular purpose, where goods are sold exclusively for reselling purposes.

Timmers links electronic procurement to particular value potential which can be generated by tendering, like for instance the larger choice of suppliers, better quality, lower prices, better delivery as well as a more advantageous sourcing process. In the case of electronic procurement via eBay web services, potential value can come about not only through tendering but also through being able to register price fluctuations quickly and, at the same time, to buy goods at the right time. Value potentialities here are lower prices as well as an automated and therefore cheaper buying process. In analyzing companies that utilize eBay’s web services for electronic procurement, both companies trading in traditional sectors as well as eBay PowerSellers could be identified.

5.3. Value chain services with eBay Web Services

On the basis of eBay web services many organizations have developed service offers which support individual value chain steps of third parties. Offers range from support in trading stock management, marketing, sales handling to dispatch.

Cultuzz, for instance, handles the selling process for 3,000 clients in the travel and tourism industries by utilizing eBay web services. In addition, Cultuzz currently runs 1,000 auctions per month on the basis of eBay web services. Transactions are largely automated, as hotel reservation systems are directly integrated with the eBay platform. If capacity utilization of hotels is low, relevant allocations can be offered automatically on the eBay marketplace.

Revenue is generated by a combination of various models identified by Timmers. On the one hand a commission of 7% of the sales price is charged per auction, and on the other a monthly fee of €10. When analyzing companies offering value chain services on the basis of eBay web services, both software producers and companies in the e-business sector could be identified.

5.4. Electronic auctions with eBay Web Services

Many organizations, especially from within the service provider sector, take the opportunity to auction their surplus service provider capacities at short notice and automatically via eBay web services. In this way hotels can, for instance, auction their free rooms on the last day, at short notice to the highest bidder and thus their free capacities are taken up. By this income production can be boosted.

The Marriott hotel chain, for instance, utilizes the Cultuzz offer for auctioning free hotel rooms via eBay web services at short notice, using the eBay platform.
The potential value of electronic auctions identified by Timmers can also be generated using eBay web services. By automation of auctioning excess capacities at short notice, the total operating capacity can be increased and the costs per unit decreased. In analyzing companies which execute auctions utilizing eBay web services, both companies trading in traditional sectors as well as eBay PowerSellers were identified.

5.5. Electronic Shopping Centres with eBay Web Services

Third party suppliers use eBay web services to filter special offers of sellers who are offering their products or services via eBay and then, for instance, present a theme-related range of products to their users.

For example, www.x-prozent.de filter special offers via eBay web services. Offers are listed by x-prozent according to the amount of discount, and the sales process is also executed via eBay. Numerous price search engines (e.g. shopping.com or idealo.de), which represent electronic shopping centers, also integrate eBay offers into their portals via eBay web services in order to be able to offer their users as wide a product choice as possible.

eBay supports these services within the framework of the eBay partner program. For each completed instant sale or for each bid that has come in via the website of an external provider, eBay pays a commission. On top of that eBay remunerates new registrations. These affiliate programs are typical for Internet providers of products or services in order to lead additional visitors to their respective offers. In addition, such affiliate programs allow for financing free services by a website operator. In analyzing companies which constitute electronic shopping centers utilizing eBay web services, particularly companies in the area of e-business were identified.

5.6. Information brokers with eBay Web Services

Many organizations use eBay web services in order to refine information gained from them by either editing it or combining it with other sources of information. Thus there are already about 75 so-called Mash-Ups based on eBay web services. These are applications linking information from eBay web services with other information and based on this, an information offer is placed in the Internet.

In this way, findnearby.net for instance links eBay web services with those of Google Maps so that the user can see, on a map of Google Maps, which eBay offers were placed in his vicinity. The business model of findnearby.net, which is designed for financing through advertising, would not be feasible without eBay web services. Especially in the case of large objects (cars, cupboards) or real estate, local searches are worthwhile as these objects typically are first inspected or difficult to dispatch.

Apart from these Mash-Ups, other organizations offer opportunities for obtaining eBay market data via a specially developed market data API and thus gain better understanding of trends, supply and demand, prices, as well as marketing options. Thus buyers and sellers at Terapeak.de can conduct sellers’ analyses, product analyses, trend analyses and further market analyses for €12.50 or €22.50 per month respectively.

The sources of revenue for information brokers identified by Timmers can be found in information brokering with eBay web services too. On one hand it is matter of models financed through advertising like findnearby.net, on the other they are models that are processed via subscriber fees like Terapeak.de. In analyzing the companies which broker information on the basis of eBay web services, Mash-Up providers as well as market analysts were found.

5.7. Virtual Communities with eBay Web Services

Many organizations use the Internet in order to establish virtual communities and in this way bind their users to their website. The basic function of virtual communities is that its members can communicate with each other about a common interest by utilizing electronic media.

Kaboodle’s business model is based on the idea of forming a virtual community, within which users simply list everything that interests them in Kaboodle, be it websites on the Internet or different supermarket products, and chat to like-minded people. By utilizing eBay web services, Kaboodle was able to integrate the virtual eBay community into the Kaboodle offers. In this way it is possible to import objects or services bought or sold by a user into Kaboodle and thus avoid the user’s having to manually enter his goods or services. An eBay user can therefore automatically build a list of goods or services which he bought or sold at eBay auctions in Kaboodle, and makes it possible for others to evaluate and comment on them. Other providers, such as RatingParadise.com, are planning to form a virtual community of experts who have made many top quality reviews on eBay and other websites, by integrating eBay user information via eBay web services.
The potential value of a virtual community accrues either through membership fees or advertising, the turnover increasing with the number of members. Thus eBay web services can help to enlarge virtual communities – as in the case of Kaboodle – in that the eBay community is automatically integrated via eBay web services. In the analysis of companies that form virtual communities based on eBay web services, particularly companies of the e-business sector were found.

6. Conclusion

Analysis of opportunities for using eBay web services being utilized within different business models shows that especially the e-business company models identified by Timmers can be realized on the basis of eBay web services supporting individual functions. No examples were found of the business models value chain integration, electronic marketplaces or collaborative platforms which were realized with the help of eBay web services.

For the remaining business models the question arises, who can typically realize which business models with the aid of eBay web services. Figure 3 shows the correlation between types of companies and business models in which only the grey-toned business models can be supported with the help of eBay web services.

It was shown that on the one hand additional business opportunities were generated for existing companies by using eBay web services. Many examples can be found in which both traditional businesses and also eBay PowerSellers conduct their sales, their procurement but also auctions via eBay web services. For instance, existing e-Business companies use eBay web services to enlarge their virtual communities or to integrate eBay offers into their electronic shopping mall.

On the other hand eBay web services offer potentialities for start-ups. Thus many examples can be found in which new businesses were created on the basis of eBay web services, especially those which, according to Timmers, show a high degree of innovation. Developers make use of eBay web services to construct and sell new software solutions, e.g. for value chain services, in order to offer new information services by linking up with other web services or refining eBay data and making them available in aggregated form for market and trend analyses. Examples of the new e-business companies are businesses which establish virtual communities based on eBay web services or other web services.

Based on above insights, guidelines can be derived insofar that particular target groups should systematically investigate consistent use of potentialities offered to third parties by web services. This paper showed scenarios for different business models according to Timmers’ classification of different types of companies by means of the example of eBay web services.

Future research should investigate other web services to establish whether similar potentialities exist to those that emerge when using eBay web services. The above analysis could serve as a framework for such research.
7. References


