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BUSINESS MODELS FOR VIRTUAL COMMUNITIES

AN EXPLORATIVE ANALYSIS

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Abstract

The paper gives a brief overview about business models in general and a specific analysis of business models for virtual communities, based on an explorative study (web analysis) of more than one hundred online communities.

The study focuses on the different components of an online community's business model: provided services, content management, registration and privacy policies, and revenue sources.

Keywords: Virtual communities, business models, revenue models, empirical study

What is a Business Model?

As Timmers has shown more than two years ago, the term business model is very popular by authors focusing their work on the competitive aspects of the digital economy. Unfortunately the term is not used consistently within the electronic commerce literature (Timmers, 1998). Therefore we start this investigation with a brief definition of the term business model:

A business model *"is the method by which a firm builds and uses its resources to offer its customers better value than its competitors and to make money doing so"* ((Afuah & Tucci, 2000), pp.3,4), this means a business model can also be seen as *"the organization (or architecture) of product, service and information flows and the sources of revenues and benefits for suppliers and customers"* ((Timmers, 2000), p.31).

Based on these definitions business models are regarded as "pictures" of the utility generating production, service, and sales systems of an enterprise. We prefer the phrase "utility generating" rather than "profit or revenue generating" because we think generating incomes alone might be good enough for a revenue model but not for a business model. A business model is more holistic, it comprises all benefit generating elements for the enterprise, its customers and partners. Nevertheless the ability of generating revenues is the most important capability of a business model.

Many enterprises of the new economy have not paid enough attention to the revenue generating ability of their business models. We think that this is one of the major reasons why the new economy has been in trouble (falling stock ratings, drop of wages,) since the NASDAQ crash in March 2000 (Brandtweiner, 2001).

The objective of this article is to learn something about the specific forms of business models of virtual communities and to identify the typical components of these business models.

Definition of Virtual Communities

Virtual communities can be seen either as pure social aggregations, based on a sufficient human feeling that leads to a formation of personal relationships in cyberspace (Rheingold, 1993) or more from a commercial perspective in the sense of Armstrong & Hagel (1996).

Following the commercial view on virtual communities we regard them as groups of internet users sharing common interests and needs. Most of the people are attracted by the communities because they provide the opportunity to “meet” with like-minded strangers regardless where they are. But these communities are more than simple social institutions. In the beginning virtual communities were only groups drawn together by common interests, now virtual communities are groups with a critical mass of purchasing power. This economic power is based on two facts: (a) In communities, members can exchange information with each other on topics like the quality of products and services and their prices (Hagel & Armstrong, 1997) and (b) Communities are a perfect place for marketing activities because they are pools of consumers of specific demographics and/or interests (Turban, Lee, King, & Chung, 2000).

The Economics of Virtual Communities

From an economic point of view the simple sense of group cohesion is not a sufficient explanation for the formation and existence of virtual communities, both formation and existence of a community will only occur if it delivers utility to its members and related parties, like merchants and advertisers.

So why should web users visit a virtual community? First because he/she has “heard” that this specific community will serve his/her interests and needs. If the community fulfills the expectations of the user he/she will start using the community services more intensively. The users will invest time and efforts in developing relationships with other members and in creating e.g. a personalized interface or a “one click ordering account” (Afuah & Tucci, 2000). Therefore the users are likely to have high switching costs if they change the community and this increases the probability of a lock in of the consumers. A lock in will only occur if the community delivers value to the person visiting it (Brandtweiner, 2000), i.e. the value of a virtual community is an expression of the community’s ability to satisfy the wants and needs of the target group (Siegel, 1997).

A community which is valuable to the consumers is also valuable for merchants, market makers and advertisers. Virtual communities are suitable instruments for adding value for the customer. This means not only the price and quality of the product make that customers buy from a certain virtual merchant: It is the total value the customer gets from a certain Web site that leads to the purchase. In operational terms this fact may be expressed as the target of the virtual merchant to maximize the customer delivered value (Scharl & Brandtweiner, 1998b), which is calculated as follows (Kotler, 1999):

Total Customer Value
(Product, services (including communities),
image values and psychic utility)

MINUS **Total Customer Cost**
(Monetary, time, energy, and psychic costs)
—————
EQUALS **Customer Delivered Value**
(„Profit” to the consumer)

By maximizing the customer delivered value virtual communities play an important role: Communities support the creation of trust and it is a generally accepted fact that trust is a key factor for successful online business (Armstrong & Hagel, 1996). In addition, virtual communities support the collection of customer-specific data. Customer-specific data enables the marketer to provide customized solutions, i.e. products, information and services (Hagel & Armstrong, 1997), and these community enabled customized solutions will create a trustful long-term relationship between customer and merchant, i.e. the merchant can utilize the cumulated purchasing power of the community members (Schubert & Ginsburg, 1999).

As a result of all these facts, virtual communities normally lead to market expansion: Primarily responsible for the market expansion is the reduction of transaction costs for vendors and customers due to the improved communication. Because of this transaction cost reduction the supply as well as the demand curve shifts to the right. As a result of this movement of the curves the intersection of the supply and demand curve lies farther right than in the days before virtual communities and this means that the sales volume has risen (Hagel & Armstrong, 1997).

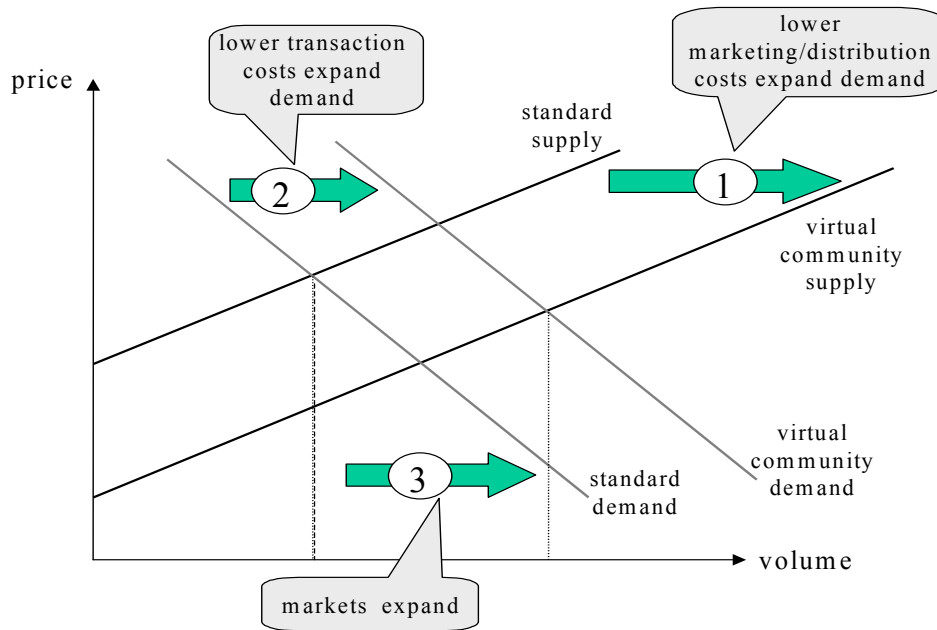


Figure 1. Market Expansion (Hagel & Armstrong, 1997)

The real value of virtual communities for merchants, market makers and advertisers comes from the community members. A virtual community can be an important add-on to a virtual shop in order to generate customer loyalty and a market expansion. For some market sectors virtual communities are a must already. In the B2C field the sectors books and music have to be mentioned (e.g. amazon.com and napster) and in the B2B field the metal industry is a good example (Timmers, 1998).

Research Model

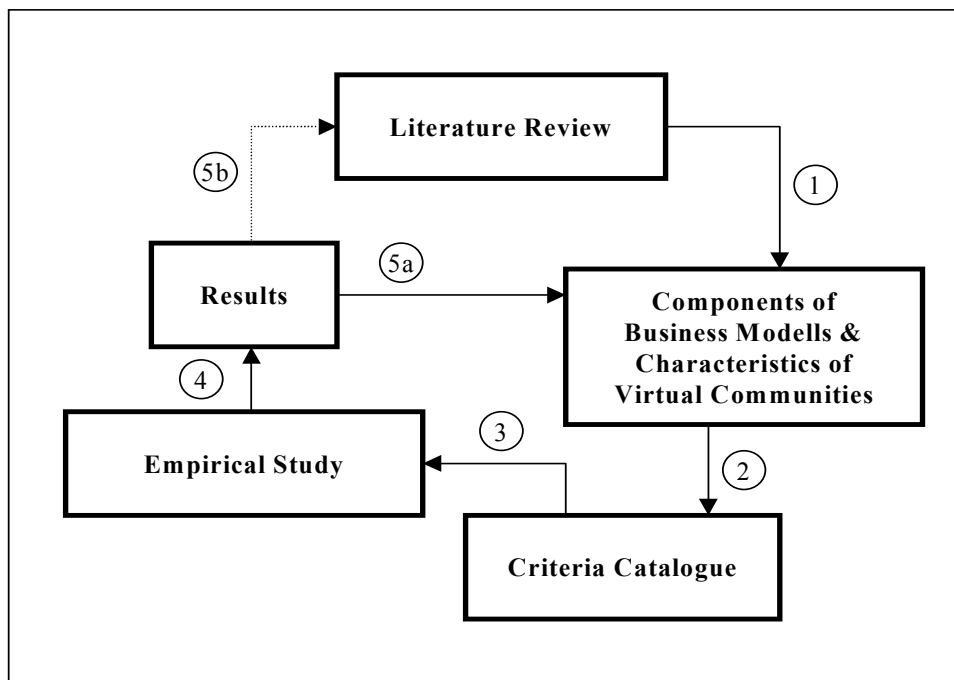


Figure 2. Research Model

Our research was based on the model presented in figure two. We started with an intensive literature review and developed on the bases of this theoretical knowledge our analysis tool. As we will described in the next section our analysis tool has been improved during a pre test phase

Important for us was that some findings may call for an alternative interpretation of the literature and therefor the literatures influence on the analysis tool may change as more (empirical) information is learned.

Method, Design and Purpose of the Study

The study was completed as explorative research based on an analysis of the web sites of 133 virtual communities. The study was conducted in the summer 2000 and should provide first empirical based insights in business models of virtual communities. The data collection was done by a student of our department under the supervision of one of the authors (Waldmüller, 2000).

The main instrument of analysis was a criteria catalogue that was first developed on a theoretical base and was consistently enlarged and improved during the analysis. This approach had the consequence that approximately the first 40 virtual communities were analyzed more than once, because of changes and improvements of the analysis tool.

The following types of communities have been analyzed.

Table 1. Categories of Analyzed Virtual Communities

Categories of analyzed Virtual Communities	Number of Subcategories	Number of Categories
Topical Virtual Communities (VCs)		106
Different Topics (Horses, Golfing, Pets etc.)	25	
Finance VCs	17	
VCs in Web Portals (and Search Engines)	10	
VCs of Information Services	11	
Game and Fantasy VCs	8	
Research VCs	6	
Product Specific VCs	29	
Target Group Specific VCs		12
Geographical VCs		15
Total Number of Analyzed VCs		133

Research Questions

The basic research question in this study is: "How do business models of virtual communities look like, what are their components and in which specific forms do they appear?"

For answering this basic question, the question was operationalized, i.e. decomposed into five specific research questions. The topics of these research questions corresponds to important aspects of business models for virtual communities:

1. What types of Internet-specific services are provided?
2. Is there some kind of content management?
3. What are the dominant registration policies?
4. What are the dominant privacy policies?
5. What are the most important revenues sources for virtual communities?

Findings of the Study

The findings of the study are presented in five separated sections corresponding to the research questions.

Provision of Internet Specific Services

The Internet services which are provided by the analyzed communities are shown in the table below.

Table 2. Provided Internet Specific Services

	Portion	Quantity
Internal Search Function	97%	129
External Search Function	28%	37
Community Calendar Services	61%	81
Email Accounts	46%	61
Homepage for Members	28%	37
Newsletters	91%	121
Email Feedback Forms	100%	133
Ecards	35%	46
Discussion Platforms	98%	131
Chats	71%	95
Web Wide Paging	23%	31

Internal search functions, newsletters, feedback services (e-mail), discussion platforms and chats are the services which are provided very often.

External search functions (e.g. “search the web”), possibility for members to build their own homepage within the communities web space, electronic greeting cards, and web wide paging systems (e.g. ICQ, ichtat, LiveList, PeopleLink) are provided more seldom.

Interesting is that community calendar services (to announce e.g. chat events or things like that) are used by 61%, but the provision of email accounts is supported just by 46% of the analyzed communities.

Content Management

The content is one of the most important components of a virtual community’s business (Armstrong & Hagel, 1996). Therefore we think that an effective content management is necessary for a successful online community, e.g. chats and discussion platforms should be tightly related to the communities topics, postings should be evaluated (by members and by the administration), and postings should be easy to find.

The following table shows what content management related activities and services are provided by the 133 communities we have analyzed.

Table 3. Content Management in VCs, n=133

Content Management Activities	Portion of VCs Providing These Activities
Discussions and chats are kept closely related to VC themes.	76%
Active participation of VC administration in discussions and chats.	88%
Selected, very active community members get (restricted) administration rights.	83%
Evaluation of postings from the community administration.	20%
Evaluation of postings from community members.	23%
Search function for postings of certain members	53%
Search function for postings with good evaluations.	21%
Search functions for postings sent in a certain period of time.	47%

Registration

The registration is obviously an important feature of virtual communities. The data collected during the registration process may be used for revenue generating purposes, e.g. selling it to advertisers as marketing information.

For an active participation, 127 of the 133 analyzed virtual communities insist on a registration. 120 communities allow the user to choose a log in name, only in seven cases the community administration selects a log in name for the user. The password for the first log in is selected in 40 communities by the community management, the remaining 87 communities allow the user to choose a pass word.

A detailed representation of an email address is obligatory in 123 communities, one community leaves it to the consumer if he/she provides an emailaddress and three do not ask for an email address. Together with the six communities which have no obligatory registration nine communities do not ask for an email address.

Other member data in which the communities are interested in is shown in figure three.

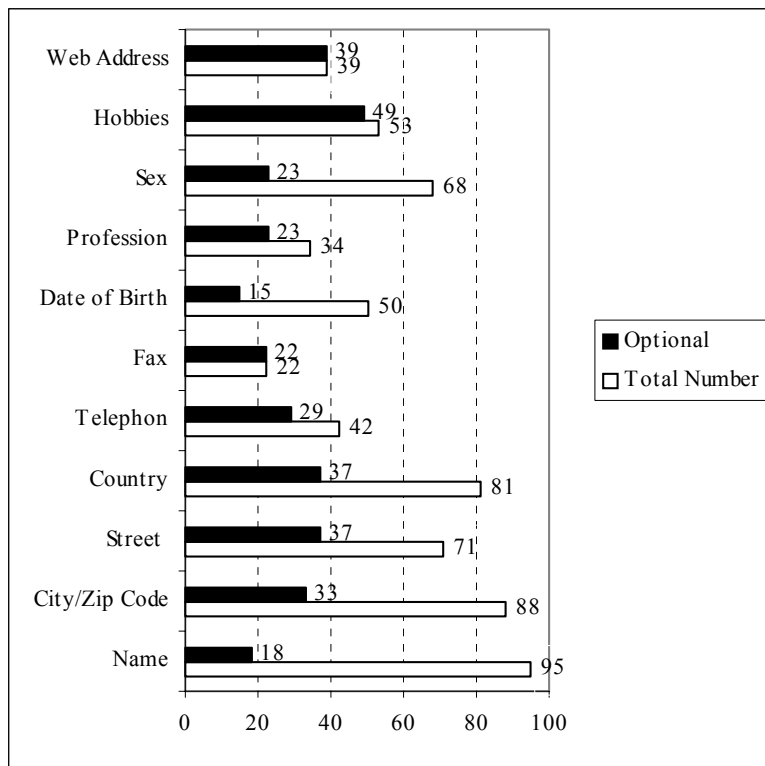


Figure 3. Collected Member Data (except e-mail address), n=133

Privacy Policies

As mentioned above, six of the 133 analyzed virtual communities have no registration facilities, therefore they do not provide any information about privacy. Despite of the fact that the vast majority of the remaining 127 communities provide information concerning their privacy policies 22% of the whole sample do not say what they intend to do with the collected user data.

The commercial use of the collected member data is obviously important for many virtual communities. The majority (98) of the communities provide information for which purposes the collected data is used, 62 of them provide detailed and 36 inaccurate information. 29 communities (the 22% mentioned above) have some statements concerning privacy on their sites but do not say what they do with the socio-demographic data collected by them.

Explicit information on cookies that might be used was provided by 67 (50%) of the analyzed web sites.

Revenue Sources of Virtual Communities

The major income sources of virtual communities are:

1. Subscription or access fees
2. Advertising
3. Trade: sales revenues, commissions and demand expansion (community effect)

As we have only analyzed communities that grant free access, we cannot provide any findings concerning the subscription or access fee business model.

The advertising model is very attractive for virtual communities, simply because virtual communities are very attractive for advertiser because they provide usually “pure” target groups. Theoretically this means that virtual communities can charge higher prices for their advertising space, but in practice the target group provision has almost no effect on the price. The advertising prices depend almost alone on the amount of persons visiting the site (expressed in page impressions or visits), the more people visit the site, the higher is the price for the advertisers. This does not mean that these target group providing functions of virtual communities have no influence at all. It plays an important role when advertisers decide where to place their advertisements (Hagel & Armstrong, 1997).

From the communities we have analyzed 90 % use advertising (somewhere on their sites) for revenue generation, but just 45 % place the banners according to certain topics of discussion platforms, i.e. only 60 from 133 virtual communities execute a theme-specific advertising strategy.

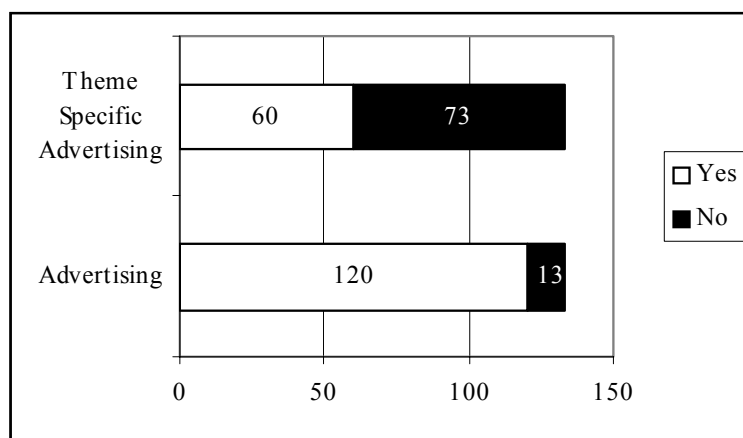
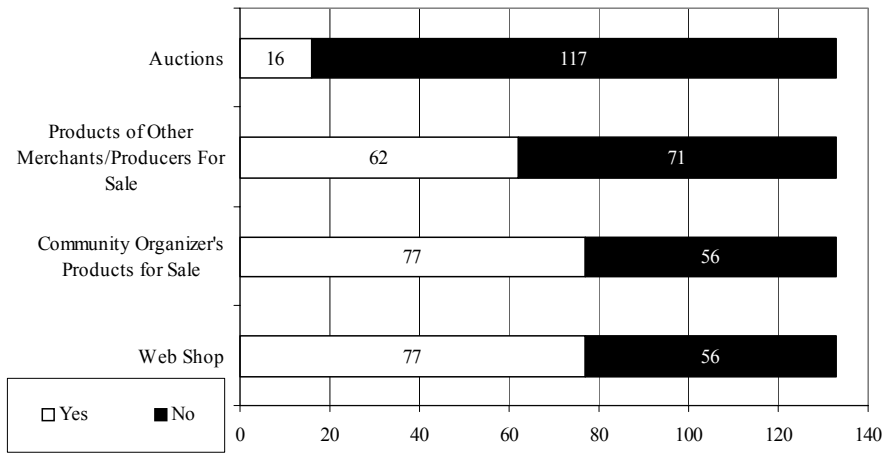


Figure 4. Advertising Activities in Virtual Communities, n=133

Virtual communities utilizing trade as revenue generator basically have two options: Either they can sell their own products or products of other merchants/producers. The corresponding income types are classical sales revenues and commissions.

Higher incomes because of demand expansion (e.g. amazon.com) are just relevant for merchants adding one or more communities to their web shop to achieve better customer loyalty and benefit from the so-called community effect. As our analysis has focused on web sites which are primarily communities and not primarily merchants using communities for sales improvements, we cannot provide any new findings on that topic.

From the 133 virtual communities we have analyzed 77 have a web shop, 62 sell not only the community organizer’s products but products from other producers/merchants too, and 16 communities provide auctions as sales mechanisms.



	Portion
Web Shop	58%
Community Organizer's Products for Sale	58%
Products of Other Merchants/Producers For Sale	47%
Auctions	12%

Figure 5. Trade in Virtual Communities, n=133

Conclusions and Summary

We have defined business models as "pictures" of the utility generating production, service, and sales systems of an enterprise. We have emphasized that business models are more than revenue models but the ability of generating revenues is the most important ability of a business model.

Our research has shown that virtual communities which are normally regarded as social aggregations rather than revenue generating institutions make intensive use of different business models.

The 133 communities we have analyzed use advertising and merchant activities for revenue generation. If we apply the business model taxonomy of (Afuah & Tucci, 2000) on our findings, we see that virtual communities use four business models in combination: the advertising model, infomediary model (an organization collects valuable information on consumers and their buying habits and sells this information), the merchant model and the community model.

Areas for Further Research

We have just analyzed virtual communities which do not charge subscription or access fees and which are independent institutions and not add-ons to e-shops or e-malls.

We think that especially the second community type is already very important and will become even more important in the next years. Therefore we intend to conduct a study emphasizing on the add-on communities of e-shops and e-malls (e.g. amazon.com) in the near future.

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