



Online publisher; Competing in the digital market of the print industry

Thesis

R.G.J. Vleerbos

October 2007

Online publisher; Competing in the digital market of the print industry

COLOFON

Document: Thesis
Version: 1.0
Date: 04-10-2007
Status: Final
Author: R.G.J. Vleerbos
Studentnr. S0117803
Email: r.g.j.vleerbos @ student.utwente.nl
Phone number: +31 (0) 6 11 426 336
Address: Snoeymansweg 6, 7668 TH Haarle (gem. Tubbergen)

Institution: University of Twente
Education: Business Administration
Mastertrack: Innovation Management
Faculty: School of Management and Governance
Supervisor: Mrs. A. von Raesfeld PhD.
Second Supervisor: Mr. E. Constantinides PhD.
Visiting address: Drienerlolaan 5, 7522 NB Enschede
Postal address: P.O. Box 217, 7500 AE Enschede

Company: PrintPartners Ipskamp B.V.
Company Supervisor: Mr. M. den Ouden
Visiting address: Capitool 25, Business & Science Park Enschede
Postal address: P.O. box 333, 7500 AH Enschede

© Rob Vleerbos, Enschede, 2007

No part of this thesis may be reproduced by print, photocopy or any other means without the written permission of the writer.

'Soms denk ik uren na en heb ik nog niks op papier, een andere keer bereik ik precies datzelfde in 5 minuten.' - Herman Finkers

Version registration

Version	Author	Date	Note
0.1	R.G.J. Vleerbos	29-03-2007	Draft version
0.2	R.G.J. Vleerbos	13-04-2007	Integration PvA and Preliminary investigation
0.2	R.G.J. Vleerbos	19-04-2007	Theoretical outline, methodological approach,
0.3	R.G.J. Vleerbos	14-05-2007	Analysis (competition, suppliers) market (2.6), 4.1 and 4.2 contents revision
0.4	R.G.J. Vleerbos	06-06-2007	Integration research results and conclusions (analysis)
0.5	R.G.J. Vleerbos	28-06-2007	"Red line", appendixes, research results
0.6	R.G.J. Vleerbos	23-07-2007	Red line, conclusions, specifying some parts
0.7	R.G.J. Vleerbos	27-08-2007	Feedback revision
1.0	R.G.J. Vleerbos	17-09-2007	Final feedback revision

Preface

This thesis is the result of the graduation project for the master program Business Administration. During the master program I specialized in the track Innovation Management. My student time was a busy period in which I did a lot of things, I even found time to study at some rare moments.

There are a number of people which I like to thank for their cooperation. First of all I would like to thank all my colleagues at PrintPartners Ipskamp, with special attention to my company supervisor, Martijn den Ouden, for the help and possibilities they gave me to write my thesis. These possibilities included valuable advice and an interesting look into the organization.

My special thanks goes to Ariane von Raesfeld and Efthymios Constantinides for their advice and guidance to get my thesis at an academic level and their enthusiasm and flexibility.

I would also like to thank my parents and my girlfriend Kristel for their motivating words.

Rob Vleerbos

Enschede, October 2007

Management Summary

Recently, some important developments occurred in the print industry. New technical possibilities lead to new ways of offering value to customers. The average customer becomes more demanding because of the new possibilities, he wants to be able to introduce changes until the last moment (flexibility) and keep stock as small as possible (Just in Time delivery). The new developments form on the one hand a big threat to traditional print companies. But on the other hand there are big chances for print companies who adapt to these new developments.

PrintPartners Ipskamp (PPI) is a print company specialized in the production of books, brochures, manuals and publications in batches of one to several thousands. PPI has an especially strong position in the academic market, they are market leader in dissertation printing. To answer the changing customer needs and to defend their market position, PPI is planning to set up an online publisher with the possibility to adapt the book layout online. Orders will be printed on demand.

To make the online publisher a successful business, it is important for PPI to position the online publisher strategically in the academic publishing market. The goal of this research is to identify a suitable strategy for this: *"What is a suitable strategy that allows PPI to position the online publisher in the academic publishing market, with respect to the environment, stakeholders and the company's strategic capability"*.

In the literature study, the notions of strategy were examined. Also literature on marketing models and business models was examined to determine suitable models usable in this research. Different segmentation bases were examined to determine a suitable segmentation basis for positioning the online publisher in a suitable market segment. And literature on determining customer needs was examined to set up a thorough basis for the research.

The research consists of three parts. First, the print industry has been analyzed to determine the influence of the recent developments. And a preliminary segmentation has taken place in which the academic market has been chosen as a suitable market segment.

Then a desk research was executed in which the academic market was analyzed in more detail and the competition in the market segment was analyzed. Also an internal analysis took place to determine the readiness of PPI for the online venture.

The empirical research analyses the customers' point of view towards the possibilities of the online publisher. The goal was to make a match between the offering of PPI and the customer needs and wishes.

The results of the research were used as input for a SWOT analysis. The SWOT analysis formed the foundation for the recommendations with regard to the strategy that PPI can choose to position the online publisher successfully in the market.

The results form a strategic basis for setting up the online publisher in the academic market.

Contents

1.	INTRODUCTION	9
1.1	BACKGROUND	9
1.1.1	<i>PrintPartners Ipskamp</i>	10
1.1.2	<i>Online publisher</i>	10
1.2	RESEARCH DESIGN	10
1.2.1	<i>Research goal</i>	10
1.2.2	<i>Problem statement</i>	11
1.2.3	<i>Research questions</i>	11
1.3	RESEARCH APPROACH AND THESIS OUTLINE	11
2.	THEORETICAL OUTLINE.....	13
2.1	STRATEGY; AN OUTLINE	13
2.2	MARKETING MODELS	14
2.3	BUSINESS MODELS	14
2.3.1	<i>Overview of business models</i>	15
2.4	THE 4S MODEL AS BASIS FOR THE BUSINESS MODEL.....	16
2.5	CHOOSING A SEGMENT	16
2.5.1	<i>Conventional and progressive bases</i>	16
2.5	HOW TO DETERMINE WHAT CUSTOMERS WANT	17
2.6	EVALUATING THE 4S MODEL IN A B2B MARKET SEGMENT	17
2.7	SUMMARY	18
3.	METHODOLOGY	20
3.1	THE PRELIMINARY RESEARCH	20
3.1.1	<i>Method for external analysis</i>	20
3.1.2	<i>Method for internal analysis</i>	21
3.1.3	<i>Market segmentation method</i>	21
3.2	DESK RESEARCH	22
3.2.1	<i>Competitor analysis</i>	23
3.2.2	<i>Internal analysis</i>	23
3.2.3	<i>Stakeholder analysis</i>	24
3.2.4	<i>System</i>	24
3.3	EMPIRICAL RESEARCH	25
3.3.1	<i>The case study</i>	25
3.4	BUSINESS MODEL	28
3.5	SUMMARY	28

4.	ANALYSIS	29
4.1	SUMMARY	29
5.	ANALYSIS PART 2: SWOT CONFRONTATION	30
5.1	SUMMARY	30
6.	CONCLUSIONS	31
6.1	SUMMARY	31
6.2	REFLECTION UPON THE USE OF THE 4S MODEL	31
	SOURCES	32

1. Introduction

This document encloses the results of my graduation assignment for the master program Business Administration at the University of Twente in Enschede. The graduation assignment is conducted at PrintPartners Ipskamp B.V. in Enschede. This chapter will give an overview of the background of the research, the research goal and the research approach.

1.1 Background

The print industry belongs to the bigger branches of industry. The companies in the branch occupy themselves with reprint and duplication of information. Printed paper is the most important product. The print industry has some specific sectors. The usual categorization is printing offices, print preparation companies (prepress) and print finishing companies.

Recently, some important developments occurred in the print industry. There is an important shifting from traditional print to digital print. Digital print means that data (images or text) is transferred directly to the carrier (paper). Besides this, there are some important trends like Web-to-Print and Print-on-Demand. Web-to-Print is an operating procedure where customers upload information by means of the internet. This information will be transferred automatically to an accurately shaped publication and processed to a print or electronic end product. Printing-on-Demand is a digital print technology that can be used to print a complete book in only a few minutes. This technology makes it easy and cost-efficient to print books in batches of only one or two, instead of big print-runs of hundreds or thousands [Sectorstudie Grafimedia, 2002].

The average customer becomes more demanding because of the new possibilities, he wants to be able to introduce changes until the last moment (flexibility) and keep stock as small as possible (Just in Time delivery). The network of the print industry is also subject to change. Before, the network of the print industry was a synoptic linear chain where prepress, print and finishing could be distinguished. The new development have changed this into a complex network branch in which prepress, print and finishing became more and more integrated and all kinds of interconnections with other branches of industry originated [Romano, 2004].

Thanks to the internet the market became more transparent, and because of new technologies it is possible to print cheaper. This causes customers to compare prices more often. The whole process becomes more flexible, customers can place orders with a batch size of just one piece, and reordering becomes more easy, faster and cheaper.

These developments form on the one hand a big threat to traditional print companies. But on the other hand there are big chances for print companies who adapt to these new developments. Some existing companies make use of this and a number of new companies originated that adapt to these new developments, like Lulu and Vistaprint. For example, at Lulu a customer can print a book without startup costs and minimum batch size, where the book is printed when an order has been placed, and not before.

The companies that adapt to these new developments are rapidly gaining market share. Customer needs are changing and customers become more demanding. Extra services become more important. PrintPartners Ipskamp can make advantage of the recent technical developments to be able to answer the changing customer needs and to defend their market position against the already adapting companies.

1.1.1 PrintPartners Ipskamp

PrintPartners Ipskamp (PPI) is a print company specialized in the production of books, brochures, manuals and publications in batches of one to several thousands. They print in black/white and color. PPI is a big player in the market for scientific publications. They have market share of around 25% in the Dutch dissertation market. Some important customers are for example the University of Amsterdam and the CITO institute.

1.1.2 Online publisher

PPI is planning to set up a digital publisher with the possibility to adapt the book layout online. A digital publisher in this context means an online application that can be used by the customers to upload print material to PPI. This upload tool can be integrated in the intranet environment of the customer. The customer can adapt the book layout online and also customized templates can be used for the layout and cover. The material will be printed on demand.

This makes it possible to adapt to the recent developments. Run time will be shortened, printing becomes cheaper because customers can deliver their print paper online in the right format, which causes a decrease to prepress costs.

Another option that PPI wants to give its customers is to possibility to offer and sell their print material online. Stock will be limited to a minimum because an order via the online publisher will not be printed until the moment that the order has been placed. And the print material can be made available to anyone who is interested through buy-now links on websites like Amazon.com or the customer's own homepage. The customer can also chose to make the online selling option only internally available.

Write book >> Upload book >> Create layout >> PDF book >> Web store internal/external >> Print on demand

“Online publisher” process

1.2 Research design

To get to a market positioning it is important to identify the needs of the customers with regard to the (changing) factors on which they base their choices. This will allow PPI to set up an online publisher that matches the needs of the potential customers.

Competition has increased and changed with regard to the technological developments. The competition has to be mapped to give PPI the possibility to position the online publisher with respect to the competition in the digital market.

To be able to position the online publisher, it is also very important to look internal; what are the core competencies and capabilities of PPI. Are there elements in these competencies and capabilities that makes it possible for PPI to differentiate itself in the market, and more important, has PPI the competencies and capabilities to set up an online publisher successfully. The product itself, the online publisher, is an important factor in this.

And because of changes in the network it is important to determine the position of PPI in the network to point out in how far PPI depends on the network to set up and position the online publisher in the digitalizing market.

1.2.1 Research goal

The development of a business model that allows PPI to position the online publisher strategically in the academic publishing market with respect to the environment, stakeholders and the company's strategic capability.

1.2.2 Problem statement

Based on the research goal the following central question can be formulated:

“What is a suitable strategy that allows PPI to position the online publisher in the academic publishing market, with respect to the environment, stakeholders and the company’s strategic capability”

The central question contains the following important elements:

- *Strategy* is the direction and scope of an organization over the long term, which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholder expectations and providing superior value to particular market segments [Johnson et al, 2006a].
- *Strategic position* is concerned with the impact on strategy of the external environment, an organization’s strategic capability (resources and competences) and the expectations and influence of stakeholders [Johnson et al, 2006b].
- *Online publisher*: A digital upload tool for print material with the possibility to make the printed material online available for the customer or third parties. Reorders will be printed on demand.
- *Environment*: The first level is the vertical environment, which consists of relationships that link a supplier firm with each of its current buyers and its potential buyers. The second level is the competitor environment, in which the actions of firms that compete with a given supplier influence that supplier’s actions. The competitor environment consists of suppliers that sell goods similar in function to those of a focal supplier. The third level is the community environment, which encompasses the aggregate behavior of supplier firms that produce different components and therefore do not compete directly with a focal supplier [Martin et al, 1998].
- *Stakeholders* are those individuals or groups who depend on the organization to fulfil their own goals, and on whom, in turn, the organisation depends [Johnson et al, 2006c].
- *Strategic capability* is concerned with the resources and competences that an organization can use to provide value to customers or clients. Unique resources and core competences are the basis upon which an organization achieves strategic advantage and distinguished itself from competitors [Johnson et al, 2006d].

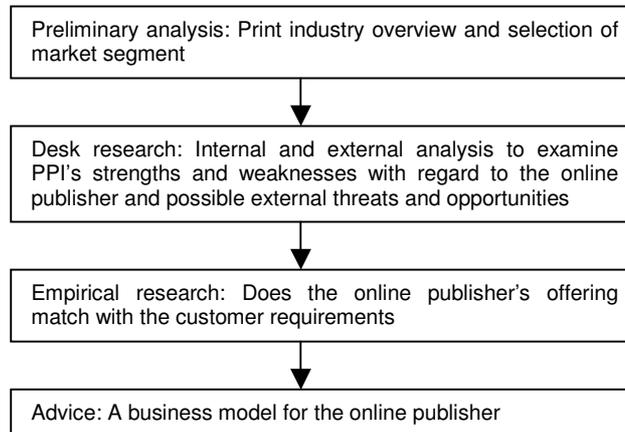
1.2.3 Research questions

- What is the current *competitive* position of PPI in the academic publishing market?
- Which *competences* and *resources* does PPI need to position the online publisher successfully in the market?
- On which *stakeholders* does PPI depend to exploit the online publisher successfully?
- What are the needs of the *customer* in the academic publishing market?
- How can PPI *position* itself in the academic publishing market to make the online publisher distinctive?

1.3 Research approach and thesis outline

The choice for the academic publishing market will be explained in the preliminary analysis. The needs of the consumer in that market segment are unclear. The academic market is also a large segment, so the needs of the consumers in the segment can vary depending on the sub segment they are in. The research consists of two parts, a desk research and an empirical research. The most important aspect for the success of the online publisher is to identify the needs of the customers in the academic market segment and analyze if there is a match with

the online publisher that PPI wants to offer. So the needs of the customers in the academic market will be identified by empirical research. Other important aspects are the competition; do they offer comparable concepts and can PPI differentiate from them? The resources and competences of PPI; is PPI able to set up the online publisher? And the stakeholders; to what extent is PPI dependent upon them to set up the online publisher? These questions will be answered by desk research. Both parts combined will lead to an advice about the positioning of the online publisher in the academic market.



Desk research

A desk research will be conducted in which the competitors, stakeholders, and the internal organization of PPI will be analyzed. Data will be gathered by means of secondary research [Verschuren & Doorewaard, 1984] to extract more information about the known competitors and to search for possible new competitors. Competitor and business partner data will be extracted from annual reports, statistical data about the print industry, and academic publishing data from different studies (e.g. CBS, European Commission, Print Industry Center). Data about the internal organization will be identified by interviewing employees and by examining internal documents. The gathered data will be used to perform a competitor analysis and a stakeholder analysis.

Empirical research

To identify the market potential for the online publisher, an empirical research will be conducted by interviewing (potential) customers about the needs and wishes with regard to online publishing.

The results of both parts will be combined to form a business model that allows PPI to position the online publisher in the academic market.

Thesis outline

The theoretical background for this research will be presented in the following chapter. In the third chapter, the methodology will be explained. The main concept used will be the 4S model of Constantinides [2005]. The analysis of the research results will be described in the fourth chapter. An empirical study will be conducted to get an answer to what the needs of the customer are in the academic market segment. Questions about the stakeholders and competition of PPI will be answered by interviewing commercial people within PPI, and by conducting a desk research of statistical data descriptions of the branch and documents in the form of annual reports and sector reports. The research results will be used in a SWOT analysis in chapter five. And the conclusions will be presented in the sixth chapter.

2. Theoretical outline

This chapter gives an overview of the different theories that have been taken into account. First, an outline will be given of the different notions of strategy. In 2.2, different market models will be described and the choice for the 4S-model will be made. In paragraph 2.3 different business models will be discussed. The usage of the 4S model to fill in a business model will be explained in paragraph 2.4. In paragraph 2.5, different segmentation methods will be discussed. Different methods are available to be able to understand what customers want; these will be discussed in paragraph 2.6.

2.1 Strategy; an outline

The problem statement of this research is *“What is a suitable strategy that allows PPI to position the online publisher in the academic publishing market, with respect to the environment, stakeholders and the companies strategic capability”* [Johnson et al., 2006a]. Strategy plays a central role in this problem statement. Strategy is a broad definition that is used for a variety of contexts. As stated in the definitions in chapter one, *strategy is the direction and scope of an organization over the long term, which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholder expectations and providing superior value to particular market segments* [Johnson et al, 2006a]. Because strategy is a very important element in this study, the notion of strategy will be explored further in this subchapter and the choice for the chosen definition will be explained.

Mintzberg [1998] gives a comprehensive overview of ten different schools of strategy in his book ‘Strategy safari’. With his co-authors Ahlstrand and Lampel, he reviewed more than 2,000 texts in preparation of his book. Mintzberg [1998] also presents the ‘the 5 P’s of strategy’, which are different ways of thinking about the essential characteristics of strategic planning. The 5 P’s and the 10 schools that he described are explained in appendix 1. None of these 10 approaches is complete in and of itself, either. Each offers some useful concepts, but has its disadvantages as well.

Anderson [2004] gives an overview of the notion of strategy. He uses the article “What is strategy” of Michael Porter to describe the difference between operational effectiveness and strategy. Operational effectiveness means performing similar activities better than rivals perform them. And according to Porter, strategy is the creation of a unique and valuable position, involving a different set of activities. Strategy is about pursuing a course of action different from competitors and providing superior value to particular market segments [Anderson, 2004, page 133].

Johnson [2006a] described a number of characteristics that are usually associated with the word ‘strategy’, but also gives a good description of his notion of strategy. Strategy in the notion of this thesis will be used as *the direction and scope of an organization over the long term, which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholder expectations and providing superior value to particular market segments.*

The definition of Johnson [2006a] also takes the main points of the notions described by the other authors. As indicated by Johnson, strategy is about gaining a long-term advantage. Strategy goes from the inside out, overlapping the design school described by Mintzberg [1998]. And the goal is providing superior value to a particular market segment, as indicated by Anderson. Crafting a market strategy is according to Anderson [2004, page 131] *the process of studying how to exploit a firm’s resources to achieve short term and long-term marketplace success.*

With respect to this research, the definition of strategy is used as a central guide for the advice. The description of Johnson can be fit into the goal of this research; *To give PPI advice about the direction and scope of the company for the long term to achieve advantage in the*

changing environment of the print industry through its configuration of resources and competences with the aim of fulfilling stakeholder expectations and providing superior value to the academic market segment by setting up an online publisher.

2.2 Marketing Models

Strategic tools and models are often used to analyze marketing decisions. For these analyses, a number of marketing models are available. For the online publisher, an important element is e-commerce. E-commerce is gaining importance rapidly. There are a number of marketing model developed that take e-commerce to a more or less extend into account.

The most common model is the 4P-model [McCarthy, 1964]. The 4P-model is based on sets of activities (Product, Price, Place and Promotion), which are used to craft a marketing plan. This model is criticized by a number of scholars that argue that the 4P model is not very suitable in an e-commerce environment. One of the critique points of Lauterborn [1990] on the 4P model is that it reasons too much from the perspective of the company and not enough from the perspective of the customer. Lauterborn [1990] states that each of the four original P variables must be seen from a customer perspective. This can be done by the conversion of the 4P-model to the 4C-model. The 4C model translated product to consumer model, price to costs for the consumer, promotion to communication and place to convenience.

Constantinides [2005] argues that the four elements of the 4P model cannot be seen detached from each other in a virtual environment. He proposes the 4S model that integrates the strategic (scope), operational (site), organizational (synergy) and technical (system) elements of the marketing management process.

Comparing the three models, the 4P and the 4C models are more limited to operational marketing decisions while the 4S model takes both strategic and operational aspects into account, but is limited to the business-to-consumer market. The 4S model also focuses more on the website itself, while the other models are broader applicable. But because the 4S model integrates the virtual activities within the existing company strategy, marketing and operations, it will be used as a theoretical framework. The use of the 4S model in a B2B market will be evaluated upon in the final chapter of this thesis.

2.3 Business models

The results from the 4S model will be used to create an advice that allows PPI to position the online publisher in the academic publishing market. This will result in a business model for the online publisher.

There is no commonly accepted definition of a business model, and there are also a number of different models available. Most research on business models has focused on an e-business context and research on e-business models has focused primarily on two complementary streams: taxonomies of business models and definitions of components of business models [Malone et al. 2006]. The results of the 4S model will be used as a basis for the business model, so I will use the definitions of relevant business model components to identify the most important business model in this setting.

With respect to this research, it is important to know who the customer is (target customer), what the customer wants (value proposition) what competencies PPI needs to deliver the value to the customer (core competency) and which business partners are required (Partner network). These building blocks will be used as requirements to identify a suitable business model. Osterwalder made a comparison of a large number of business models based on the 9 building blocks [Osterwalder 2005, page 19-20]. Target customers, value proposition, core competency and partner network are four of them and these will be used as most important criteria for the business model selection.

2.3.1 Overview of business models

There are a lot of business models, the most suitable business models that include the 4 important building blocks with regard to this research are described hereunder:

Weill and Vitale [2001] define a business model as a description of the roles and relationships among a firm's consumers, customers, allies and suppliers and it identifies the major flows of product, information, and money, as well as the major benefits to participants. Afuah and Tucci [2003] state that each firm that exploits the internet should have an internet business model. They understand it as a set of internet- and non-internet-related activities that allow a firm to make money in a sustainable way. Hamel [2000] argues that a business model is simply a business concept that has been put into practice, but for which he develops a number of elements. He identifies four main business model components that range from core strategy, strategic resources over value network to customer interface. These components are related to each other through three "bridges" and are decomposed into different sub-elements. Applegate [2001] perceives a business model as a description of a complex business that enables the study of its structure, of the relationships among structural elements, and of how it will respond to the real world. And the last model is the model proposed by Osterwalder [2005] himself (see figure 1), which consists of four areas that a business model has to address:

- 1 Product: What business the company is in, the products and the value propositions offered to the market.
- 2 Customer interface: Who the company's target customers are, how it delivers them products and services, and how it builds a strong relationships with them.
- 3 Infrastructure management: How the company efficiently performs infrastructural or logistical issues, with whom, and as what kind of network enterprise.
- 4 Financial aspects: What is the revenue model, the cost structure and the business model's sustainability.

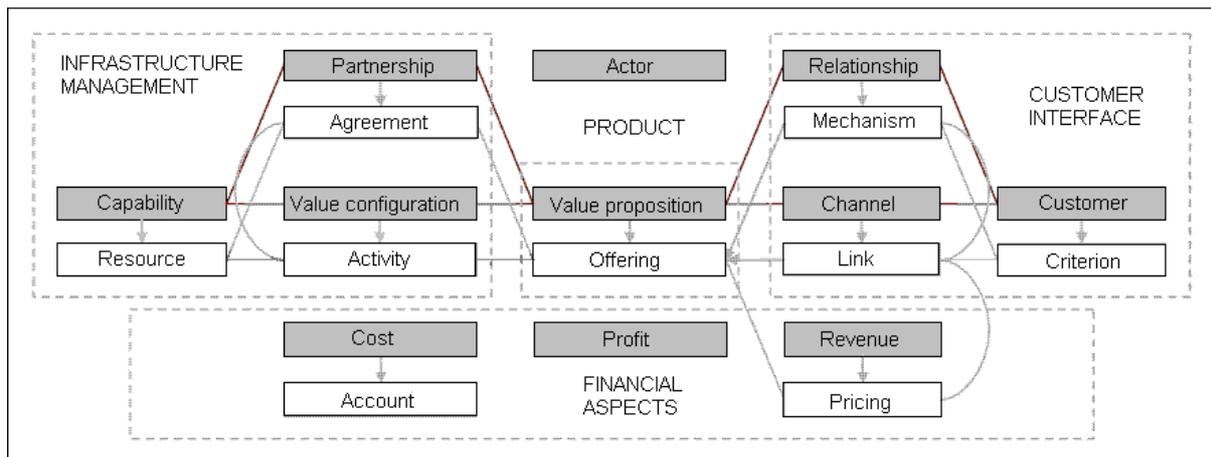


Fig. 1: The business model ontology [Osterwalder, 2002, page 44]

Malone et al [2006] indicate that no single model seems to do better than another across all six measure of performance that Malone et al. used. They indicate that some models do seem to be superior on specific measures.

As there is already indicated, there is no single best business model, I will use the model of Osterwalder [2005] because it is the most complete, it contains the necessary components with regard to this research, but it also contains the most important elements of a range of business models. The focus will lie on the four building blocks identified as the most important for this research (target customer, core competency, value proposition and partner network).

2.4 The 4S model as basis for the business model

The results of the 4S model will be used to fill in the four building blocks of the business model:

SCOPE is of primarily strategic character and outlines the market, readiness of the organization for the online venture and the strategic role of e-commerce for the organization. This relates to who the customer is (target customer) and what competences PPI needs (core competency).

SITE: Identifies the operational aspects of the online presence reflecting the character, positioning and market focus of online firms. The corporate web site, as the main interface between the firm and its customers, must be designed in a way that facilitates contact with the target group. Site relates to what the customer want (value proposition).

SYNERGY is the integration process necessary for realizing the virtual organizations objectives. Such synergies can develop between the virtual and the physical organization as well as between the virtual organization and third parties. Third party integration is aimed at the business partners necessary to cooperate with. With regard to the front office and third party integration, these partners are important. Synergy relates to the required business partners (partner network).

SYSTEM: Outlines technical factors underpinning the secure, safe, cost-efficient and customer-friendly operation of the corporate web site. System will be matched with what the customer wants (value proposition).

2.5 Choosing a segment

The definition for market segmentation is used broadly the same by all writers. Market segmentation is the process of splitting customers into different groups or segments, within which customers with similar characteristics have similar needs. By doing this, each one can be targeted and reached with a distinct marketing mix [McDoland, 1995, page 10]. For conducting a market segmentation for the online publisher, different options are available. An important factor to take into account is the difference between conventional and progressive bases of segmentation [Anderson, 1995]. Online publishing is a relatively new phenomenon, and for this reasons it might not be feasible to use the traditional methods of segmentation. An overview is given hereunder. The segmentation process itself is described in chapter 3.

2.5.1 Conventional and progressive bases

There are a lot of different segmentation bases. Whatever base of segmentation is used, the following four criteria to judge validity of proposed segmentation scheme are always used [Anderson and Narus, 2004].

- 1 Measurable: can the size, growth and market potential of a segment be measured.
- 2 Profitable: how profitable is the marketing effort likely to be? What is the payoff from each segment?
- 3 Accessible: can segments be identified and reached successfully.
- 4 Actionable: can effective marketing and sales programs be formulated for attracting and serving the segments.

Anderson and Narus describe two broad bases of segmentation [Anderson, 1995, page 46-49]. Those are the conventional base of segmentation and the progressive base of segmentation.

The conventional base of segmentation

The conventional base of segmentation is the more traditional method and segments on industry, customer size, customer behavior and geography. Anderson and Narus indicate that these segmentation bases are currently often not enough to pinpoint groups of customers with

sufficiently similar requirements and preferences [Anderson, 1995, page 47]. The same goes for making a segmentation for the online publisher. Online publishing is a relatively new phenomena, it is useful to gain a deeper understanding of how customer requirements and preferences vary.

Progressive bases of segmentation

More progressive bases of segmentation segment on basis of for example application, customer capabilities and business priorities, usage situation, and customer profitability. Segmentation by application is used because firms that use the suppliers core product or service in the same way or for the same purpose tends to derive value from it similarly. An often occurring application segmentation is for example between sales to original equipment manufactures and replacement sales for maintenance. Customer capability segmentation can be useful when customers vary in what competencies they possess and what knowledge and skills they want suppliers to provide. Customer business priorities strongly guide which capabilities customer firms seek to possess as sources of competitive advantage. Segmentation based on usage situations is that customers may use core products in the same application but may have markedly different requirements and preferences for it in different usage situations.

With regard to online publishing, a progressive base of segmentation could be very useful because online publishing is a relatively new phenomenon, which makes it harder to identify relevant market segments with the conventional base of segmentation, as already indicated.

Segmentation method

McDonald and Dunbar [1995] describe an approach that combines the conventional and the progressive base of segmentation. This method will be used as a guideline for the segmentation because it combines both methods, which allows identifying relevant market segments in a broad manner. Often more bases of segmentation are used [Anderson, page 46].

2.5 How to determine what customers want

One of the most important aspects is to determine if customers have a need for the online publishing opportunity that PPI can offer. This is essentially twofold, one the one hand it is the question if they want to upload and buy academic material online, and on the other what do they expect of the online publisher. Johnson [2006f] indicates that an understanding of customer needs and how they differ between segments is crucial to developing the appropriate strategic capability in an organization. Understanding which features are of particular importance to a group of customers is known as critical success factors, those product features that are particularly valued. Prahalad and Ramaswamy [1996] describe that the role of the consumer has changed from isolated to connected, from unaware to informed, from passive to active. The impact of that is infested in many ways. Because of the internet, customers have better access to information, which allows them to make better informed choices. Geographic limitations are eroding fast, consumer communities becoming stronger. Prahalad and Ramaswamy [1996] indicate that it is important to let customers interact while developing new products. In that respect, PPI can learn from customers. It is important to know what people think, do and want with respect to the possibilities of the online publisher.

2.6 Evaluating the 4S model in a B2B market segment

Constantinides [2005] indicates that the 4S model is mainly aimed at the B2C market. The academic market is more like a B2B market. Because there are differences between the B2C and the B2B market, the use of the 4S model in a B2B market will be reflected upon in chapter 6.4. Differences can be identified in for example promotion (in the B2B there is often personal contact between seller and customer) and distribution (in a B2B market, there is often more direct distribution). But the main difference between the B2C and the B2B market is that in the B2C market, the end user also takes the decision to buy the product. In the business market,

more persons than the one who are the end users take these decisions. In the academic market, this for example comes forward in that the institutes develop print material, but the communication department is also involved in determining where the material will be printed. Hutt and Speh [2004] describe the individuals involved in the purchasing decision as buying centers. "The buying center consists of those individuals who participate in the purchasing decision and who share the goals and risks arising from the decision"... "The concept of buying center provides insight into the role of group forces in organizational buying" [Hutt and Speh, 2004, page 74]. Hutt and Speh indicate that the size of buying centers can vary, but on average there are per purchase more than 4 persons involved. The composition of these buying centers is not described in the organizational chart, and can vary per purchase. Hutt and Speh indicate that organizational buying is more a process than an isolated act [2004, page 75].

Hutt and Speh describe a process to describe the buying process [2004, page 75-84]. They describe five different labels that can be given to the people involved. One person could have all roles, or the role can be separated over different individuals. But often the key influencers of the purchasing decision are located outside the purchasing department.

The composition of the buying center can be predicted by projecting the impact of the product on various functional areas in the organization. Hutt and Speh [2004, page 78] offer some clues for identifying powerful buying center members, like identifying the experts or trace the connections to the top.

Hutt and Speh [2004] describe three things to take into account while chartering the buying process in an organization. In a B2B market, it are still individuals who make the buying decisions. Hutt and Speh [2004] argue to be aware of individual perceptions of the buying situation. Individuals use different evaluation criteria (for example the purchasing department takes price as the strongest criteria, while engineering states that quality is the strongest criteria). The volumes of information that flow into the organization are also important; the information that an individual chooses to pay attention to has an influence on the decision. Individuals also have a desire to reduce risks. Perceived risk consists of uncertainty about the outcome and magnitude of consequences associated with wrong choice. More risk is likely to be taken in a group structure, and individuals more often do reorders.

Hutt and Speh [2004] also indicate that segmentation can be made of a market on basis of the patterns of involvement in the purchasing process of particular decision participants. These patterns of involvement will vary across different segments. Hutt and Speh [2004] use an example of the hospital segment in which they identify groups selecting a single supplier (for investor owned hospitals), groups selecting a small set of suppliers from which individuals hospitals may select and private group practices. The theory of Hutt and Speh [2004] will be used as a basis for the evaluation of the 4S model in a B2B market.

2.7 Summary

In this chapter, the notion of strategy is explained to form a suitable understanding of the way strategy is used in the problem statement. Then different marketing models have been examined and based on the advantages with regard to e-commerce, the choice has been made to use the 4S model as a basis for the research.

The goal of the research is to set up a business model for the online publisher. Different business models have been examined to find the most suitable business model. These models have been analyzed based on four important aspects; who the customer is (target customer), what the customer wants (value proposition) what competencies PPI needs to deliver the value to the customer (core competency) and which business partners are required (Partner network). No single best business models could be pointed out, but the business model of Osterwalder [2004] was the most complete.

The online publisher will be aimed at a particular market segment. It is important to select the segment in a thorough way. Different segmentation bases were described in this chapter. Because it regards a relatively new phenomenon, traditional segmentation bases are not very suitable, for that reason, the progressive segmentation is preferred, so the McDonald and Dunbar [1995] approach that combines the conventional and the progressive base of segmentation has been chosen.

Then it is important to identify how the customer needs and wishes can be identified. Different theories on this subject have been examined to get a better understanding of this subject.

And concluding, the 4S model will be evaluated because this model is mainly aimed at the B2C market instead of the B2B market. The concept of buying centers has been explained and will be used to describe this.

In the next chapter the methodology for the research will be presented.

3. Methodology

In the previous chapter, the theoretical foundation has been explained. In this chapter a description will be given of the methodology and the ways of data gathering, the instruments used and the way of analysis.

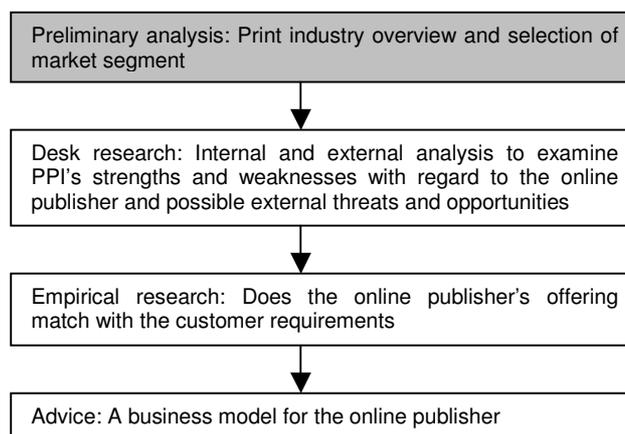
First, the methodology for the preliminary analysis, in which the choice for the academic publishing market will be explained, will be described. Explaining the choice for the academic publishing market and giving an overview of the print industry are the main goals of the preliminary analysis. Methods for internal and external analysis will be described and a market segmentation method will be chosen.

As already described before, the research consists of two general parts. First, the characteristics of the academic publishing market will be identified by means of desk research. The academic publishing market has to be analyzed to determine how to set up a strategy to position the online publisher in this segment. For this, I will look at the external environment, defined as the characteristics of the segment with respect to the competitors. It is also important to look internally to determine the capabilities and competences of PPI with that enable the company to be truly competitive in the segment. This cannot be done alone by PPI, for that reason the business partners of PPI have to be identified.

And next to that, the market potential of the online publisher will be identified by means of an empirical research. Interviews will take place with possible customers. The reason for interviews and the way of information gathering and analysis will be explained in paragraph 3.3.

3.1 The preliminary research

The preliminary research is aimed at getting a good overview of the print industry and to make a broad segmentation of the market to find a suitable market segment for the online publisher. In the main research, more in depth research will take place focused on the application of the online publisher instead.



3.1.1 Method for external analysis

The external analysis examines opportunities and threats that exist in the environment. Both opportunities and threats exist independently of the firm. The external analysis will be conducted on two levels. First, the total market will be investigated to determine a market segment for the online publisher in the preliminary research. Then the competitors in the

chosen market segment, the academic publishing market will be identified in the main research, and for this the framework of Porter will be used.

The environment consists of different layers, as already indicated in chapter one. The most general layer is the macro (or vertical) environment, this consists of broad environmental factors that impact most of the organizations. For the macro environment, the Pestel-framework is the most common model. Johnson [2006e] also identifies the Pestel framework as a useful method to characterize the macro environment. Another model identified by Johnson is Porters diamond. But this model is mainly aimed at differences between countries and thus at a higher level. With regard to identifying the key drivers of change in the print industry, the Pestel framework is a suitable option.

The next layer is the industry or sector layer, this is a group of organizations producing the same products or services. Porter's five forces framework is described by Anderson [2004, page 55] as a method to identify the sources of competition. The method of Porter will be used for the preliminary analysis, although Porter's framework has repeatedly been challenged by other academics. They stated that three dubious assumptions underlie the five forces:

- That buyers, competitors, and suppliers are unrelated and do not interact and collude
- That the source of value is structural advantage (creating barriers to entry)
- That uncertainty is low, allowing participants in a market to plan for and respond to competitive behavior

3.1.2 Method for internal analysis

The internal analysis identifies the strengths and weaknesses of the firm. Porter [1985] argues that competitive advantage cannot be understood by seeing a company as a whole. It is essential to investigate all activities an organization performs to find the sources of competitive advantage. The value chain categorizes the generic value-adding activities of an organization. The "primary activities" include: inbound logistics, operations (production), outbound logistics, marketing and sales, and services (maintenance). The "support activities" include: administrative infrastructure management, human resource management, R&D, and procurement. The costs and value drivers are identified for each value activity. The value chain has been criticized for being modeled too closely on the assembly line analogy, being too linear, too unidirectional and too sequential. The model is also not very suitable for service organizations. The value chain will be used for the preliminary analysis because it is a useful way of thinking through the ways in which value is delivered to customers.

3.1.3 Market segmentation method

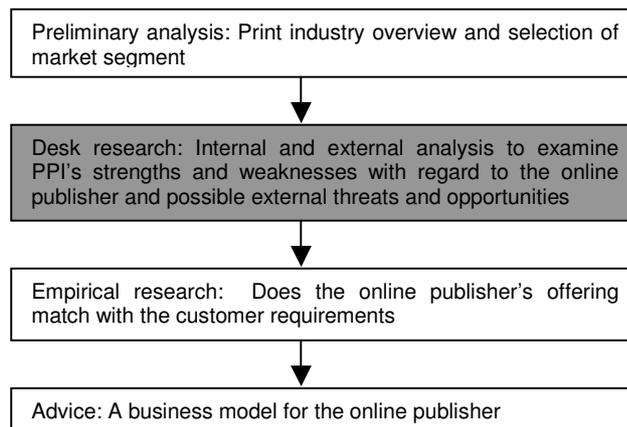
For a market segmentation, it is essential to be able to recognize and measure the characteristics of the buyers who serve as a basis for the segmentation. And it is also essential that the segments themselves differ enough from each other to be able to distinguish them and to be able to serve them. This means that potential customers within a segment should have similar responses to the marketing mix variable of interest but a different response to members of other segments (internal and external homogeneity). Other factors are that the segments need to be reachable (accessibility) and that the segment should identify a small set of groupings of substantial size (parsimony). It is important for the segmentation that the segments are large enough [Verhage, 2001, page 203-205].

The segmentation process consists of different steps. Segmentation data used is based on data from the Sectorstudie Grafimedia [2005], KVG0 [2006], KVG0 [2007], and available data within PPI. McDonald and Dunbar [1995] described the process (see also figure 1). The first step is aimed at identifying the whole market, not only the part the company is currently successful in. The first step will be to get an overview of the market that PPI is in. Then will be determined at which stages the segmentation should occur because the next three steps draw a picture of who buys what, where, when and how. Step 5 looks at the reasons why the various products are bought. Step 6 will take all previous steps in account to describe how the segments could be summarized. The final step subjects each cluster to a segmentation test.



Fig. 2: The process of segmentation [based upon McDonald page 18/19]

3.2 Desk research



Desk research is a research strategy in which use is being made of research material that is produced by others. Characteristics of desk research are: [Verschuren, 1984, page 169]

- Use of existing material (literature, secondary data, statistical material)
- No direct link with the research subject
- Use of material from another perspective than which it is was in first case used for

There are two different kinds of desk research; literature research and secondary research. Literature research is about knowledge sources and secondary research is about data sources. The secondary data research is most feasible in this setting because most of the needed data is available in the form annual reports and statistical analysis, especially with regard to the competitor analysis. The used data has to be reliable, most data used in statistical analysis and annual reports can be considered as reliable. A problem with secondary data research is that the data can be false interpreted.

Desk research has advantages and disadvantages. Desk research makes it possible to gather useful information relatively fast and the data used can be considered reliable. A disadvantage

is that the data was primarily meant for other purposes, which makes it possible that not all data is available in the right form.

The desk research will zoom in on the characteristics of the academic publishing market, with respect to the competition and stakeholders. Next to that the readiness of PPI for the online publishing initiative will be determined by an internal analyses. The desk research is mainly focused at the scope and the synergy part of the 4S model. The competitor and stakeholder analysis will be used to determine different opportunities and threats that exist in the environment and the internal analysis will be used to determine the internal strengths and weaknesses of PPI.

To extract information about the known competitors and to search for new competitors, competitor and business partner data will be extracted from annual reports, statistical data about the print industry, and academic publishing data from different studies (e.g. CBS, European Commission, Print Industry Center). The gathered data will be used to perform a competitor analysis and a stakeholder analysis. Current competitors and business partners of PPI will be identified by means of interviews with commercial people of PPI.

3.2.1 Competitor analysis

In this first part of the 4S model, a market analysis will be conducted to determine the position of PPI with respect to the competition. Gaining knowledge about present and prospective customer requirements and preferences is a primary concern. But because customer judgments about the value of the firms market offerings take place within the context of the market offerings from other firms, knowledge about the competition is also required [Anderson, 2004, page 55]. For analyzing the competition, different methods are available. Anderson states that Porter provided a good framework for competitor analysis. The framework of Porter consists of four diagnostic components. Pulling together knowledge of these areas provides an understanding of each competitor [Anderson, 2004, page 56].

3.2.2 Internal analysis

In the development of a strategy for a new market segment, it is important to take into account the internal possibilities and restrictions. The internal analysis of strengths and weaknesses focuses on internal factors that give an organization certain advantages and disadvantages in meeting the needs of its target market. Strengths refer to core competencies and capabilities that give the firm an advantage in meeting the needs of its target markets. Weaknesses refer to any limitations a company faces in developing or implementing a strategy. To identify the core competencies and capabilities, the resource-based view is a much used method.

The resource based view sees companies as very different collections of physical and intangible assets and capabilities. Resources are the building blocks for strategy. Resources have to pass five external market tests of its value; durability, appropriability, sustainability, competitive superiority and inimitability. According to Anderson, core competencies and capabilities are resources that are complementary building blocks of a value-generating strategy that provide competitive advantage. Priem and Butler (2001) made four key criticisms [Johnson, page 154] which have already been counteracted by Barney (2001).

It is necessary to identify the threshold competencies and resources that are necessary to compete with the online publisher. Threshold resources are the resources needed to meet customers' minimum requirements; threshold competences are activities and processes needed to meet customers' minimum requirements. For creating competitive advantage, it may be that PPI has some unique resources. But it is more likely that PPI is able to achieve competitive advantage because of core competencies. Core competences are activities and processes through which resources are deployed in such a way as to achieve competitive advantage in ways that others cannot imitate or obtain [Prahalad, Hamel, 1990].

For this research, the resource based view will be used because it identifies the capabilities and resources. This allows determining the capabilities and resources that PPI needs to position

the online publisher successfully in the market. The resource based view is often referred to as an explanation of competitive advantage in terms of strategic capabilities. If a company wants to achieve competitive advantage over others, it will do so because it has capabilities that the others do not have or have difficulty in obtaining. These capabilities could be the resources the organization has, they could also be the way these resources are used or deployed and this is known as the organization's competences [Johnson, 2004, page 116].

3.2.3 Stakeholder analysis

Once a company has assessed their core capabilities, they can find themselves in a situation where they can't compete on attributes as they don't have the necessary resources. Because of this, networks are formed to utilize the advantageous attributes, and the importance here is dependent upon a mutually beneficial relationship that significantly adds to the value of a firm's market offering. Business networks are a set of two or more connected business relationships in which each exchange relation is between business firms that are conceptualized as collective actors [Anderson et al., 1994]. They take the concept of a firm as an actor performing activities and employing resources and identify the function of business relations as characterized by three essential components. These three layers, described fully in "Business relations in network context" by Hakansson and Snehota [1995], are actors, resources and activities. Their framework concentrates on the interdependence and cooperation between the network actors. The framework differentiates between company level, relationship level, and network level in which actors, resources and activities exist. Anderson et al. [2004] indicate that the ARA model is useful for analyzing business networks. They indicate that three concepts help analyzing business networks. Network horizing, which refers to how extended an actor's view of the network is; Network context, which is the part of the network within the actor's network; and the network identity which refers to how firms see themselves in the network and how they are seen by other actors. With regard to online publishing, the ARA-model should be a suitable model to charter the business partners of PPI.

There are other models available. Ramirez [1999] describes stakeholder analysis as an analysis that "seeks to differentiate and study stakeholders on the basis of criteria and attributes. There is no single stakeholder tool; rather each context demands a set of criteria appropriate to the problem situation at hand." This indicates that there is no best method or tool. Ramirez [1999] described different methods. The target of his study is different, but the different methods described are from a wide range of disciplines. An important method that Ramirez lists is that of Grimble et al. [1995]. He lists a flexible set of steps for conducting stakeholder analysis. Three major phases are described: defining the problem, analyzing constraints and opportunities, and agreeing on an action plan.

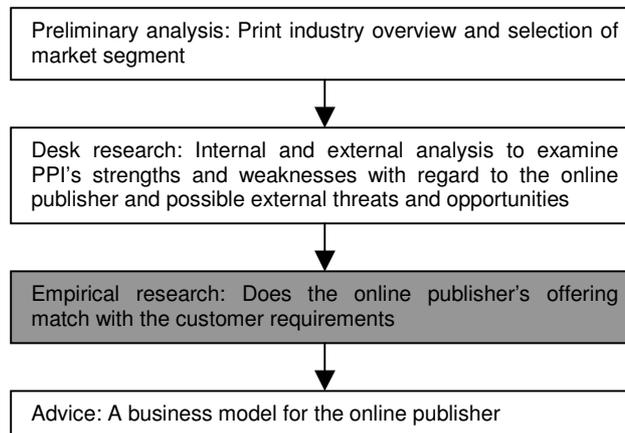
In the context of the online publisher, in which the business partners are important and the other stakeholder models take a too broad scope, the ARA model will be used to charter the business partners for the online publisher.

3.2.4 System

To gather information about the underlying system of the online publisher, different suppliers of online-publishing packages will be described. Data will be gathered from the internet. The results of this part will be, as already indicated, only descriptive, results will not be analyzed and thus no method will be used.

3.3 Empirical research

Customer perceptions relate mainly to site aspect of the 4S model and to the customer part of the scope. Site identifies the operational aspects of the online publisher. Site identifies the customer expectations with regard to the online publisher and the motivations to use the online publisher. The main goal of this part is to identify the customer needs and wishes and combine them with the possibilities of the online publisher. This part of the 4S web marketing mix model is mainly answered by empirical research. Empirical research is used to identify the customer link between the market segment and the online publisher.



3.3.1 The case study

Because the online publisher is a new kind of service, it is important to know the opinions of the customers in the segment towards online publishing. There are different research strategies available. According to Yin there are three conditions that identify when to use a particular strategy [Yin, 1984, page 16]. The reason for choosing a case study is that the main research question is a how-question, the research does not require control over behavioral events and the research focuses on a contemporary event. This leaves an experiment and a case study as the most feasible options according to the table of Yin (see figure 2).

Strategy	Form of research question	Requires control over behavioral events	Focuses on contemporary events
Experiment	How, why	Yes	Yes
Survey	Who, what, where,	No	Yes
Archival analysis	Who, what, where,	No	Yes/no
History	How, why	No	No
Case study	How, why	No	Yes

Table 1: Research strategies [Yin, 1984, page 17]

The case study will be conducted in de form of a multiple case study. The main reason for the choice of a multiple case study is that the evidence from multiple cases is stronger, and the overall study is therefore regarded as more robust [Yin, 1984, page 48]. The case study will be used to identify the market potential for the online publisher by asking the (potential) customers to identify to what extend there is a need for online publishing opportunities.

Pros and cons of a case study

A case study is more maneuverable because it needs less structuring beforehand than a survey or experiment. Results are often being accepted faster because the methods used are

more recognizable. A disadvantage of the case study is the external validity; it is harder to generalize the findings.

Unit of Analysis

The unit of analysis are different research institutes and faculties of the university of Twente. Employees that are involved in the publishing process of the different institutes and faculties will be interviewed. The reason that different faculties and institutes within a university have been chosen is that the publishing process is decentralized. Institutes can decide by themselves when and how to publish. Institutes have been selected on the amount of material they publish. Three faculties have been selected, two large research institutes, three small institutes and also the library of the Twente University are selected for the case studies.

Interviews

Collecting evidence for case studies can come from six sources; documents, archival records, interview, direct observations, participant-observation and physical artifacts. Interviews are one of the most important sources of information [Yin, 1984, page 83]. Because this research regards the opinions of people towards online publishing, interviewing is a suitable option. There are several forms of interviews. Most commonly used are the open ended interviews in which the investigator can ask key respondents for facts about a subject as well as for the respondents opinions about events. Another type of interviews is a focused interview, in which a respondent is interviewed for a short period of time. In such cases, the interviews may still remain open-ended, but the interviewer is more likely to be following a certain set of questions derived from the case study protocol. A third type of interview is more structured, along the lines of a formal survey. During the interview, it is possible to show the potential customers the website of comparable online publishers and ask them to rate them. This can also be done in a focus group setting. Within a focus group setting, participants are shown potential product concepts and then asked what the value of these offerings or concepts would be to their firms [Anderson, 2004, page 62].

For this research, focused (or semi-structured) interviews will be used to identify the opinions towards online publishing. This technique is used to collect qualitative data by setting up a situation (the interview) that allows a respondent the time and scope to talk about their opinions on a particular subject. The objective of a focused interview is to understand the respondent's point of view rather than make generalizations about behavior. The researcher is in a focus interview able to move in any direction that appears interesting and rich in data. Structured interviews, where the content and order of questions are specified in advance, are of more limited value in that respect. Important in a focused interview is to carefully word the specific questions, so that the researcher appears naïve about the topic.

Validity

There are some disadvantages to focused interviews, like that findings may be difficult to analyze and generalize and the researcher has no way to know if the respondent is lying. A focused interview is difficult to repeat exactly, since the questions are not pre-determined and the respondent is encouraged to talk freely in depth and detail. But because questions can be asked in depth provides an opportunity to increase validity. It is essential to guarantee the validity of the case study. Yin [1984] provides some insight into the kinds of validity that have to be taken into account. An especially important point is the construct validity, which refers to assessing validity by investigating if the measure really is measuring the theoretical construct it is suppose to be. To increase construct validity, several tactics are available. One of them is to let the key informants review a draft case study report. External validity is with regard to this research also an especially important topic because the results have to be generalized to the academic publishing market. The way to deal with this is replication logic. Time constrains do not permit to extend the case study, but to deal with the external validity, use will be made of cross-case analysis. [Babbie, 2004, page 372] in the form of a case-oriented analysis. For this, each case is examined in detail and special note to the variables that seem important in the first case will be examined in the following cases. The objective is to be sure that if a later investigator followed exactly the same procedures, the researcher should arrive at the same

findings. The prerequisite to deal with this is to document the procedure followed in the case study.

Case study overview and questions

The main reason for the case study is to get an answer to what the needs of the customer are in the academic publishing market with respect to online publishing. The first topic is then to identify if there is a need for online publishing. The next topic is what the expectations with regard to an online publisher are. The interviewees will be employees involved in the publishing process within a faculty or institute. The questionnaire can be found in appendix 2. Next to the case study questions, the respondents will be asked to rate online publishing websites according to their functionality. When evaluating these websites, the web experience [Constantinides, 2005] will be used to determine in how far these concepts satisfy the user needs. This survey can be found in appendix 2.

The interviews

Interviews will be held at the university of Twente. The university of Twente has a decentralized structure with autonomy at the lower levels. For this reason, different faculties and institutes were interviewed.

The interviews have been conducted at 3 faculties, two key institutes, three smaller institutes, and the university library. The three faculties are 50% of all faculties, so results can be generalized. In appendix 2 the list of interviewees can be found.

The institutes are not representative for the whole university. The reason for this is that a large amount of the institutes does not have suitable material for an online publisher; their main outputs are research articles. Choices have been made based upon the websites of the institutes and faculties. On these websites, the research material produced is been made visible. Most of the (often more technical) institutes only produce articles. Articles are produced in journals. For the online publisher, book like productions are most interesting. A number of institutes produce material for external parties. Institutes that produce other material beyond articles have been selected.

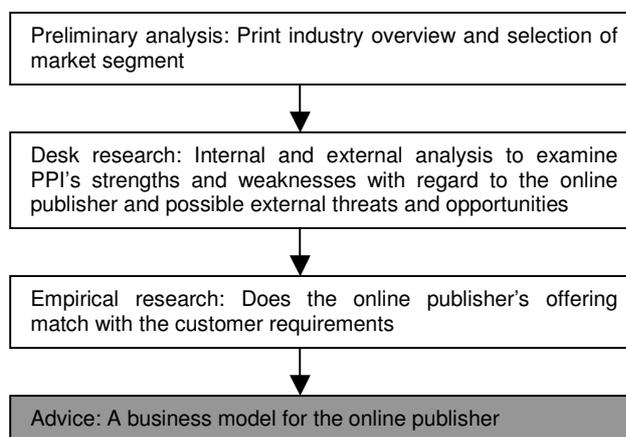
Because only one university is studied, it will be difficult to generalize the findings to other universities. But taken into account the decentralized structure of the university of Twente, if other universities have the same structure, it will be more plausible to generalize the findings to other universities. At the university of Wageningen and the university of Groningen, the structure is for example also decentralized.

Analysis of the case study evidence

The gathered data will be analyzed in a qualitative way. In qualitative data analysis, data collection, analysis and theory are more intertwined than in quantitative research [Babbie, 2004, page 370]. The gathered data will be transcribed immediately after the interviews. Use will be made of cross-case analysis [Babbie, 2004, page 372] in the form of a case-oriented analysis. For this, each case is examined in detail and variables that seem important in the first case will be examined in the following cases. Some subsequent cases will closely parallel the first one in the apparent impact of particular variables. Other cases will bear no resemblance to the first. These latter cases may require the identification of other important variables, which may invite the researcher to explore why some cases seem to reflect one pattern while others reflect another. Data processing for qualitative data is no cut-and-dried process that guarantees success [Babbie, 2004, page 375].

3.4 Business model

As already indicated in the theoretical outline, a business model will be described for the online publisher. But to accomplish this, an overview will be given of the different strengths and weaknesses of PPI with regard to the online publisher, and the opportunities and threats that exist in the environment. These will be extracted from as well the preliminary research, the desk research and the empirical research used to form an thorough advice about how to position the online publisher.



3.5 Summary

The methodology for the research has been described in this chapter. First the preliminary research has been described, the Pestel framework will be used to give an overview of the current situation in the print industry and the Value Chain will be used to give an overview of the internal situation of PPI.

Then the methodology for the desk research has been described. The framework of Porter will be used to describe the competitors who pose possible threats for the online publishers. The resource-based view will be used to analyze the internal readiness for the online publisher and the ARA model will be used to charter the stakeholders. And in paragraph 3.3 the choice for performing interviews and analyzing the results in a cross-case analysis were explained. In paragraph 3.4 an explanation has been given of the way the results will be described to come to a suitable advice for PPI.

In the next chapter, the analysis of the research results will be presented.

4. Analysis

In this chapter, the results of the research will be presented. Results will be presented according to the 4S model. First the desk research, which focused on the Scope, Synergy and System, will be described. And then the empirical research, which focused on the Site, will be described afterwards. But first a description will be given of the preliminary research.

4.1 Summary

The preliminary research was done to make an overview of the strengths and weaknesses of PPI and the opportunities and threats that exist in the whole print industry. This forms the basis of the SWOT analysis, which will be presented, at the end of chapter 4. An overview of strength, weaknesses and opportunities and threats in the academic market will be given in the desk research. A first step to find a suitable market segment for the online publisher has also been taken by dividing the market in rough segments and select the most suitable. The more comprehensive market segmentation of the academic market is presented in the desk research.

In the desk research, the academic publishing market will be analyzed closer, and different competitors who also operate in this market segment will be identified and analyzed. This will result in a description of opportunities and threats that exist in the academic market. Then an internal analysis will be performed to determine in how far PPI is ready to set up an online publisher, followed by an examination of the necessary business partners. This will result in a description of PPI's strengths and weaknesses. The results will be input for the SWOT analysis that will be described in chapter 5.

The empirical research analyses the customer's point of view towards the possibilities of the online publisher. The goal is to make a match between the offering of PPI and the customer needs and wishes.

Next to that, the presentation of the online publisher is important. To identify the customers' opinions, a questionnaire based upon the web experience was filled in by a number of respondents.

First, the different suitable segments have been described in more detail. The reasons why they are interesting and the way of publishing as well as the buyers have been identified. Then the customer expectations with regard to the online publisher have been described.

In the next chapter, the analysis will be continued by confronting the analysis results in a SWOT matrix.

5. Analysis part 2: SWOT confrontation

The results of the preliminary research, desk research and empirical research were translated to strengths, opportunities, weaknesses and threats in paragraph 4.5. The different SWOT parts were compared in paragraph 5.5 to be able to create a basis for an advice about the possible chance of success for PPI to position the online publisher. This basis will be worked out further in the next chapter and a suitable strategy for PPI to position the online publisher in the academic market will be given in the form of a business model

5.1 Summary

The findings of the research can be used as input for a SWOT analysis. The SWOT analysis will form the foundation for the recommendations with regard to the strategy that PPI can choose to position the online publisher successfully in the market.

Different strengths can be extracted from the internal analysis in both the preliminary research and the desk research. The strengths are strong points of PPI that allow a higher chance of the online publisher to become a success.

Next to the strengths, there are also a number of weaknesses that can decrease the chance of implementing the online publisher successfully. Weaknesses are possible threats to the successful positioning of the online publisher

The opportunities are mainly based upon the findings that resulted from the empirical research and with regard to the offerings of the competition. Opportunities create chances to be able to successful position the online publisher.

The threats indicate the areas to which PPI has to give attention to or which can have important influence upon the successful implementation of the online publisher.

The different strengths, weaknesses, opportunities and threats where confronted against each other in the SWOT confrontation. It is now important to identify the important results from the confrontation and form suitable strategic recommendations from that. This will be done in chapter 6.1 where an overview of the strategic options that were identified in this SWOT confrontation will be described in the form of strategic guidelines. Results of the confrontation will be used and combined, because differentiation from the competition is very hard by focusing on a single aspect. The strategic guidelines will be worked out to a more concrete advice in the form of a business model in the following chapter.

6. Conclusions

Based upon the results from the SWOT analysis, suggestions for a strategy will be lined out. Then a more concrete advice in the form of a business model will be given in chapter 6.2. The answers to the research questions will be summarized in 6.3. Then the reflection upon the use of the 4S model will be described. Concluding, some limitations of the research will be described.

6.1 Summary

Resulting from the SWOT confrontation, different aspects can be pointed out which give guidelines to a strategy that increases the chance of success for the online publisher. These aspects will be described in short hereunder. These guidelines will form the basis for the business model that will be described in 6.2. The combination of guidelines is important, just picking a few as the most important guidelines will not be enough to give strategic recommendations that allow to differentiate from the competition.

As described in chapter 2.3, the business model of Osterwalder will be used with the focus on the four elements defined as most important. The 4S model was used as input for these elements, as described in chapter 2.4; scope relates to who the customer is (target customer) and what competences PPI needs (core competency). Site relates to what the customer wants (value proposition). Synergy relates to the required business partners (partner network) and system outlines the technical factors (which has to match the value proposition). This forms, in combination with the results of 6.1, the basis for the business model that will be described in short hereunder. Although only the four elements defined as most important will be described, the other elements will be part of the descriptions.

6.2 Reflection upon the use of the 4S model

In a B2B market, the individuals make the buying decisions. Hutt and Speh [2004] argue to be aware of individual perceptions of the buying situation. Individuals use different evaluation criteria (for example the purchasing department takes price as the strongest criteria, while engineering states that quality is the strongest criteria). The volumes of information that flow into the organization are also important; the information that an individual chooses to pay attention to has an influence on the decision. Individuals also have a desire to reduce risks. Perceived risk consists of uncertainty about the outcome and magnitude of consequences associated with wrong choice. More risk is likely to be in a group structure, individuals more often do reorders.

In the research this came forward in the way the faculties and institutes operate. Faculties and institutes have autonomy in the print process. But for large productions (promotional material) they cooperate with the central communication office of the University of Twente. Another important aspect is that the researchers write the print material, but they are not involved in the print and publishing process.

The 4S model is a very useful model. But the model can be extended by taking into account the purchasing decisions of the people involved. So theory of Hutt and Speh [2004] about the buying situations can have added value for describing the potential customers in the Scope part of the 4S model.

Another important aspect is that the model does not have a customer focus. It does not zoom in on the functionalities that customers require. For example, the model does not help in predicting what customers need to work with online documentation.

Sources

- [Allen, 1970] Allen, T.J.; *Communication Networks in R&D Laboratories*; R&D Management, 1 (1970), 14-21
- [Amith and Zoth, 2001] R. Amith, C. Zott; *Value creation in e-business models*; Strategic Management Journal, 22; 2001; p. 493-520
- [Anderson, 2004] James C. Anderson, James A. Narus; *Business market management; understanding, creating and delivering value*; Pearson/prentice hall, 2004; ISBN 0-130123008-3
- [Anderson et al., 1994] James C. Anderson, Hakan Hakansson, Jan Johanson; *Dyadic business within a business network context*, Journal of Marketing, October 1994
- [Babbie, 2004] Earl Babbie; *The practice of social research*; 10th edition, Tomson & Wadsworth, 2004
- [Constantinides, 2005] E. Constantinides; *Virtual Marketing, New rules and challenges in the networked marketplace*; PrintPartners Ipskamp; ISBN 90-365-2138-8; 2005
- [Economisch bureau ING Bank, 2002] Economisch bureau ING Bank; *Sectorstudie Grafimedia*; Januari 2002 <http://www.ingbank.nl>
- [European Commission, 2005a] European Commission, *Publishing Market Watch*, 27 January 2005, page 18 http://ec.europa.eu/information_society/media_taskforce/doc/pmw_20050127.pdf
- [European Commission, 2005b] European Commission; *ICT and Electronic Business in the Publishing & Printing Industry Key issues and case studies*; Sector Report No. 03-1; July 2005
- [Grimble et al., 1995] R. Grimble; *Trees and Trade-offs: A Stakeholder Approach to Natural Resource Management*, Gatekeeper series No.52, International Institute for Environment and Development, London.
- [Hutt and Speh, 2004] Michael D. Hutt and Thomas Speh; *Business market management*; Thomson South western, 8th Edition; 2004
- [IBI, 2002] IBI and university of Wuppertal; *Horizon of print and publishing opportunities in the media economy of the 21st century*; April 2002
- [ING Bank, 2002] Economisch bureau ING Bank; *Sectorstudie Grafimedia*; Januari 2002
- [ING Bank, 2007] ING Bank; *Sectorvisie Grafische Industrie*; januari 2007
- [Johnson et al, 2006a] G. Johnson, K. Scholes, R. Whittington; *Exploring corporate strategy*; Prentice Hall; 7th edition; 2005, page 9
- [Johnson et al, 2006b] G. Johnson, K. Scholes, R. Whittington; *Exploring corporate strategy*; Prentice Hall; 7th edition; 2005, page 17
- [Johnson et al, 2006c] G. Johnson, K. Scholes, R. Whittington; *Exploring corporate strategy*; Prentice Hall; 7th edition; 2005, page 165

- [Johnson et al, 2006d] G. Johnson, K. Scholes, R. Whittington; *Exploring corporate strategy*; Prentice Hall; 7th edition; 2005, page 13
- Johnson [2006e] G. Johnson, K. Scholes, R. Whittington; *Exploring corporate strategy*; Prentice Hall; 7th edition; 2005, chapter 2
- Johnson [2006f] G. Johnson, K. Scholes, R. Whittington; *Exploring corporate strategy*; Prentice Hall; 7th edition; 2005, chapter 3
- [KVGGO 2006] KVGGO; *Grafimedia in cijfers*, 2006 (can be downloaded at <http://www.kvgo.nl/index.php?pxp=a1.s.content-a1.s.current-sbedrijfstak5->)
- [KVGGO 2007] <http://www.kvgo.nl/index.php?pxp=a1.s.content-a1.s.current-sbedrijfstak1-> (last visited: March 2007)
- [Lauterborn, 1990] R. Lauterborn; *New marketing litany: 4Ps passes, 4Cs takeover*, Advertising Age; 1 October 1990
- [Malone et al. 2006] Malone, Thomas W., Weill, Peter, Lai, Richard K., D'Urso, Victoria T., Herman, George, Apfel, Thomas G. and Woerner, Stephanie; "Do Some Business Models Perform Better than Others?"; MIT Sloan Research Paper No. 4615-06; May 2006
- [Martin et al, 1998] Xavier Martin, Anand Swaminathan, Will Mitchell; *Organizational evolution in the interorganizational environment: incentives and constraints on international expansion strategy*, Administrative Science Quarterly; September 1998
- [McCarthy, 2001] McCarthy, J.: *Basic Marketing: A managerial approach*, 13de editie, Irwin, Homewood Illinois; 2001
- [McDonald, 1995] Malcolm McDonald and Ian Dunbar; *Market segmentation: a step by step approach to creating profitable market segments*; MacMillan business; 1995
- [Meerjarenplan 2007] PrintPartners Ipskamp; *Meerjarenplan 2007*; PrintPartners Ipskamp; februari 2007
- [Mintzberg, 1998] Henry Mintzberg, Bruce Ahlstrand, and Joseph Lampel; *Strategy Safari : A Guided Tour Through the Wilds of Strategic Management*; The Free Press; New York; 1998
- [Nikos, 2005] <http://www.utwente.nl/nikos/about/progressreport.pdf>
- [Osterwalder, 2004] Osterwalder; *The Business model Ontology: a proposition in a design science approach*; university de Lausanne; 2004
- [Osterwalder et al. 2005] A. Osterwalder, Y. Pigneur, and C.L. Tucci; *Clarifying Business models: Origins, Present and future of the Concept*; Communications of AIS; Volume 15
- [Porter, 1979] Porter, M.E. *How competitive forces shape strategy*, Harvard Business Review; March/April 1979
- [Porter, 1985] Michael Porter; *Competitive Advantage: creating and sustaining superior performance*; 1985; The Free Press; pp 36-61
- [Prahalad, Hamel, Prahalad, C.K., Hamel, G.; *The core competencies of the corporation*;

-
- 1990] Harvard Business Review; 1990
- [Prahalad, Ramaswamy, 2004] Prahalad, C.K., Ramaswamy, Venkat; *Co-creating unique value with customers*; Strategy & Leadership vol. 32 no 3; 2004
- [Rabobank 06/07] Rabobank cijfers & Trends; *Branche Grafische Industrie; editie 2006/2007*
- [Ramirez, 1999] Ramírez, R.; *Stakeholder analysis and conflict management*. In: Buckles, D. (ed). *Cultivating Peace: Conflict and collaboration in natural resource management*. IDRC/World Bank Institute, Ottawa and Washington D.C. 101-126; 1999
- [Romano, 2004] Romano, Frank J; *An Investigation into printing industry trends*; Printing Industry Center at Rochester Institute of Technology; 2004
- [Rowlands, 2004] Rowlands, I. Nicholas, D. Huntingdon, P.; *Scholarly communication in the digital environment: What do authors want? Findings of an international survey of author opinion: project report*; City University, London, UK, 2004.
- [Struhl, 1992] Steven M. Struhl; *Market segmentation: an introduction and review*, Market research technique series; 1992
- [Tudelft.nl, 2007] <http://www.tudelft.nl/live/pagina.jsp?id=1871b039-e902-4244-b2d2-13cc153e4c64>, site visited: may 2007
- [Valuebasedmanagement.com, 2007] http://www.valuebasedmanagement.net/methods_ge_mckinsey.html, last visited: march 2007
- [Verhage, 2001] Verhage, B; *Grondslagen van de marketing*; 185-219; Stenfert Kroese; 2001. p. 185-219
- [Verschuren & Doorewaard 1984) Piet Verschuren, Hans Doorewaard; *Het ontwerpen van een onderzoek*; Uitgeverij Lemma, 1984, ISBN 90 5189 546 1
- [Walker et al, 1992] Orville C. Walker Jr., Harper W. Boyd Jr., Jean-Claude Larreche; *Marketing Strategy: Planning and Implementation*; Irwin Inc.; 1992