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1 FOREWORD

Writing a foreword to a thesis is a particularly rewarding task, as these pages are usually the ones that are read most. Joking aside, it also allows me to express my appreciation to all those who have supported, stimulated, motivated and inspired me, each in their own unique way, over these past few years.

I had to think long and hard about whom to dedicate my first big “thank you” to. After much deliberation, I decided to start with the people who stimulated me after my trend setting RSi-period to pursue the illustrious title of ‘Dr.’ again. Actually, these are the people I don’t even need to thank, because to them, all this was a foregone conclusion (they say the same about my research results…). All I can offer in return is a humble and very, very deep Japanese bow to two of the greatest inspirations, shining examples, who with their simple questions and sharp analyses managed time and time again to drive me to the pits of despair (yet at the same time also restored my energy and taught me to appreciate the beauty of scientific research¹). Their company on the nicest roof patio of Amsterdam is second to none, and I look forward to the day that they present their magnum opus to the scientific forum…

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¹: The beauty of scientific research is not always immediately apparent to everyone.
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Writing a PhD is a fantastic experience, but also an incredibly lonely one. I would never have been able to manage it without your help. I have learnt a lot from this whole process, and haven’t regretted it for a single moment. So, be inspired…

--René.

2 INTRODUCTION

2.1 Developments in the Internet market

The Internet is the evolutionary next step in the position occupied in our society by information and communication technology. It untangles many of the technological bottlenecks, which existed in the early days of distributed multi-medial information systems, bottlenecks which at the time prevented society from using it en masse, and from deploying it commercially (Williams and Blair, 1994). Now, it turns out that (Internet) technology is becoming increasingly intertwined with everything around us. Yet, at the same time, it is becoming less and less visible. Strikwerda (2000) states, that present-day man is increasingly making use of information and communication technology, consciously and unconsciously, to shape and give meaning to his actions, his personal expressions and social-emotional relationships.

In a very short space of time, the Internet has managed to occupy an important position in the (everyday) life of Western civilisation. As it is technically relatively easy to set up an attractive web site, many organisations have gone on-line without a solid business approach (Larsen and Bloniarz, 2000). McBride (1997) concludes from his research that organisations decided to take the Internet route without carefully considering the role the Internet could play in supporting business strategy, or giving it new impulses. “Where there was a relation to strategy, it was seen as promoting the organisation’s image and as part of their public relations strategy”.

According to McBride, “Firms’ reasons for joining, expected benefits and strategy are driven more by their perceptions of the Internet as providing a new market place and offering leading-edge technology rather than any cool-headed consideration of its value to the firm.” McBride explains the rapid growth and acceptance of the Internet mainly as a consequence of its perceived importance, an importance that was fuelled in particular by the enormous media attention given to Internet trends: ”The take-up of the Internet is often a result of the perception of its importance.” In this respect, the Internet is no different from other technological innovations. Moore and Benbasat (1991) for instance argue that innovations diffuse because of perceptions of using innovations rather than that of innovations themselves.
Media attention was fuelled by the desire to label everything Internet-related as the new economy. For instance, Kelly’s publications (1998), in which he indicates that the old economic patterns of supply and demand would no longer be of relevance, thus creating new forms of profitability, attracted a great deal of attention.

Evans and Wurster (1997) also outline the rise of the new economics of information. They posed that, over the past decade, managers have focused on adapting their operating processes to new information technologies. Dramatic as those operating changes have been, a more profound transformation of the business landscape lies ahead. Executives, and not just those in high-tech or information companies, will be forced to rethink the fundamentals of their businesses. Over the next decade, the new economics of information will precipitate changes in the structure of entire industries and in the ways companies compete. This fundamental shift in the economics of information is less about any specific new technology than about the fact that a new behaviour is reaching critical mass.

In the early days of the commercial use of the Internet, referred to by researchers such as Kelly (1998) as the rise of the new economy, the success of ‘doing business’ on the Internet was not measured using ‘old’ criteria such as achieving a sustainable competitive advantage (Porter, 2001). Rather, it became commonplace to calculate success on the basis of the number of page views requested by a visitor, and the number of visitors attracted to the site. As a result of a greater reach, the emphasis was placed on network effects (Kelly, 1998), even if this meant making a loss on every customer. This so-called ‘burning of money’ was extremely commonplace, sometimes even a way of showing that you, the entrepreneur, understood how to ‘do business’ in the new economy. Organisations strived for a high organisational value by being the first to build up a large network of customers, through which they could make lots of money by applying for a listing on the stock exchange (Arthur, 1996). Little attention was paid to effectively monitoring the performance and actual results and comparing these with the costs and investments made (Barsh et al, 2000). A so-called ‘old economy’ strategist such as Porter lashes out at this culture of making calculations on the basis of page views and hits, instead of looking at how to acquire a competitive advantage (Porter, 2001). In Shapiro’s and Varian’s (1998) words: “Ignore basic economic principles at your own risk. Technology changes. Economic laws don’t.”

The view, that economic laws appeared to have remained fundamentally unchanged, was reflected in reality. Barsh et al (2000) assert, that selling online had alerted us to the power of the Internet to change the way we do business and run our everyday lives. They identify however that the financial performance of web entrepreneurs is extremely disappointing. An important lesson for the new economy is, that “businesses have to make money”.

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CHAPTER 2 - INTRODUCTION

Many young Internet businesses went bust, while others saw their market value drop to more realistic proportions. Doing business on the Internet once again simply became business, if that hadn’t always been the case anyway (Maes and Parson, 2000). It seemed clear that investments in Internet projects had to once again comply with conventional investment criteria such as the Net Present Value method (Rengers and Siccama, 2000). According to Köselka (1998), businesses, in order to breed long-term success, must have a corporate culture, in which the creating of a profitable relationship between company and customer is of the utmost priority. Such a relationship can only be achieved if a business is able to improve the working methods of the customer. After all, the customer must execute his activities better, faster and more profitably using the products and services at his disposal. It is the aim of every organisation to provide its customers with a solution to their problems.

Results from research carried out by Poo and Swatman (1999) relating to this period support the observations in the market. In the early days of e-business, it was easy to distinguish yourself by virtue of the fact that you were doing business over the Internet. Once others started following suit, this alone was not enough to distinguish yourself. Poon’s and Swatman’s longitudinal study into Internet commerce concludes, that Internet commerce managed to fulfil some, but not all, business objectives. Over the 20-month period of the study, the speculations in business and media report about what the Internet can do were not always supported: sales increases were far lower than initially expected, and many respondents were disappointed with the performance of the Internet as a virtual marketplace. Yet, 95 percent of their sample said they would continue to use the Internet commerce for their businesses. Some respondents expressed the view they no longer gain competitive advantage. Often the loss of competitiveness was due more to competitors also having gone on-line, with the result that Internet commerce had become a competitive necessity, rather than a matter of competitive advantage.

The approach of Internet projects is changing from simply experimenting and ‘just do it’ to a more strategic approach (Evans and Wurster, 1999). According to Boonstra (2000), businesses have to develop a strategic vision on the position and role of the organisation, given the possibilities of the Internet. This requires those in senior management positions to significantly increase their involvement with the Internet. Research carried out by Price Waterhouse Coopers (2000) echoes this belief: “A significant change between our research in 1999 and 2000 is the increase in the number of companies that now have direct executive committee or senior management participation in the Internet area. Those that have executive committee involvement this year is six times as large as last year, senior management involvement has more than tripled.” That the Internet is growing from simple applications to strategic use corresponds with the growth curve of technology diffusion in general. Van den Hooff (1997) also found for instance that, when
organisations accepted and used email, they initially used it indiscriminately, until e-mail slowly but surely grew into a strategic tool for the organisation.

The increasing awareness of strategic management of the significance of the Internet, combined with the many failed initiatives and uncertainty about the effectiveness and success of Internet commerce, illustrates the need for further research. For instance, Poon and Swatman (1999), when researching several branches of trade, found no underpinning for the view, that marketing through the Internet is as effective or maybe even more effective than marketing through other channels. Not surprisingly, their conclusion was: “the determinants of the effectiveness of Internet marketing are complicated and clearly require further research.”

Arising from this need for further research, it would be interesting to draw parallels between research into Internet applications on the one hand and the way in which research into information systems was and is being carried out on the other. Ives and Learmonth, writing in 1984, stated that “Researchers concentrated their efforts on delineating the nature of information systems function: operational support versus decision support, the impact of information systems on end users or the importance of information systems to the organisation as a whole. More recently, however, the external use of information systems as competitive weapons has come under consideration. Recent studies demonstrate that information systems offer a unique opportunity for competitive advantages. These studies present descriptive models for classifying successful strategic applications and for evaluating the potential of proposed applications.” In those days, many more researchers, including Miller (1987) and Venkatraman and Ramanujam (1987), highlighted the importance of further research into the correlation between strategic orientation of information systems and organizational performance.

The parallel with research into the Internet is, that this was initially also more phenomenological, with the technical functioning of the Internet being the main focus of attention (see for instance Williams and Blair, 1994). Over the past few years, the focus has been shifting increasingly towards research into strategic applicability and success. This is illustrated for instance by Gonzalves et al (1999), who use the work of Ives and Learmonth as a basis for their longitudinal research into the impact of Internet sites on the competitiveness of organisations. They, too, conclude that there is still a substantial need for further research into the strategic deployment of the Internet.

We thus see both society and science showing a growing awareness of the need for a strategic perspective on the Internet.
2.2 Strategy of an e-formula

Literature views the strategic perspective of the Internet from various angles. References are made for instance to the Internet strategy of the organisation, the network in which the organisation operates, a web site, or a combination of these. This paragraph highlights the approach our research is to take.

Before examining these approaches, it is helpful to note that the application range of the Internet can deviate strongly within all these approaches, ranging from for instance e-procurement, digital marketplaces, co-buying, supply chain management or e-commerce (Hinfelaar, 2000). Our research will narrow down this focus to the market side of an organisation, focusing in particular on e-commerce.

Boonstra (2000) uses the term Internet strategy to describe the direction chosen by an organisation when using the Internet. The organisation is a central theme for Boonstra, just as it is in classical strategy approaches (Heene, 1995), and the Internet is assigned an important role to ensure that the organisation can (continue to) operate successfully in future. As many organisations exploit more than one web site at a time – an organisation such as Philips has hundreds of sites – the Internet strategy, from an organisational point of view, can resemble aspects of the ‘thinking’ portfolio from the corporate strategy (Grant, 1998, De Wit and Meyer, 1998).

A second approach would be to highlight not the organisation, but the network in which the organisation operates. In order to meet customer needs, various organisations collaborate with each other as well as with their customers. This approach can be highly flexible, using ever-changing set-ups (Alexander, in: De Vries, 2001). In this respect, the Internet’s role is to dynamically put a network of suppliers and customers and customers in touch with each other. Seen from this angle, the Internet strategy resembles the network level strategy (De Wit and Meyer, 1998).

A third approach for strategically assessing the Internet is to highlight not the organisation, but a web site with a clear face to the customer. Such a web site can have a similar strategy for achieving competitive advantages as the organisation, but could also have its own proposition with its own competitive strategy, and a such its ‘own face’ to the market. The site can be based on new competencies, or capitalise on competencies of the underlying organisation(s). In this case, the Internet strategy mainly resembles a business level and operational strategy (De Wit en Meyer, 1998).

From these three approaches, we can deduce that the Internet strategy of an organisation need not correspond with the Internet strategy of a web site. We can only speak of the
Internet strategy when an organisation does not operate in a network, but uses one site, and the positioning and competencies tie in with the organisation’s.

In terms of the approach taken by our research, it would be interesting to research both the electronic face to the customer (i.e. the web site) as part of the strategy object, as this is the place where businesses interact with the customer and offer value, as well as the (group) organisation(s) using the electronic outlet. This ties in with Prahalad and Ramaswamy (2000), who name this wide combination of interaction structure with customers and the network of cooperating organisations as the basis for core competencies, and are in favour of a combined object of consideration. For this reason, we have decided to incorporate into the research object both the web site and the underlying organisation(s) behind the web site.

Our next consideration is to decide whether to use an outside in perspective, whereby the web site is a central theme and the organisation comes second, or an inside out perspective, whereby the organisation is central and the web site plays second fiddle. In order to consider the pros and cons, it helps to realise that one single organisation could have more than one web site, each of which in turn can have its own position in the market arena. Every site can offer a different assortment of products and services, with its own price/quality ratio, tuned to various target groups. As such, each web site could effectively become a separate business. This ties in with Evans and Wurster (1997), who argue, that in the age of the Internet, organisations can be divided into various separate organisations with their own face to the market, each of which would have their own source for competitive advantage. If we were to opt for an inside out approach, the research would be primarily concerned with choosing a collection of site propositions. As we described in paragraph 2.1 however, little is known at present about the success of individual site propositions. That is why we have opted for an outside in approach, where we focus primarily on the proposition and features of one web site, one face to the customer, and place the organisation behind the site second. In this case, the object of strategy resembles the business level and operational strategy (De Wit and Meyer, 1998).

How best to label this combined research object? In our opinion, it is comparable with a formula. According to Verhage (1999) a formula is a face of an organisation to its customers. As in our approach, Verhage opines that an organisation can exploit more than one formula, each of which has its own well-considered assortment to respond to a certain consumer need within a carefully selected target group. According to Verhage, a formula has its own clear position in the market arena in terms of supply, price and quality. Although we believe that, by definition, a web site need not be focused primarily on sales, Verhage inspires us to introduce a new term, ‘e-formula’ (Jansen, 2000). The term e-formula might be a good label for our research object, as it closely resembles Verhage’s
definition, and there are at present no other commonly used terms for our outside in perspective on the web site and underlying organisation.

This leads us on to define our research object, the e-formula:

An e-formula is defined as:

- an electronic outlet (i.e. web site) with a recognisable virtual address (i.e. URL) as a face to the customer and a clear proposition in the market arena;
- the organisation(s) responsible for the operations directly connected to this web site (i.e. responding to emails, order handling, placing information on the site etc.).

In our research project, ‘electronic outlet’ is narrowed down to web sites, whereby a web site can be the only face of an organisation to its customers, meaning that all contacts are dealt with digitally. In this case, we can use the term ‘pure player e-formula’. However, organisation(s) might also use the web site in addition to other channels. In this case, the term ‘multi channel formula’ can be used.

Figure 1 illustrates the relationship between an e-formula, an organisation and its customers.
The need to define a new construct as a research object has also been recognised by Amit and Zott (2001). They argue, that one stepping stone on the road towards an integrated theory of value creation in e-business would be the definition of a new unit of analysis that captures various interdependent sources of value. According to them, existing theoretical approaches suggest distinct units of analysis that are commensurate with the alleged main locus of value creation. In the value chain framework, it’s the firm’s activities, in Schumpeter’s theory of economic development, it is the firm (and in particular the entrepreneur), in the resource based view, it is the resources and capabilities that constitute the firm, in strategic network theory, it is the network of firms, and in transaction cost economics, it is the transaction that is both the unit of analysis and the presumed locus of value creation. Using any of these theoretical frameworks in isolation would result in some crucial aspects of value creation in e-business either being ignored or not being given due importance. That’s why Amit and Zott define a unit of analysis that depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities. This unit of analysis is quite close to our e-formula approach.

2.3 Design of an e-formula

Henderson and Venkatraman (1993) distinguish two levels of consideration for looking at organisations, namely the strategic, externally aimed level of consideration, and the internal, executing level. Abcouwer et al (1997) and Maes (1999) build on Henderson’s and Venkatraman’s model to set up a generic model for information management. The verbs ‘aim’ can be used for the strategic level of consideration, and ‘design’ for the level of consideration concerned with the structuring of organisation, information and technology. As to the performing level of consideration, the term ‘executing’ can be deployed. The levels can be illustrated using the example of a supermarket. On a strategic level, a supermarket can choose to focus on achieving a better ‘shopping experience’ than its competitors. On the ‘design’ level, it could for instance opt for wide aisles between the shelves and a relaxation corner with seats, where shoppers can enjoy a cup of tea or coffee. The executing level of consideration is concerned with filling up the coffee machine, clearing the tables and keeping the coffee corner neat and tidy.

It is important to stratify the levels of consideration, as organisations often do not achieve a successful break-through simply by following a new strategy – market chances are usually visible to everyone – but by using foresight to cleverly design structures and processes (Miles and Snow, 1994). That is why this research project will look at the e-formula on both the strategic, directional level as well as on the structural or design level.
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This study narrows the design of e-formulas down to the designing of an interaction structure for digital client contacts. Most e-entrepreneurs see their e-formula as the ultimate self-service outlet (Jansen, 2000), where visitors, supported by intelligent interactive tools, decide for themselves where, when and how they will interact with the e-formula to satisfy their needs. Moments of contact are established when the customer has a latent or manifest need, places an order, has questions or problems when using the product or service, and whenever (s)he feels the need to replace or extend the product or service, thus creating a further need (we have, in effect, come full circle). Section 3.3 analyses this cycle, which we have christened the Customer Life Cycle, in more detail.

Considering a life cycle for moments of customer interaction as a line of approach for a research project is not a new idea. For instance, Ives and Learmonth (1984), Gonsalves et al (1999) and Schubert and Selz (1999) use a phased life cycle and a scoring per phase to compare the design of interaction structures of a wide range of organisations. However, as yet, little empirical research has been carried out into the design of interaction structures to support a customer life cycle. Gonsalves et al (1999), using what they call an ‘extensive literature search’, conclude for instance, that: “The frequency with which the Customer Resource Life Cycle (CRLC) is mentioned in journal articles shows its importance in such areas as information systems, investment decisions, strategic alignment, information systems planning, competitive advantage, interorganizational information systems, telecommunications management and electronic commerce.” However, they only found one study where the CRCL played a part in an empirical investigation. “Despite its limited use in empirical research, the CRLC offers a framework for studying how organizations might plan to use an information-systems application like the web to help them compete. Similarly, it provides a framework for understanding the expected and achieved impact of the web on competitiveness as related to the three generic strategies of focus, differentiation and cost leadership (Porter, 1985). No previous research has examined these effects.”

Further research is therefore needed to analyse the design of an e-formula to support a customer at different moments of contact in a life cycle.

2.4 Success of an e-formula

At present, there is still uncertainty as to the successes that can be achieved with e-formulas. Research carried out by Gonsalves et al (1999) states, that it is ‘entirely possible’ that managers aren’t exactly sure as to what the success of their website is, because many visitors use their site primarily as an information medium, and obtain value through other channels. Larsen and Bloniarz (2000) add, that it is at present difficult for an organisation to properly distinguish the contribution an e-formula makes to the success
of the firm from other factors contributing to that success, especially in a multi channel environment. And lastly, research carried out by Price Waterhouse Coopers (PWC 2000) shows that a large percentage of Internet entrepreneurs (44%) do not deploy specific criteria to measure the success of e-business initiatives. From this, we can conclude that little appears to be known about the success e-formulas (can) generate.

2.5 Research aims

The preceding paragraphs demonstrated that:

- the Internet is developing from an experimental stage to a stage where strategic decisions are made about the Internet;
- little is known about what strategic choices concerning the Internet are successful;
- little is known about the design of sound e-formulas to support customer contacts for the duration of a life cycle.

In view of the novelty of the research area, the need for greater know-how, and the uncertainty as to whether existing theories are still relevant, we have decided to turn the defining (not the testing) of hypotheses into our research aim. In doing so, we will not have to start from scratch. Doorewaard and Verschuuren (1999) describe the role of ‘sensitising concepts’ in this kind of ‘formulating research’, representing concepts of which we can identify the basic ideas, but of which there is no detailed understanding of the exact definitions or mutual correlation. The ‘strategy of an e-formula’ is such a sensitising concept.

Our research aim is defined as follows:

To develop hypotheses about how strategic and design choices of an e-formula correlate to the success of an e-formula.

Our research question is directly derived from this, and can be formulated as follows:

What (combination of) strategic and design choices of an e-formula correlate to the success of the e-formula?

In order to answer the main question, we will first of all need to answer a number of descriptive sub questions, which are aimed in part at better defining the sensitising concepts:

Q1. What strategy choices can be made for an a-formula?
Q2. What design choices can be made for an e-formula?
Q3. What factors define the success of an e-formula?

These descriptive sub-questions will be answered in chapter 3.
Before concentrating on the ‘correlated to’ aspect of the research question, let’s briefly look at the term ‘combination of’. In our particular case, it indicates the possibility that strategic and design choices are not fully independent of each other, but could for instance strengthen or even weaken one another. According to Miles and Snow (1994, p67), it is not only the individual choices that are important, but rather, by virtue of their mutual interaction, the combination of choices. The expression ‘combination of’ has been inspired by the term ‘alignment’ as used by Porter (1996) and the concept of ‘configurations’, as used for instance by Mintzberg (1983).

According to Porter (1996), strategic thinking has for a long time recognised the importance of various functions within an organisation using policy lines that are carefully tuned to each other. It has however gradually disappeared off most managers’ agenda. Managers don’t view the company as one single entity, and choose instead to focus on the core competencies, critical tools and key factors for success. According to Porter, ‘alignment’ is significantly more essential to the competitive advantage than most managers realise, especially as separate activities influence one another. Porter goes on to say that the strategic tuning of activities to each other is not only important for achieving a competitive advantage, but also for maintaining that advantage, because a properly tuned, aligned configuration is harder for competitors to imitate. When activities complement each other, competitiors will reap few awards by simply imitating them, unless they can successfully copy the entire system.

Porter names three, not mutually exclusive, types of alignment:

- **Alignment of the first order: simple consistency** of each activity (function) with the overall strategy. This ensures that competitive advantages of activities are geared to each other and do not cancel one another out. The strategy is simple to explain to customers, employees and shareholders alike.

- **Alignment of the second order: mutually enforcing activities.** A supplier of soap distributes luxury soap to a top-end hotel. This distribution channel stimulates the image and sales of this particular brand of soap to drugstores, another channel. If the soap were to be packaged in the hotel using the hotel’s own brand name, the synergy would be lost because the customer would not recognise the brand.

- **Alignment of the third order: optimising efforts.** A clothes chain views the availability of clothes in stores as an important element of its strategy. This can be achieved in two ways: by having a large stock locally, or by having frequent warehouse deliveries. Opting for the second choice creates a larger turnover rate of the assortment, thereby also lowering the implementation costs for shorter clothing model cycles (important in fashion). Each strategic choice strengthens the other.

In all three of the above types of alignment, the whole is more important than its individual parts.
A more encompassing way of looking at alignment is to argue that not only the internal characteristics should be tuned to each other, but that the internal characteristics must also be tuned to the environment of the organisation. This is formulated by Mintzberg (1983) in his configuration hypothesis: “in an effective structure, it is essential that there is consistency between the design parameters and the contingency factors (the situational factors)”. Miles and Snow (1994) speak in this context in terms of a ‘fit’. Anyone who is able to achieve a ‘fit’ between the internal and external alignment, will yield success. Miles and Snow highlight four levels of fit: a complete misfit is doomed to fail, a limited degree of fit is needed to survive, a firm fit will usually result in excellent results and ‘accolades of admiration’, and anyone able to be the first to achieve a firm fit in a dynamic environment, and to continuously adapt it to his changing surroundings, will almost certainly end up in the hall of fame.

Using the concepts of alignment (Porter) and configuration (Mintzberg), we shall, for the purposes of our research, define the term ‘configuration’ as follows:

_A configuration is a pattern of answers to strategic questions and design questions._

In principle, this pattern of answers will take on a different form for all e-formulas (after all, each e-formula makes its own individual choices).

Next, we can concentrate on the term ‘correlate to’ in the research question, which stands for the possible link between choices and success. Here, we are not only interested in the correlation between individual choices and success, but especially in success configurations. Such a success pattern of answers to strategic questions and design questions will be called an _archetype_. Archetypes are based on the assumption that the pattern of choices does not have an additive but a synergetic effect on the success (Doty and Glick, 1984).

A relevant question is whether such an archetype, such a successful combination of choices, rings true for all types of e-formulas, or that we must distinguish different classes of e-formulas, each with their own archetypal success pattern. The broader way of looking at correlation, which also requires a certain degree of consistency with the business’s environment, supports the need for numerous archetypes. Mintzberg (1983) for instance distinguishes five different types of archetypes (which he later extended to seven). For Mintzberg, an archetype is an ideal type, a theoretically consistent combination of situational factors and design parameters. In a certain sense, his archetypes don’t really exist. As Mintzberg points out: “At the end of the day, they are only words and drawings on a piece of paper, not reality. Real-life organisations are incredibly complex, much more
complex than any of these paper configurations. They represent a theory, and each theory simplifies reality, thus distorting reality."

For the purpose of this research, we have decided to make a distinction between a number of classes of e-formulas, still to be defined, where each class will be given its own success configurations (which could correspond in part with the success configurations of another class, although this is not compulsory). For each e-formula, we can assess to which class it belongs, and to what extent its pattern of choices ties in with or deviates from the archetypal pattern of that class (the degree of fit).

With this, we can also define the terms ‘archetype’ and ‘fit’:

An archetype is a textbook configuration, consisting of a pattern of choices to strategic questions and design questions, which are related to each other, and which maximises success within the context of the surroundings.

Fit is the degree to which the pattern of choices of a specific e-formula ties in with the archetype (applicable within its own context).

Using these definitions, we can translate ‘combination of’ from the main research question into five sub questions:

Q4. What is a useable, defendable classification of e-formulas?
Q5. What strategic and design choices are made per class of e-formulas?
Q6. What does the archetypal success configuration of strategy and design choices look like per class of e-formulas?
Q7. Does a greater degree of fit with the archetypal success configurations correlate to a higher degree of success?
Q8. What hypotheses can be drawn up for the correlation between strategy and design choices, and success?

2.6 Structure and bookmarker

In order to satisfy our research aims, we shall begin by answering sub questions Q1 to Q3, using research literature to assess which strategic and design choices can be distinguished for e-formulas, and what factors define the success of an e-formula. This creates greater insight into the sensitising concepts, the central elements of the research question.

In order to answer research questions Q4 to Q8, we shall carry out an empirical study. The set-up and methodological accounts of this empirical research will be discussed in chapter 4. We will verify the representativeness of the respondents, and describe the
approach of all analyses, as well as the reliability of scales of constructs. This chapter will also comprise a classification for e-formulas and describe the basic characteristics of the respondents.

For the three most prevalent classes of e-formulas, we shall describe the strategic and design choices in chapters 5 to 7. For these classes, we shall also define hypothetical archetypes and test whether a loss of fit with these archetype means a loss of success. This answers research questions Q4 to Q8 as regards their content. Each of these three chapters will be concluded with a summarising discussion concerning the applicable class of e-formulas.

The results of the empirical study are discussed in chapter 8 (the last chapter) and related back to the theory, and recommendations are made for subsequent research.

Readers who would like to have an overview of the most important findings of our research are advised to read chapter 2 (Introduction) in its entirety, paragraph 3.1.2 (Central Concepts), and the (discussion) paragraphs 3.6, 5.7, 6.7 and 7.7.
3 THEORETICAL FRAMEWORK

This chapter is concerned with answering sub questions Q1 to Q3, using research literature to examine the strategic and design choices that can be distinguished for e-formulas, and the factors that define their success. In doing so, this chapter will offer a greater insight into the sensitising concepts, the central elements of the research question. In order to achieve this, we will begin by choosing a conceptual framework (3.1), before going on to discuss the strategic and design choices described in research literature (3.2 and 3.3). Next, we will consider the potential successes that can be achieved with an e-formula (3.4). We shall conclude this chapter by summarising the conceptual framework (3.5) and discussing the research literature (3.6).

3.1 Choosing a conceptual framework

We shall dedicate this paragraph to choosing the central conceptual framework, thereby concretising the concept ‘strategic choices’ and ‘design issues’ of the research question. To that end, we will first consider two general approaches of strategy, namely the positioning view and the resource based view, before going on to define the central concepts of the research.

3.1.1 Background to strategy

“Strategy is the Big Job of the organisation. In situations of life or death, strategy is the Tao of survival or extinction. The study of strategy must not be disregarded.” These are the words of Sun Tzu, written in 360 BC. The word strategy is derived from the old Athenian function strategos, a function created during the democratic reforms of Kleisthenes, more than five centuries before the birth of Christ (Cummings, 1998). During that period, ten strategoi were chosen, each of whom were assigned military control over a certain area, and who together formed the Athenian War Council. Strategos was a compound of the word stratos, meaning army, and agein, meaning leading. The emergence of the term ran parallel to the increasing complexities of waging war. Where previously an important role had been assigned to individual heroes, the emphasis was now increasingly being placed on coordinating and creating synergy between a large number of units working in close collaboration with each other. Cummings poses, that the
Greek Strategoi pursued strategy in its purest form, and that present-day strategists could learn from them.

Coordinating, and creating synergy between a large number of units working in close collaboration with each other still plays an important part in present-day views on strategy. These views also point out the importance for an organisation to secure and maintain harmonization between itself and its environment in order to achieve a sustainable competitive advantage (De Wit and Meyer, 1998). Strategic literature distinguishes two main streams on how this harmonization should take shape. The positioning view states, that an organisation must adapt to its surroundings, and highlights the position of an organisation in the market arena. The resource based view takes its departure from the distinguishing competencies of an organisation, and the options available to the organisation to adapt its surroundings to these competencies. We shall take a closer look at both views.

**Positioning view**
Marketing literature usually opts for the positioning view (De Wit and Meyer, 1998). According to Jaworski and Kohli (1993), successful businesses determine their own position by listening to the cues of customers and competitors. These businesses look for potential customers, whose wishes can at present not be optimally met by their competitors. If they succeed in building a relationship with these customers, they can focus their attention on defending the position secured in the market arena from new players. The organisation can remain successful by continuously listening to its customers, and tuning the products and services to the customers’ wishes (De Wit and Meyer, 1998). The competencies and resources of a business are the limiting factors, the preconditions for securing and defending the chosen position.

Although Porter doesn’t explicitly preach a positioning view, he is implicitly a well-known representative of this trend. Porter (1996) poses, that a competition strategy revolves around ‘being different’ from your competitors, consciously choosing a different set of activities to deliver a unique value mixture. According to Porter, strategic positioning involves carrying out activities that are different from your competitors’, or carrying out similar activities in a different way. Porter describes, that organisations have over the past few years started focussing less on strategy in favour of operational effectiveness. As a result, many organisations are carrying out activities that are similar to their competitors’, only better (or are at least trying to carry them out better). This operational effectiveness does however not result in a competitive advantage. It collectively raises the productivity threshold of an entire sector, which is of potential benefit to the customer, but does not involve anyone securing a better relative position in the market. Porter goes on to say, that by striving for operational effectiveness, whereby
competitors focus their attention on executing their core processes, repeatedly outsourcing non-core sections of their processes to the same parties, competitors are increasingly starting to look alike.

The fact that managers are gradually focussing more on operational effectiveness at the expense of strategy is resulting in static or falling prices and cost pressure, which in turn affects long-term investments. Porter therefore indicates, that it would be wise to start thinking about strategy again. In this context he poses, that, in order to guarantee a sustainable competitive advantage, it is not enough to simply choose a unique position, as competitors will be prompted to copy this. That is why, in general, it is important to focus one’s attention on deepening the strategic position, rather than opting for a wider spread and compromises. One way in which to do this is to look at how to extend the strategy, which can raise the level of the existing activities system as a result of companies providing extras or services that the competition cannot possibly copy, or only at far too exorbitant prices.

**Resource based view**

The resource based view goes hand in hand with the positioning view, which focuses on choosing a position in the market arena. Proponents of this view believe, that a strategy should not be formed on the basis of external chances, but on the basis of internal strengths (De Wit and Meyer, 1998). An organisation must focus on acquiring and developing competencies or unique assets that are difficult to imitate, and formulate a strategy on how these competencies can be utilised. The building up of competencies can be a long and drawn-out affair. This is both a strength and a weakness, the strength lying in the fact that it is difficult to imitate, because it takes the competition a long time to construct a similar competency (Barney, 1991). Its weakness however is that it will also take a long time to switch to other competencies if the need arises (De Wit and Meyer, 1998).

Prahalad and Hamel (1990) are early proponents of the resource based view in management literature. They pose, that the distinguishing characteristics of an end product or service, such as the price or quality, are becoming less and less important as a source for competitive advantage, as these characteristics are slowly converging between competitors. Prahalad and Hamel illustrate this by using a tree as a metaphor: “The diversified corporation is a large tree. The trunk and major limbs are core products, the smaller branches are business units; the leaves, flowers, and fruit are end products. The root system that provides nourishment, sustenance, and stability is the core competence. You can miss the strength of competitors by looking only at their end products, in the same way you miss the strength of a tree if you look only at its leaves.”
Although a great deal of research is being carried out into the correlation between competencies and success (Barney, 1991), there is as yet no generally accepted operational classification of resources or competencies in the field of strategic management (De Wit and Meyer, 1998). This is why the term competency is used in many different ways, and with a strong diversity of opinions. Developments are however underway to render core competencies more concrete, or to use them as a basis for research (Peelen, 1999). De Wit and Meyer refer to Durand (1996), who uses the metaphor of a sportsman to illustrate the various tangible and intangible forms of competencies. A successful sportsman must have a healthy body (tangible resource), competitive insight (knowledge), speed (capability) and the mentality of a winner (attitude). His fame (reputation) and sponsorship contracts (relationships) can support him even further in the sporting arena.

Prahalad and Hamel (1990) originally searched internally in organisations for the basis for competencies, which back then concerned internal, organisation-specific processes. Prahalad and Ramaswamy (2000) pose, that the source from which competencies can be tapped, has grown, from an individual organisation, via a partner network, to an ‘extended enterprise’, where an important part is also played by the customer. Where customers were previously seen as passive buyers, whose most important task was consuming or selling on goods and services, customers have now become part of the extended enterprise. The customer cocreates and extracts business value. He is a partner, a joint developer of the products and services assortment as well as a (potential) competitor. According to Prahalad and Ramaswamy, this means that the structure for an active, ongoing interaction with the customers forms the basis for access to competencies.

From a resource based view perspective, an organization should try to build on their unique competencies first before attempting to find or create a more suitable market, instead of reactively adapting to the unpredictable whims of the current environment (De Wit and Meyer, 1998).

**A combined view**

Day (1994) is a strategist who propagates a combined positioning and resource based view. Although his approach closely resembles the positioning view, he argues, that three types of capabilities are important in a market-oriented organisation. Externally focussed capabilities are e.g. market sensing, customer linking, channel bonding and technology monitoring. Capabilities with an internal focus are for instance financial management, cost control, technology development, integrated logistics, manufacturing and transformation processes and human resource management. These external and internal capabilities are connected to each other through spanning processes. These spanning capabilities are for instance the process of customer order fulfilment, pricing, purchasing,
CHAPTER 3 - THEORETICAL FRAMEWORK

customer service delivery, new product/service development and strategy development. According to Day, an organisation’s success is dependent on the degree to which it is able to use externally focussed capabilities to sniff out chances in the market, respond to these with the aid of the spanning capabilities, and actually fulfil them with the internally focussed capabilities.

3.1.2 Central concepts

We have chosen to focus on the positioning view. This ties in with the much-followed approach in the marketing strategy, and also makes it easier to operationalise measures than the resource based view, where there is little agreement on useable ways of gauging this (De Wit and Meyer, 1998).

In order to answer research question Q1 and Q2, we must decide what strategic and design concepts we are going to explore. Here, we support the position of Christensen and Tedlow (2000), who argue that, in order to understand and interpret the influence of the Internet and e-commerce, use can be made of conceptual frameworks and experiences from existing (strategic) literature.

Next, we must ask ourselves which aspects or concepts of strategy we should distinguish. De Wit and Meyer (1998) indicate, that there is no unequivocal definition or list of aspects of strategy available. It is for this reason that we have decided to base our research on Andrews (1988), who has compiled the aspects described in strategic literature into a list of ‘statements of strategy’, and to convert this into a conceptual framework to be used for the purposes of our research:

1. Market Arena
   For which markets or market segments will products and services be offered?
2. Value Proposition
   What value (products or services) does the e-formula offer its customers?
3. Distinguishing Value
   In what way is the e-formula different from other formulas and e-formulas that are active in the market arena?
4. Revenue Model
   In what way(s) are investments in the e-formula justified?
5. Organisational Form
   In what organisational form are the activities that are needed to operate the e-formula organised?
6. Channel Positioning

What position does the e-formula occupy in the channel, and how are multi-channelling and channel conflicts dealt with here?

A more popular way of formulating these ‘statements of strategy’ is to call them considerations or choices that an e-formula has to make on a strategic level. These considerations tie in with Day’s (1994) externally oriented capabilities and spanning capabilities and will be discussed in paragraph 3.2.

In order to complete the conceptual framework, we must include one further consideration, neglected in Andrews’ classification, namely what Hagel III and Singer (1999) call Customer Relation Management Business and what Prahalad and Ramaswamy (2000) refer to as the customer interaction structure. This Customer Relation Management Business and Interaction Structure ties in with what we call the design of the e-formula, and will be discussed in paragraph 3.3.

3.2 Strategy of an e-formula

This paragraph discusses the strategic considerations that can be made for an e-formula.

3.2.1 Market Arena

While economists see the market as a place where supply and demand meet, in the business world a market arena is usually defined as a group of customers with similar needs. In other words, a market consists of buyers whose demands are much alike (De Wit en Meyer, 1998).

In the positioning view (paragraph 3.1.1), an e-formula selects a market arena in which it can offer products and services. The physical world is governed by all kinds of geographic restrictions when it comes to choosing a market arena, but the general assumption for the network economy is that it no longer has a location and as such no longer has to worry about geographic restrictions (Kelly, 1998). Rayport and Sviokla (1995) pose, that this allows for new economies or scope. A business can base itself on a single set of digital assets to deliver value in a variety of different markets. This applies to both geographic markets and demographic markets, both in business to business and business to consumer markets. It is now possible to create more than one face to the market on the assets of a digital back office, each face aimed at a different set of customers (NB: this ties in with our approach of taking e-formulas as our object of research, whereby each e-formula can be one such face).
The possibility of serving new markets and thereby bringing in new customers is seen as one of the most important opportunities the Internet can offer the entrepreneur (Harrington and Reed, 1996). And in actual practice, market innovation is also seen as the most important advantage of e-commerce. KPMG Consulting stated in 1999 (Electronic Commerce Research Report 1999): “The ability to reach new markets or customers is clearly seen as the most important benefit of e-commerce. In 1998, a quarter of all respondents took this view. Now, that figure has leapt to over a third of all the companies interviewed”.

The strategist Igor Ansoff (1965) developed the product/market expansion grid, depicting four alternative growth strategies for an organisation. As the name suggests, Ansoff combines the products and services provided by an organisation, what we in the broader sense shall call the value proposition, and the market arena in which they are delivered. Ansoff poses, that an organisation has to first generate more turnover in its existing market arena by selling more of its existing products and services in this arena. Ansoff refers to this growth strategy as the penetration strategy. Next, the organisation can sell its existing products in new markets (the market development strategy). By offering new products (the product development strategy) an organisation can go on to offer new products in new markets (the diversification strategy). The growth strategy model leads us to the next strategic consideration, the value proposition.

3.2.2 Value Proposition

The value proposition describes the value offered by an e-formula to its visitors. This could be an assortment of products or a form of service provision. A value proposition need not always be concerned with selling products or services; in general, it relates to the value the visitor extracts from the e-formula. Szymanski and Hise (2000) concluded their research by stating that success depends heavily on the way in which the value proposition is shaped.

We shall first of all consider the angles from which a value proposition can be set up, before going on to discuss what types of value propositions are suited to being offered over the Internet, where we can distinguish a shift from offering products to offering services.

Evans and Wurster (1999) indicate, that customers and providers view products or services differently, and that the value proposition of an e-formula can therefore be set up from different angles. This is what they call affiliation, to indicate that an affinity is struck up with one of the involved parties: the buyer or seller. The term affiliation is however a rather awkward one, as it is also frequently used in Revenue models (see paragraph 3.2.4).
Berryman et al (1998) tie in with Evans and Wurster, and highlight three perspectives: that of the offering party, where the main focus is on drawing attention to an offer, that of the requesting party, for whom the quest to fulfil a need is a central issue, and an intermediary (neutral) perspective, which primarily tries to put parties in touch with one another. Evans and Wurster go on to say, that the existing category boundaries will become blurred and value propositions will have to be reconsidered if the requesting party’s perspective, rather than the production source or the offer, is chosen as a starting point for putting together the value proposition. By way of illustration: if from a supplier’s point of view somebody supplies bouquets of flowers, he will from the customer’s point of view be offering a (limited part of) a gift service. The flower service could evolve into a general gift service as a value proposition, which is aimed at helping its customers ‘pamper’ their loved ones.

The (re)consideration of value propositions leads us to an interesting question: what assortment of products or services is suited to being offered via e-formulas? Kierzkowski et al (1996) indicate, that the Internet is a particularly interesting tool for assortments that have a natural fit with the basic features of the Internet and the usage context of the average Internet user. This means that an online assortment is especially interesting if it concerns products that are information intensive, popular with the online user group, where it is possible to conclude transactions online, and that are attractive for relation marketing purposes (as opposed to products that are predominantly placed on the market using mass marketing). Bouwman et al (2000) highlight a few other points that determine to what extent products are suited to being offered via e-formulas, such as the homogeneity of quality and product features, the place or the physical specifics – meaning that the value can only be obtained at predetermined locations – the dependency on the knowledge and skills of people and the shelf life of the product.

The size of an Internet assortment can differ from that of a conventionally arranged assortment. Evans and Wurster (1999) pose, that the breadth and depth of an Internet assortment are virtually infinite, as there are no restrictions in terms of shelving space and shop surface space (it can be noted that this does however have implications for e.g. the interaction design of the e-formula, the manageability of the database or the supplier management, but these fall outside the scope of this thesis). The products and services offered do not even need to be in stock, but can be delivered straight to the customer from the stock of suppliers and manufacturers. In principle, there are no restrictions: all products and services, which meet a (group of) need(s) of a customer, can be offered. This makes any e-formula that decides on this option extremely appealing to the customer. That is why Evans and Wurster even consider it worthwhile to offer products and services of your competitors. They opine, that existing retailers should build up their Internet
assortment as though they were an e-tailer, i.e. they should not let their existing physical restrictions hinder them and only offer a medium-sized assortment.

Products, which do not meet the features of Kierzkowski et al (1996) or Bouwman et al (2000), might nevertheless be suited to being offered via e-formulas. This has been made possible through a change in value propositions as a result of the digitalisation trend. Molenaar (1999) poses, that products lose some or all of their physical features and are made ‘downloadable’ (he uses the example of the so-called ‘specialty goods’, such as diet products and wines by was of illustration). After compiling highly detailed information about the customers, the seller can be pro-active in making and offering tailor-made concepts: a collection of wines put together, imported and maybe even bottled especially for the individual customer. In that case, an important part of the value proposition is digitised, which means that the physical product in the sales process plays a subordinate role to the concept and experience of service.

Evans and Wurster (1999) also highlight the experience of the value proposition in relation to the actual proposition. They underline, that the provision of purely objective product information is not always the best option. There are for instance product categories where the customer would like to have exaggeratedly subjective information as part of the consumption experience, for instance in the case of expensive designer clothing and sports cars. Here, it is not about selling products, but about serving customers’ needs and wants. According to Strikwerda (2000), this has to do with the fact that the basic needs of western civilisation have been fulfilled, as a result of which the customers’ interest has shifted to value propositions where ‘experiences’ play a major part. Maes and Parson (2000) state that the filling in of basic needs has been banished to the background in favour of the factors time and emotions. Pine and Gilmore (1999) go even further and use a model for the progression of economic value that helps organisations escape from ‘commodotization’. This model comprises five stages of value propositions: extract commodities, make goods, deliver services, stage experiences and guide transformation. They pose, that ‘experiences’, which have the ability to change the life of mankind forever, are the most differentiated and distinguishing value proposition an organisation can deliver, and for which the highest premium can be demanded.

The potential of the Internet to digitise the value proposition stems partly from its potential to pull apart physical value chains and information value chains. Rayport and Sviokla (1995) distinguish three stages in which this is done. The ‘visibility stage’ helps organisations gain a better insight into the physical operations, so that these can be designed more efficiently. In the ‘mirroring capability stage’, organisations can replace (parts of) their physical operations with virtual activities (see also Choi et al, 1997), so that parallel virtual value chains can be set up. The third stage exploits the information
flows in the virtual value chain to create new value forms for the customer, resulting in new value propositions (see for instance also Evans and Wurster, 1997).

With the digitising of the value proposition, we can witness a shift away from offering physical products towards offering services. The two aren’t identical however, as services have other features. This is illustrated in Figure 2, which displays a number of basic features of service provision and the resulting implications of placing them on the market (De Vries and Stegen, 1999).

<table>
<thead>
<tr>
<th>Service provision – Basic features</th>
<th>Implications for distribution policy</th>
</tr>
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<tbody>
<tr>
<td>Intangibility</td>
<td>• Services cannot be held in stock (Normann, 1991);</td>
</tr>
<tr>
<td>(De Jong &amp; van Bemmel, 1992; Grönroos, 1990; Normann, 1991)</td>
<td>• Services can only be experienced during consumption, and are difficult to make tangible prior to purchase (Berry and Parasuraman, 1991).</td>
</tr>
<tr>
<td>Inseparable from production and consumption</td>
<td>• The customer always participates (partially) in the production process (Grönroos, 1990; Normann, 1991);</td>
</tr>
<tr>
<td>(De Jong &amp; van Bemmel, 1992; Grönroos, 1990; Normann, 1991; Berry en Parasuraman, 1991)</td>
<td>• Services cannot be exported, production equipment can (Norman, 1991);</td>
</tr>
<tr>
<td>Information can represent the process and product</td>
<td>• The quality of services is determined by both the end product and the process (Berry en Parasuraman, 1991);</td>
</tr>
<tr>
<td>(Rayport en Sviokla, 1995; Evans en Wurster, 1997)</td>
<td>• Customers take risks as a result of a lack of understanding of their role in the production process, the manner of interaction with the service provider and the intangibility of the product (Heskett et al 1990, Berry and Parasuraman, 1991). The distribution must provide insight into processes and offer the customer the opportunity to influence these (Berkley and Gupta, 1995; Berry and Paraduraman, 1991).</td>
</tr>
<tr>
<td>Information can represent the process and product</td>
<td>• Service and the service provision process can be distributed by means of software;</td>
</tr>
<tr>
<td>(Rayport en Sviokla, 1995; Evans en Wurster, 1997)</td>
<td>• The difference between communication about the product and the distribution of the product is fading in the eyes of the customer (Barnatt, 1998).</td>
</tr>
</tbody>
</table>

We can conclude this paragraph with the assumption that value propositions, which fit in with the features of the Internet, are suited to being offered via e-formulas. An important position in this respect is occupied by digital or part digitised value propositions, based for example on emotions, experiences and service provision, which have been set up from the perspective of customers’ needs. This implies, that innovation of the value proposition is necessary for many existing players.

### 3.2.3 Distinguishing value

It becomes more difficult to distinguish yourself in the transparent Internet world, where the competition is merely a mouse-click away from you, and where many (new) intermediaries help the customer to compare the various providers. As Kierzkowski et al...
(1996) formulated for the consumer market: while much of the digital revolution is over-hyped, it will nevertheless fundamentally change the traditional marketing balance of power by giving the consumer more control over their relationship with marketers. In an interactive, two-way, addressable world, it is the consumer – and not the marketer – who decides with whom to interact, what to interact about, and how to interact at all. Marketers have to earn the right to the digital relationship, and they have to do so by continuously enhancing the value they offer. Maes and Parson (2000) support this view and speak of an economy of abundance, in which it’s becoming increasingly difficult to mark yourself out as a provider of products and services. Partly for this reason, Evans and Wurster (1999) pose, that the balance of power is shifting towards the customer.

The question a provider of products and services should ask himself, is how he should distinguish himself in relation to other players in the market arena. Wheelen and Hunger (1998) have formulated two questions an organisation should ask itself:

- Am I competing in terms of pricing, or in terms of quality and service?
- Am I competing in terms of providing a product or service en masse, or am I concentrating on niche products and services?

In order to answer these two questions, we will now discuss the considerations surrounding e-formulas.

**Pricing versus Quality**

The impact of the Internet on the quality and the way in which the value proposition is given shape has been highlighted in paragraph 3.2.2. As such, we shall now focus our attention primarily on pricing and the mutual trade-off between price and quality.

Research literature pays a lot of attention to changes in pricing as a result of the Internet. We shall begin by discussing differences between pricing on the Internet and in the physical world, and the fact that in this context it is difficult to speak of the price, as prices can vary depending on the context of the visitor. Next, it will be made apparent that research literature advances three contradictory opinions, i.e. that the Internet leads to a drop in prices, no change in prices with an adjusted quality, as well as higher prices. We shall conclude by discussing the implications different pricing strategies have on the cost structure of an organisation.

Nunes et al (2000) pose, that a pricing strategy can take on different forms in the world of Internet than it would in the physical world, mainly because it is becoming easier for a provider to place the same product on the market in different ways, by setting up different e-formulas next to each other. This is much more difficult and laborious to do in the physical world. Nunes et al pose, that a person behaves differently in different situations.
On the lookout for basics, a customer might be a bargain hunter; he may however also want to be treated *top of the bill* for a special occasion, and might therefore be less concerned about price. By setting up different parallel e-formulas, each with their own positioning and pricing, the customer’s needs can be met in both situations. In total, Nunes et al describe fifteen types of pricing mechanisms, which occur in combination with each other on the sites researched.

According to Van der Kind (1999), the difference between pricing on the Internet and through conventional channels has to do with the customer’s perceptions. Van der Kind poses, that the price level perceived by the customer in virtual outlets will probably be lower than in traditional stores, even if the other operational costs are the same. He underpins this thesis by drawing a comparison with the way in which logistical costs in traditional retail and in e-tail are passed on. In the traditional model, the consumer only bears the costs of the last section of the logistical chain, i.e. from the shelf to his home. In e-tail, the prices of items are usually exclusive of shipping costs, because the consumer pays all of the logistical costs, including the section he used to do himself. This means, that the portion of the margin used by traditional retailers for the purposes of logistics, is made visible in the virtual stores and vanishes from the margin. As such, Van der Kind concludes that the price level as perceived by a customer is lower for e-formulas than for conventional formulas.

Delivery costs will eventually have to be paid, and will usually be borne by the customer, whether or not incorporated in the prices quoted in the online outlet. Barsh et al (2000) indicate, that it is sensible in this case to on-charge: from an economic point of view, free shipping is only a sound option if it is a specific vehicle to attract new customers or as a reward for loyal customers and heavy buyers.

Sinha (2000) lists six points that might explain the differences between pricing on the Internet and in the physical world:
1. the Internet undermines the ‘risk premium’, which providers of well-known brands could demand from wary buyers;
2. a customer has a more efficient means of looking for products and services that can meet his needs;
3. by carrying out pricing on the customer end, such as in reversed auctions, a customer gains a better insight into the ‘price floor’;
4. the Internet stimulates rational shopping;
5. customers can get a clearer overview of the price variations used by a provider for his product, e.g. across different countries (something which is at odds with the thesis of Nunes et al (2000), highlighted earlier);
CHAPTER 3 - THEORETICAL FRAMEWORK

6. the e-commerce paradigm of ‘burning money’, which places greater emphasis on increasing the number of customers than on making profit, has changed the way customers perceive pricing.

Sinha believes that it is in particular the above points that pose a threat to the pricing of large existing brands. According to him, increased cost transparency would increase the problems of these organisations. He for instance anticipates:
1. a decrease in margins;
2. a transformation of products and services to commodities (this is also emphasised by Pine & Gilmore (1999));
3. less loyalty;
4. damage to the reputation of organisations, as it creates a perception of unfair price-fixing.

Resembling this is Peterson et al’s (1997) discourse of pressure on the margins in online sales of products and services of a homogenous or commodity nature or fully replaceable products and services. The Internet could conceivably see large numbers of buyers and sellers with (near) perfect information at their fingertips (information relating to quality specifications and price). Under these transparent circumstances, Bertrand’s competition model (in: Peterson et al, 1997) predicts that companies will be offering products and services at marginal costs, and that no single company will be able to make a profit because of fierce price competition. Porter (2001) uses a comparable line of argument on how price competition on the Internet could lead to a loss in profitability for business sectors or industries. Peterson et al (1997) on the other hand argue, that this discourse does not apply to Internet entrepreneurs. They believe that entrepreneurs competing on the Internet are in touch with each other and are aware of the fact that they depend on one another. Low prices stimulate sales, which would rapidly lead to a long, drawn-out price war on the Internet: it is highly unlikely that they would want to enter into this. Peterson et al go on to postulate, that the assumption that consumers are fully aware of what’s going on need not necessarily be true. Consumers will stop looking once the marginal advantages of searching no longer outweigh the marginal costs. If consumers decide to look no further, this by definition doesn’t mean that they have decided on the provider offering the lowest prices. Peterson et al go on to postulate, that products and services are rarely completely undifferentiated, because companies can always find physical or perceptual means of differentiating the (perceived) quality of their products and services (In our research, the term quality implies this broad interpretation of quality). Examples of the above are guarantees, service and the perception surrounding the product (paragraph 3.2.2), or the degree to which the value proposition is aimed at the individual situation (we will focus on this later). Other factors determining quality, for which a customer is prepared to pay, are choice and ease.
Lal and Sarvary (1999) go one step further. In their research, they pose that the Internet need not necessarily lead to a more intense price competition, and could even cause a reduction in price competition. They argue, that this reduction is brought about by the fact that a product has two sorts of attributes which a customer takes into account when making a decision, namely digital attributes, which can be assessed via the Internet, and nondigital attributes, where the customer will have to view and feel the physical product, usually in a physical outlet. Lal and Sarvary pose, that customers, when satisfied with a provider or brand, will consider the nondigital attributes *ceterus paribus* when carrying out further searches, and will therefore only make their choice on the basis of digital attributes. As a result, they will continue purchasing from the same supplier, emphasising their loyalty. This could be an impetus for these suppliers to slowly increase their prices.

We can conclude our discussion on pricing on the Internet by saying, that the opinions of researchers differ greatly with regard to the effect the Internet has on the pricing and profitability of business sectors. Porter (2001) and Sinha (2000) forecast a negative price spiral, Peterson et al (1997) are of the opinion that this won’t be too bad for most branches as long as providers keep distinguishing themselves from their competitors in terms of (perceived) quality. And lastly, Nunes et al (2000) and Lal and Sarvary (1999) envisage opportunities for further price differentiation.

We can note, that pricing as a distinguishing value in the market arena cannot be viewed separately from internal operations. In order to be able to justify low prices, it is essential to have an efficiently designed organisation with low production costs. In addition, the provision of high quality products and services makes demands on the internal processes and competencies. These organisational preconditions to fulfil the external positioning fall mainly outside the scope of our research (see 3.2.5).

**Mass supply or tailored towards niches or the individual**

One of the most frequently mentioned features of the Internet is its ability to address communication, making it possible to send messages to a small target group or individuals. The challenge is to tune the contents of the messages and – where possible – even the products and services as best as possible to individual wishes (Kierzkowski et al, 1996). Or, as O’Reilly put it in 1996: “Think niche: it’s the net’s greatest strength”. An e-formula will therefore have to ask itself, whether it is to position itself in the market as a relative mass provider of general products or services, or as a provider of products and services that are as much as possible tailored to niches or individual tastes and needs. In this case, we can speak of one-to-one marketing, relationship marketing or customer-relationship management (Peppers et al, 1999).
Peppers et al (1999) point out, that one-to-one marketing means that an organisation has as its aim, and is able to, tailor its behaviour to individual customers in such a way, that it ties in with the customer’s wishes and to everything else that the organisation knows about the customer. By deploying both explicitly formulated wishes such as general customer information, both latent and manifest needs can be addressed. Peppers et al pose, that four steps need to be taken in order for a one-to-one marketing programme to succeed. You must be able to identify customers, to differentiate between them, to interact with them, and to tailor your product or service as best as possible to the individual needs of the customer.

‘Niche-thinking’ in itself is not a new concept, but in the past it implied that a provider had a small ‘reach’ and could only serve a small group of customers (Porter and Millar, 1985). The rise of mass customisation (Pine, 1993) is however increasingly enabling organisations to combine a large reach of customers with a largely individualised value proposition. Given the (logistical) complexity of properly organising mass customisation, there will however always be a certain degree of trade-off between reach and fully-fledged individualisation (Boynton et al, 1993).

Lai (2000) and Maes (1999) illustrate, that individualisation of the form and structure in which product or service information is offered can partly be achieved with the aid of intelligent tools such as agents. In order to individualise, Lai and Yang (1998) use a categorisation of site visitors on two dimensions, namely the degree to which visitors are familiar with the Internet, and their aim(s) when visiting the site. Both dimensions influence the way in which they will visit the site and as such the problems they will encounter. According to Lai and Yang, intelligent web agents are the ideal tool to support customers as best as possible and on an individual level. Lai (2000) describes five of these agents:

- **Recommendation agent**
  Give browsing suggestions by analysing browsing behaviour of reference group and site content;

- **New content agent**
  Attract the visitors’ attention to new content;

- **Search agent**
  Provide efficient and effective search;

- **Customized agent**
  Present customised home pages proactively based on the analysis of a visitor’s browsing pattern;

- **Personal-status agent**
  Provide up-to-date personal status for each visitor.
In order to achieve complete (individual) visitor satisfaction, the intelligent web agent should not only understand the needs of the visitor, but also the assortment of products and services (Lai 2000). As such, intelligent individualisation of the communication is not an easy business.

In conclusion, it is possible, using mass customisation and agents, to serve a large group of customers in a relatively individualised manner, both in terms of communication and the value proposition, but there will always be a trade-off between the degree of individualisation and mass availability.

Combining into a model for distinguishing values

So far we have discussed three dimensions, namely price, quality and individualisation, which together illustrate four ways in which an e-formula can distinguish itself from its competitors in the market arena. These can be set out against each other in a matrix (Figure 3), creating a model for distinguishing values (Jansen, 2000).

<table>
<thead>
<tr>
<th></th>
<th>General</th>
<th>Tuned</th>
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<tbody>
<tr>
<td><strong>Price</strong></td>
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<tr>
<td>General</td>
<td>Pricing</td>
<td>Individual</td>
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<tr>
<td>Quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>Quality</td>
<td>Individual</td>
</tr>
</tbody>
</table>

Figure 3: Model for distinguishing values

The four cells of the matrix all represent a specific strategy to distinguish yourself as an e-formula in the market.

- **General Pricing**
  The e-formula chooses a clear general pricing strategy. This can be a low price, with which the e-formula positions itself as an ‘aggressive price fighter’, or a high price, for example to create a unique appearance or to pursue a skimming policy;

- **General Quality**
  The e-formula opts for a general quality position. This could be both of an obviously high quality or of a purposefully chosen lower quality. Here, quality implies the total perception of quality, as experienced by the customer, and comprises values such as specifications, reliability, service level and ease of use;

- **Individual Pricing**
  The e-formula is positioned as a provider who is able to promote individual offers or an individual pricing of its products. This can be achieved with a price forming
mechanism similar to that of an auction, but also for example by looking at order sizes or the relationship between the supplier and his customer;

- **Individual Quality**
  The e-formula provides the opportunity to tailor products and services to the needs and wishes of a small group or individual.

The model for distinguishing value makes it possible to define the positioning of an e-formula in the market arena in relation to other players or formulas. We have already noted that it is only sensible to opt for distinguishing values if the organisation(s) can fulfil these. Here, the model for distinguishing values finds common ground with the three generic strategies of Porter (1985): Cost Leader, Differentiation and Focus. The customer will probably recognise a generic cost leader strategy through pricing, a differentiation strategy mainly through the perceived quality, and the focus strategy mainly because products and services have been tailored more to individual wishes and the context of use (Wheelen and Hunger, 1998). In keeping with the scope of our research, we have not researched this relationship between external positioning and internal fulfilment any further (not counting our discussion concerning the organisation of the operation of an e-formula, as described in paragraph 3.2.5).

The link with the three generic strategies of Porter (1985) does however inspire us to focus on the concept of ‘stuck in the middle’. Porter poses, that an organisation can only pursue one of the generic strategies, and as such has to make clear choices. According to him, it is not possible to design an organisation in such a way, that an organisation works with the lowest costs in its particular industry and is still able to distinguish itself from the competition by offering the best quality. In that case, the player is ‘stuck in the middle’.

The principle of being stuck in the middle has not been extensively researched for e-formulas. Gonsalves et al (1999) are the only ones to highlight this issue. Their research concludes, that sales-oriented e-formulas do not focus merely on one of Porter’s generic strategies, but are able to combine all three. As they point out: “the web helps organizations carry out all three generic strategies”. Their research additionally shows, that web sites can especially help organisations achieve small niche segments, i.e. a focus strategy is pursued. Secondly, it was possible to distinguish the perception of quality of products and services from the competition’s. Hardly any of the web entrepreneurs managed to pursue a low-cost leadership.

In conclusion, we shall also introduce the term ‘stuck in the middle’ for the model of distinguishing values. Like Porter (1985), we could take the assumption, that it is not viable for an e-formula to position itself as a supplier of a competitive price, high quality and able to satisfy individual pricing and quality, while on the other hand it could be
deduced from Gonsalves et al (1999), that a combination of distinguishing values is achievable and successful. Our research will have to provide a closer insight into this.

### 3.2.4 Revenue Model

Before we can discuss the concept of the Revenue Model, we will first address the context within which the revenue model is still relevant, namely the wider concept of the Business Model. A commonly heard phrase whenever there is talk of the likelihood of an Internet strategy succeeding, is that “the business model is flawed”. The concept of Business Models is used with a multitude of different meanings (Sing et al, 2000).

We shall now discuss a number of the definitions assigned by research literature to the phrase Business Model:

- Sing et al (2000) define a Business Model as “a unique configuration of elements consisting of the aims, strategies, processes, technologies and structure of the organisation. This configuration is formed to create value for the customers and as such to compete successfully in a certain market”;
- Timmers (1998) defines a Business Model as follows:
  - a framework for the product, service and information flows, in which the roles of the different parties in the network are described and;
  - a description of the potential advantages of the different parties in the network, and;
  - a description of the sources of income;
- Wilder (1999) uses the term e-business models to highlight whether Internet activities are imbedded in an existing organisation, whether a separate entity has been set up for it, or whether we can speak solely of an Internet organisation;
- Gulati and Garino (2000) use a similar approach as Wilder, the main difference being that they focus their attention primarily on the way in which the collaboration between click and mortar organisations is organised;
- Rappa (2000) and Rayport (1999) use the term business model to describe the way in which you earn your money.

A substantial number of these business model definitions closely resemble or overlap what we call the strategy of an e-formula, and as such describe comparable terms as those specified in our conceptual framework (3.1). This explains why we do not use the term business model.

The approach taken by Rappa (2000) and Rayport (1999) ties in with what we call the Revenue Model. A revenue model describes the way in which operations of an e-formula
are financed, and how investments in the e-formula are recouped. In his online e-business course, “Managing the digital enterprise”, Rappa describes nine revenue models:

- **Brokerage**
  Brokers are market-makers: they bring buyers and sellers together and facilitate transactions. Those can be business-to-business (B2B), business-to-consumer (B2C), or consumer-to-consumer (C2C) markets. A broker makes its money by charging a fee for each transaction it enables;

- **Advertising**
  The web advertising model is an extension of the traditional media broadcasting model. The broadcaster, in this case, a web site, provides content (usually, but not necessarily, for free) and services (like e-mail, chat, forums) mixed with advertising messages in the form of banner ads. The banner ads may be the major or sole source of revenue for the broadcaster. The broadcaster may be a content creator or a distributor of content created elsewhere. The advertising model only works when the volume of viewer traffic is large or highly specialized.
  It can be noted that advertising can also occur in more hidden forms. For instance, a department store could incorporate into its e-formula a mini display window, where suppliers, by paying a small fee, can recommend their products, just as is the case in for example the physical Bijenkorf department stores. This mechanism is also applied in print communication in sponsored content magazines. There is as yet no commonly used name for this in e-formulas; we propose to speak in terms of sponsored content pages as a special form of online advertising;

- **Infomediary**
  Data about consumers and their buying habits are extremely valuable. Especially when that information is carefully analysed and used to target marketing campaigns. Some firms are able to function as infomediaries by collecting and selling information to other businesses. An infomediary may offer users free Internet access or free hardware in exchange for detailed information about their surfing and purchasing habits. This is more likely to succeed than the pure advertising model.
  The infomediary model can also work in the other direction: providing consumers with useful information about the web sites in a market segment that compete for their dollar;

- **Merchant**
  Classic wholesalers and retailers of goods and services (increasingly referred to as ‘e-tailers’). Pricing may be made based on list prices or through auction. In some cases, the goods and services may be unique to the web and not have a traditional ‘brick-and-mortar’ storefront;

- **Manufacturer**
  This model is predicated on the power of the web to allow manufacturers to reach buyers directly and thereby compress the distribution channel (i.e., eliminate
wholesalers and retailers). The manufacturer model can be based on efficiency (cost-savings that may or may not be passed on to consumers), improved customer service, and a better understanding of customer preferences. Perishable products that benefit from fast distribution, like fresh flowers, may prove advantageous by eliminating middlemen. The model has the potential for channel conflict with a manufacturer's established supply chain. We will discuss this in more detail in paragraph 3.2.6.

- **Affiliate**
  In contrast to the generalized portal, which seeks to drive a high volume of traffic to one site, the affiliate model provides purchase opportunities wherever people may be surfing. It does this by offering financial incentives (in the form of a percentage of revenue) to affiliated partner sites. The affiliates provide purchase-point click-through to the merchant. It is a pay-for-performance model: if an affiliate does not generate sales, it represents no cost to the merchant. The affiliate model is inherently well-suited to the web, which explains its popularity;

- **Community**
  The viability of the community model is based on user loyalty (as opposed to high traffic volume). Users have a high investment in both time and emotion in the site. In some cases, users are regular contributors of content and/or money. Having users who visit continually offers advertising, infomediary or specialized portal opportunities. The community model may also run on a subscription fee for premium services;

- **Subscription**
  Users pay for access to the site. High value-added content is essential. Generic news content, viable on the newsstand, has proven less successful as a subscription model on the web. A 1999 survey by Jupiter Communications found that 46 percent of Internet users would not pay to view content on the web. Some businesses have combined free content (to drive volume and ad revenue) with premium content or services for subscribers only;

- **Utility**
  The utility model is based on the ‘pay per use’ principle, for example the time spent watching a film or playing a game.

Rappa himself points out that new models keep popping up on the Internet, and that this list is therefore not a finite summing up. He goes on to say that organisations will in fact use combinations of these revenue models. Research carried out by Holland et al (2000) confirms this.

The ‘revenue’ from the revenue model is often the consideration the visitor is prepared to provide in return for the delivered value. We could also call this the means of exchange. In Rappa’s models, this often takes the form of hard cash. Having said that, a means of exchange can also be a less tangible consideration such as completing a personal...
information profile, discussing a product or receiving commercial messages. Peelen discusses Foa and Foa (in: Peelen, 2000), who on the basis of extended empirical research pose, that an adult can distinguish six types of means of exchange (Foa and Foa use the broader term of ‘resources’): love, services, status, information, goods and money. There are two dimensions along which these means of exchanges can be specified:

- **The personal level of the means of exchanges**
  We can speak of a personal level if the value of a means of exchange depends on the person distributing the means. This is the case for example with love. We are not shown love by a stranger or an enemy. The opposite is true of money: people are usually indifferent towards those who put money at their disposal;

- **The tangibility of the means of exchanges**
  Goods are characterised as the most concrete means of exchange, they are tangible. Status and information consist of verbal or non-verbal behaviour and are the least tangible.

Hinde (1979, in: Peelen, 2000) assumes a certain degree of symmetry in the means of exchanges. For instance, money, the non-personal and concrete means of exchange, can serve to obtain non-personal and concrete goods or services such as a packet of milk or a train ticket. It would be more difficult, or indeed impossible, to buy love with money, something that is personal and well nigh intangible. People would also be less willing to hand over personal profiles, a widely used means of exchange on the Internet, for a fee. It would be wiser to exchange information for information. By taking the initiative yourself as a supplier, and providing meaningful information, which tempts the customer to find out more, you create the opportunity to take part in a substantive dialogue, in which the customer is increasingly, little by little, prepared to reveal his personal profile. In order for the provider to obtain personal and less concrete means of exchanges, for instance personal profiles, it is usually necessary for a relationship to have already taken root. A relationship that is initially based more on the exchange of goods for money, could slowly but surely be enriched with swapping other means of exchanges such as status, love and information. In this context, it is interesting to note that research carried out by Hoffman et al (1999) shows that “consumers do not view their personal data in the context of an economic exchange of information, as many commercial web providers believe.” This contradictory remark demands closer scrutiny. With regard to the revenue model, we have decided to focus our research primarily on financial revenues. The less concrete means of exchanges, such as personal data, will be highlighted in the design of the interaction structure in paragraph 3.3.10.

Recouping investments in the e-formula need not necessarily be done via the e-formula itself. If the e-formula operates in a multi channel environment next to a conventional physical formula, and the e-formula stimulates the purchase in that conventional formula,
this can also be classified as generating revenues. Because of its indirectness however, it is more difficult to measure this form of revenue generation.

In addition to the consideration a customer is prepared to pay, investments in the e-formula can also be recouped through savings in the processes (this will be highlighted further in paragraph 3.4), by obtaining subsidies, or because of an rise in the value of the organisation(s) as a result of the e-formula.

In conclusion, we can state that research literature pays ample attention to the many types and combinations of revenue models and the different means of exchanges that play a part therein, but that at present little is known about the success of the widely divergent approaches for recouping investments in e-formulas.

3.2.5 Organisational form
In our definition of the e-formula, we incorporated the view that e-formulas can be exploited by one or more organisations. This paragraph details the different organisational forms that an e-formula can take on.

In order to be able to describe the organisational form of an e-formula, it would be wise to pause for a moment to address the essence of organisations. An organisation’s right of existence is expressed in Coase’s transaction cost theorem (1937). Transaction costs represent the time and the money expended when people and organisations trade goods or services. If the transaction costs of carrying out an activity within an organisation are lower than the transaction costs of letting a contracting party from outside the organisation carry out the same activity, the organisation will incorporate the activity in its own organisation. Coase poses that, all else being equal, an organisation will organise itself in such a way, that the transaction costs are kept to a minimum. His theorem implies, that a lowering of transaction costs will result in large businesses being broken up into a number of smaller businesses. Changes in the transaction costs structure could change the entire structure of industries. For example, it might be that an organisation discovers that the activities it has always viewed as its core activities, could suddenly be carried out more cheaply, faster and better by new, specialised providers. In that case, the business could decide to enter into an alliance with this new provider (Hagel and Singer, 1999, Hosman and Verkerk, 1999).

Entering into alliances
What are the implications of the transaction cost theory on the way e-formulas are organised? This paragraph discusses the general implications. E-formulas appear to be causing research literature to have a (renewed) interest in syndication, joint category
management and demand chain management, which we are to review individually. From that, we will deduce that e-formulas will usually collaborate in an alliance network.

Nevens (1999) poses, that the Internet’s most important influence is on the lowering of interaction costs. Nevens defines these costs as looking for goods, services and ideas and coordinating and monitoring trade transactions of these goods, services and ideas. According to him, these types of costs account for more than a third of economic activity in the United States. Harrington and Reed (1996), too, pose that the Internet brings about a reduction in interaction costs. In their opinion, this makes it more appealing to interact between companies than to develop and maintain skills within an organisation yourself. Electronic Commerce is accelerating the unbundling of business systems, allowing companies to focus on the most promising pieces of what were traditionally vertically integrated businesses. This also ties in with Quin (1992), who poses that strategy concepts should focus on developing excellent capabilities around a few key activities, the core competencies, and externally more on managing a rapidly changing network of best in class suppliers for each other’s needs. Hosman and Verkerk (1999) particularly emphasise the flexibility and speed with which the specialised small organisations in the network can adapt to changing circumstances and respond to chances and threats.

Kelly (1998) also emphasises the importance of having networks of small, specialised organisations (nodes), which are connected to each other through high-quality connections. He poses, that the nodes are becoming increasingly specialised, causing the node itself to become smaller and diminish in importance, and the number of connections to significantly increase. The flourishing of an individual organisation in the network depends on how the network as a whole is flourishing. That is why, according to Kelly, an organisation needs to primarily focus its attention on maximising the value of the network, instead of striving to maximise the value of the company itself.

A regularly recurring form of alliances on the Internet is through syndication (Werbach, 2000). Syndicators are a form of infomediary, collecting and packaging digital information in a way that adds value to it. Businesses can play three roles within a syndication network, namely that of originator (create original content), syndicator (package that content for distribution, often integrating it with content from other originators) and distributor (deliver the content to customers). We believe that syndication closely resembles the revenue model affiliation as an organisational form (see 3.2.4), and can be seen as one and the same thing within the context of this thesis. Werbach poses, that, on the face of it, syndication resembles outsourcing. They both involve the use of outsiders to supply a business asset of function. But syndication holds two large advantages over traditional outsourcing. First, because syndication deals with information rather than physical resources, a company can syndicate the same goods or services to an
almost infinite number of partners without incurring much additional cost. The second advantage is that on-line syndication can be automated and standardized in a way that physical outsourcing can’t. An important feature of syndication relationships is that business rules, such as usage rights and payment terms, can be passed between companies along with the syndicated asset or service, both take the form of digital code.

Syndication enables businesses to choose where they wish to concentrate their efforts and to piggyback a myriad of other businesses that can handle the remaining elements of a complete end-to-end service. In this respect, the function of a syndicator somewhat resembles a retailer, but Werbach points out that there are a few important differences: When a customer makes a purchase, he does so through a special hyperlinked connection to the partner site rather than through its own site. He does not need to hold inventory, process transactions or manage fulfilment, but it receives a percentage of each sale for bringing in the customer. Another difference is that syndication offers a lot more flexibility. If the product of a certain provider is not selling, another offer can be put on the site immediately. As Werbach puts it: “A syndicator never has to worry about unsold inventory or a time lag in reconfiguring its supply chain.” Syndicators are a good example that many parties on the Internet provide value not through physical distribution, but by manipulating information.

To sum up, we can state that Werbach argues in favour of originators targeting their efforts on offering a small, rounded quantity of value, which can then be sold through syndicators. Syndication itself is not a new phenomenon, but is given many new impulses thanks to the Internet and digitalisation.

Werbach’s work ties in with the development signalled previously of customers with a (latent) need, taking their own initiative to satisfy their need via the Internet (Jansen et al, 2000). They are not so much looking for www.companyname.com, but rather for www.TheSolutionToMyNeed.com. In this case, it is conceivable that more than one underlying alliance organisation is needed (behind the site) to meet the entire need. In this respect, the e-formula plays a similar bridging role as the one retailers for suppliers of products and services has been playing for years. This is what Freedman et al (1997) refer to as joint category management. They pose, that joint category management, in its broadest sense, is about manufacturers and retailers managing product categories as strategic business units in order to enhance consumer value. The focus is on the five key demand-side levers: product assortment, promotions, pricing, placement and space allocation, and new product development. This ties in with our definition of an e-formula. Manufacturers already tend to organize themselves around categories (breakfast cereals or laundry products, for example) rather than individual products or brands as in the past, because they believe a broader approach offers them a better chance of meeting consumer
needs. Increasingly, they are also creating cross-functional account teams, bringing together marketing, finance, logistics and sales personnel to give a full business perspective to each account. This also ties in with our belief, that an e-formula does not only consist of a site, but of a broad organisation to meet the promised proposition.

We can compare syndication and joint category management with what Molenaar (1999) calls demand chain management: customer contact exists with a distributor, a broker or a concept-bound party such as the purchasing consortium or a lifestyle provider (the e-formula in our terms). As soon as the customer has expressed his wishes and needs, a suitable provider from the connected network is selected. This method will result in a shortening of the distribution channel, to closer relationships between parties and to a greater interwoveness of interests, sometimes even to the sharing of responsibility. The implication is, that the marketing orientation will shift from a customer-oriented approach to a network-orientated one. Molenaar poses, that the customer will have a strong bond with the concept (the e-formula) and the parties will carefully choose who to collaborate with. After all, the collaboration is meant for the long-term, directly influencing the proposition and the mutual dependency.

According to Evans and Wurster (1999), the conviction that the e-formula is of maximum interest to a customer if the supply has the maximum breadth does not only apply to syndicators or demand chain management; having a broad supply is also important for originators, who sell their supply themselves. This means that it might be a good idea to collaborate with the competition to set up and exploit the e-formula. A clear example of where this occurs is industry-specific market places.

We can conclude this paragraph by stating that research literature heavily underpins the thesis, that e-formulas will be primarily exploited in an organisational network of small specialised parties, each with their own sharply focussed core competencies. In that respect, the network level strategy (paragraph 2.2) and the resource based view (paragraph 3.1.1) somewhat come to the fore in this research.

**The Internet: integrate into organisation or use separately?**

An important consideration for existing organisations initiating an e-formula is whether to keep the operating company in an existing organisation or rig up a new organisation. Pruijm and Schmits (2000) mention two approaches in this context: the ‘slow way’ whereby the entire organisation itself is slowly transformed into a web form, and the ‘fast way’, whereby an entirely new web firm is set up outside the existing traditional company. In this respect, we can speak of a so-called ‘pure player’, initiated by an existing organisation. This is what is usually referred to as a ‘spin off’.
Evans and Wurster (1999) pose, that an existing organisation which sets up its e-formula from the perspective of, and affinity with, a larger target group (referred to by them as 'affiliation’), while his organisation is traditionally product-oriented, will have little choice other than to start a spin-off so as not to be burdened by existing power structures and processes. They also pose however, that the strength of e-formulas lies in the fact that they can offer much greater richness than existing organisations. That is why an existing player has to reposition himself completely. Evans and Wurster use the example of a bank by way of illustration: this organisation no longer positions itself as a product provider, but instead as a navigator, thus deciding to also sell competitors’ products.

Gulati and Garino (2000) assume, that in all cases the advantages of integrating Internet activities are virtually too big for an existing organisation to ignore completely. Instead of focussing on either one or the other, i.e. developing an Internet channel in-house or launching a spin-off, they believe that managers must ask themselves what degree of integration is required for their organisation. Looking at the degree of integration, from moderate to extreme, marked out against brand, management, activities and ownership, they arrive at the following click-and-mortar strategies: Strategic Partnership (Rite Aid and Drugstore.com); Joint Venture (Kbkids.com) and In-House Division (OfficeDepot.com).

In addition to the firm choices of in house or spin off, Pruijm and Schmits (2000) advance a third way, which they call the ‘flow way’. This approach is in fact based on the transaction cost theory as described earlier (Coase, 1937). Pruijm and Schmits propose to describe each company in terms of a network of mutually independent functions. This set of functions can be defined as independent companies in a virtual internal and external market. If slowly but surely every function is turned into a virtual business, an organic growth model will effectively be created, in which the whole company is transformed. That way, new activities are started up around the borders of the organisation, the virtual pioneers as it were, which will explore the new possibilities of the web. This means that the existing organisation is slowly but surely pulled towards the new web environment. Pruijm and Schmits go as far as to say that every web function could in principle be eligible for flotation, potentially enabling these units to be more profitable than if the whole company were to migrate. This method of organising is also proposed by Eisenhardt and Galunic (2000). They call it coevolving and position it as a successor of traditional forms of collaboration.

We conclude this paragraph with Wilder (1999), who for the most part summarises the organisational forms specified. He poses, that some organisations are integrating their Internet activities into their existing organisation, while others are creating separate on-line entities or investing in up-and-coming Internet start-ups, or even moving their entire
business to the Internet, thus bidding farewell to conventional channels. Opinions are strongly divided as to which of these approaches is preferable.

3.2.6 Channel positioning
In order to clearly define channel positioning in the context of our research, we will start this paragraph by discussing the terms channel and multi channel, before discussing the channel (dis)intermediation choices highlighted in research literature.

Channel definition
The concept of channel is frequently used in marketing. Peelen and Van Goor (1991) indicate, that a distribution or marketing channel comprises a number of institutions that purchase and subsequently sell products en-route from the manufacturer to the user or consumer. This ties in with Bennet’s definition (1988): “Marketing Channels can be defined as an organized network(system) of agencies and institutions which, in combination, performs all the activities required to link producers with users to accomplish the marketing task.” The first level of a channel consists of a manufacturer of a product, the latter consists of the user or consumer.

According to Peterson et al (1997), it is possible to distinguish three types of processes within the marketing activities; three types of flow, each with its own function:
- A communication flow enables the exchange of information relating to the features and availability of products and services;
- A distribution flow enables the exchange of products and services;
- A transaction flow generates sales activities and enables economic exchanges between buyers and sellers.
Players in the channel can carry out a specific function, for instance take care of distribution, or cover a combination of functions.

Multi channelling
A significant number of organisations work with more than one channel to serve their target group. Moriarty and Moran (1990) are among the first to consider this form of multi channelling, which they call hybrid marketing systems. They indicate that multi channelling, although not easy, can yield considerable competitive advantages if used properly. Organisations are faced with the challenge, for the various groups of customers, of setting out all customer contact moments from the customer life cycle against the available channels – an e-formula can be one of those channels – in order to determine which contacts can be dealt with best through each channel. This creates a matrix, which highlights the multi channel strategy.
If we want to complete this matrix, we will have to answer the question, which channel is the most suitable for a certain customer contact. This question finds much common ground with the choice of medium (a medium is defined as a “means to transfer and distribute information”, Hoogeveen, 1994). The issue of communication media choice is described by Daft and Lengel (1986), Trevino et al (1990), Fulk et al (1990), Rice (1987) and Van de Wijngaert (1999). Rice poses, that there is no such thing as one ideal medium, superior in any arbitrary context. Different types of media have different features, limitations, bandwidth, interactivity and network features. According to Rice, multimedial features of a medium, such as integrated support of text, sound and image (Hoogeveen, 1993), need not necessarily yield better results than simple media. For instance, real-time videoconferencing is seen more as a phone with extra features than as a viable alternative to face-to-face communication. Research carried out by Daft and Lengel (1986), Trevino et al (1990), Fulk et al (1990) and Van de Wijngaert (1999) focus on the question, which medium a recipient/user will choose to satisfy an information or communication need. They argue, that the information and communication needs must be in line with one another, the features of the medium and the social context in which the user finds himself. Accessibility of the medium is also an important issue (Incidentally, Kinney and Watson (1994) show that users will always be able to solve medium limitations if there is no alternative medium available, provided they are sufficiently willing to do so).

If we translate these findings of media choice to the set-up of a multi channel strategy, we can state that, in order to be successful, we must strike a balance between using the possibilities of a channel on the one hand, and creating synergy between the channels on the other. One must therefore be careful not to approach an e-formula as an isolated aim, nor as a neglected child; balance is what’s important (Quinn, 1999). A holistic view on multichannelling appears to be the most successful. This ties in with the experiences of Vendex/KBB, one of the largest retail organisations in the Netherlands. Following several years of active experimentation with the Internet, they indicated that each Internet activity must be synergetic to the existing (physical) outlet operation (Rengers and Siccama, 2000).

Multi channelling can cause channel conflicts. Moriarty and Moran (1990) view conflict as an inevitable part of every hybrid system. When a company adds a channel or substitutes a communication method or institution within a channel, the existing division of roles and tasks is turned upside-down and positions of power are altered. The result is that existing stakeholders, sales reps, distributors, telemarketers, invariably resist. And why not: each faces a potential loss of revenue as well as competition for ownership of customers. In seeking to build and manage a hybrid system, therefore, companies must recognize and communicate the existence of conflict as the first and most important step (incidentally, they indicate (as do Evans and Wurster, 1997) that a certain degree of
conflict is not only unavoidable, but possibly even healthy, as long as the conflict doesn’t escalate).

De Vries and Stegen (1999) base themselves, among others, on Bucklin et al (1997) to describe a number of options for avoiding channel conflicts:
- Offer the same service provision in conflicting channels using different brands (for example: put the e-formula on the market under your own brand name);
- Introduce (small) changes in the offering per channel;
- Distribute contacts from different specific sections of the customer life cycle across different channels;
- Focus channels on non-conflicting market segments.

It should be noted that we have taken the e-formula as our research object. As such, our research will only incorporate multi-channelling to a limited extent.

**Channel dynamics: (dis-)intermediation**

Given the fact that information and communication technology do not only transform structures and processes within an organisation (paragraph 3.2.5), but also influence the nature and structure of the connections between organisations and the patterns of interaction and transaction processes with customers (Schubert and Selz, 1999), the possibilities of e-formulas cause an evolution in the firms’ channels and industry value systems. We can pose than an e-formula can be seen as an institute, which, depending on the nature of a product or service, can be deployed with a communicative, distribution and/or transaction function. An e-formula has the potential to act as an alternative for one or more links or parties from the channel. As a result, entire business sectors could change in terms of their construction, and all forms of new channel configurations or value webs could be created (Tapscot, 1995; Benjamin and Wigand, 1995).

The first question we can ask is what reasons there could be for re-designing channels. Bucklin et al (1996) list a few options. If customers are not served properly through existing formulas, they will be receptive to a new formula, which answers better to their needs. A formula which addresses a completely new (latent or manifest) need will also provide opportunities, just like a formula which can replace “fat, happy distributors who are unwilling to adapt to new market conditions”. Occasionally, existing formulas seemingly fail to cover certain market segments properly, often because the providers are not entirely sure as to who their customers are. Channel changes are even more attractive if the existing network of cooperating parties is not optimally tuned to one another in terms of service provision or process and exchange of information.
Bucklin et al (1996) quote the Food Cost Review for a number of different sectors to provide an insight into the remaining share of the sell price for different successive institutions in the channel (Figure 4). For instance, we are offered an insight into the opportunities that would open up if for example the sales channel could be skipped (Bucklin et al use the term channel value-added). The cutting out of one or more players in the channel, whereby for instance a manufacturer starts communicating directly with the customer, is called ‘disintermediation’. Bucklin et al pose, that well thought-out and innovative channel management is extremely important. They indicate that many companies have over the past few years been focussing their attention on redesigning business processes, and that channel issues were a neglected child.

<table>
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<tr>
<th>Percent of retail price</th>
<th>Automobiles</th>
<th>Software</th>
<th>Gasoline</th>
<th>Laser Printers, Fax Machines</th>
<th>Packaged Foods</th>
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</thead>
<tbody>
<tr>
<td>Channel Value-Added</td>
<td>15%</td>
<td>25%</td>
<td>28%</td>
<td>30%</td>
<td>41%</td>
</tr>
<tr>
<td>Manufacturer Value-Added</td>
<td>40%</td>
<td>65%</td>
<td>19%</td>
<td>30%</td>
<td>33%</td>
</tr>
<tr>
<td>Raw materials and components</td>
<td>45%</td>
<td>10%</td>
<td>53%</td>
<td>40%</td>
<td>26%</td>
</tr>
</tbody>
</table>

Source: Food Cost Review; Lundberg;Platts; Economist Intelligence Unit; McKinsey analysis, 1996.

A number of authors, including Kelly (1998), Kierzkowski et al (1996) and Jin and Robey (1999) assert that many players such as wholesalers, distributors and other intermediaries might indeed have become superfluous in the traditional channel composition, creating a basis for organising more efficient supply and marketing channels through disintermediation. However, they are unanimous in their view that there also appear to be opportunities and chances for (new) intermediaries, also known as re-intermediation. The chain dynamics arising from this is seen by Kierzkowski et al as one of the biggest opportunities provided by the Internet. The transaction costs on the Internet are so low, that it is easy to add value during the process. For instance, intermediaries will be needed to find the way in the network, because it can be extremely difficult to find the right party among the large number contained in the network.

While disintermediation on a sales level may have become an important issue with the rise of the Internet, on a communicative level manufacturers have been corresponding a lot longer outside their indirect sales channel. Put otherwise, when it comes to communication, manufacturers have long been skipping links in the chain. This can be illustrated for instance with branded products. Although branded products have been in existence since the end of the 19th century (for instance Sunlight), they didn’t come into genuine fruition until the 1950s (Molenaar, 1999). Manufacturers could distinguish
themselves with their brands and the consumer had a perception of consistent quality and price through the brand. Using mass communication, the provider could build on the customer’s perception and brand preference. It transpired that customers were assigning added value to well-known brands, and were prepared to pay extra for it. The brand is a tool for the manufacturer to secure customer loyalty (klantenbinding) outside the channel. An important precondition is that they have an unequivocal brand image (merkbeeld). What is thus important to note in this respect is that links in the chain were being skipped as early as the 1950s (in this case usually retail), but that this was only taking place on a communicative level. The reason for all the discussions on disintermediation and the ensuing conflicts with the existing channels is that, thanks to the Internet, direct transactions and distribution are now much more within reach for manufacturers, enabling them to completely ‘sideline’ the intermediate party. Molenaar notes however, that the power of the distributor is currently on the increase, as is the case with Albert Heijn or Tesco, resulting in distribution brands and concept-bound brands gaining momentum at the expense of manufacturer’s brands.

The retail channel, the last stage en-route to the end consumer, occupies a central position in the discussions about disintermediation and re-intermediation. Christensen and Tedlow (2000) discuss the four basic conditions of existence, which have always characterised the retail sector: “getting the right product in the right place at the right price at the right time.” The way in which retailers achieve this mission has kept changing in the course of time as a result of ‘disruptive technologies’. A disruptive technology enables innovative companies to create new business models that alter the economics of their industry. In retailing, the first disruption arrived in the form of department stores. The second was the mail order catalogue. The third was the rise of discount department stores. Internet retailing marks the fourth disruption.

Van der Kind (1999) also considers the changing role of the retailer. In doing so, he once again bases himself on Coase’s transaction cost theory (1937). He argues, that the function of retailing has always been to redistribute the flow of goods to place, time and quantity. This had to do with the fact that, after the industrial revolution, the timing of production often no longer corresponded with the timing of consumption, that the place of production no longer corresponded with that of the consumption, and that the production quantities were often too large to be purchased in bulk by one consumer. Retailing came into being when the advantages of mass production started outweighing the costs of the added player in the channel. In this respect, the rise of modern retailing can be explained from the economic transaction cost theory. Just imagine however if the end consumer was to be given more power: the transaction cost theory would have to be interpreted from this new, most powerful factor, i.e. the consumer. According to Van der Kind, this line of reasoning implies that the raison d’être of the retail trade would no longer be in the
lowering of the actual material costs in the channel, but in minimising the consumer’s material and immaterial ‘search costs’. The term Search Costs should be interpreted in the broadest sense here: they form the balance of real costs in terms of time, money and logistics, and negative costs (i.e. proceeds) of the shopping experience.

Looking at the strategy of intermediate parties, Evans and Wurster (1999) also advocate assigning a central position to customer support when looking to satisfying their needs. They use the term ‘navigator’ to refer to this. The services of navigators can only partially be compared to existing physical companies or industries. In their terms, Amazon is not a bookstore, but a navigator. Evans and Wurster pose, that navigation (information) in most consumer businesses makes more money than producing and distributing products (physical) and that as such it is extremely important to separate navigation from traditional activities such as producing, marketing and distributing.

Broadly speaking, the focusing of attention on the customer is considered an important development. Prahalad and Ramaswamy (2000) also highlight this issue. They argue, that important business trends such as deregulation, globalisation, technological convergence, and the rapid evolution of the Internet change the way in which businesses collaborate in channels and value webs. In this respect, the collaboration with other organisations in alliances and network organisations is much talked about. However, “managers and research have largely ignored the agent that is most dramatically transforming the industrial system as we know it: the consumer.” The customer is not only the source of competence, but usually also becomes a competitor. Customers can extract value in ways that were unimaginable even a few years ago. Thanks to the Internet, customers and companies now have much the same information available to them, and there has been a consequent shift in power. According to Prahalad and Ramaswamy, too little is as yet known about the customer’s new role as competitor or as partner and the impact this has on the design of channels.

In conclusion, it seems clear that the position occupied by an organisation in a channel or value web is under discussion, but that this involves both threats as well as chances.

### 3.3 Design of an e-formula

Our research on the design of the e-formula focuses on the customer interaction structure (Prahalad and Ramaswamy, 2000), i.e., the way in which the e-formula is designed to handle customer contacts. We shall begin by considering the pitfalls and a few general considerations involved in designing an interaction structure for digital customer contacts. We will then go on to introduce the Customer Life Cycle model that orders the sections of
customer interaction, before discussing in detail the research literature relating to the various sections of this model.

### 3.3.1 General consideration relating to the design of e-formulas

When designing an e-formula, you run the risk of encountering the same pitfalls as automation projects in the past, i.e. trying to automate existing (interaction) processes without doing justice to the features and possibilities of the Internet. Experiences gained from business reengineering could also prove to be valuable in this case. As Hammer and Champy (1993) point out: “Automation often involves doing the wrong things more efficiently”. The real power of Information Technology is not so much in improving old processes, but in making new processes possible. The digital serving of customer contacts could be seen as the automation of interaction processes. Partly for this reason, it seems wise to take the lessons of Hammer and Champy to heart.

According to Peelen (2000), it is important to consider norms and values when designing digital customer contacts. Ciborra (1999) calls this ‘hospitality’ and notes, that a virtual environment is characterised by a high degree of casualness. People come and go on a web site. Ciborra describes how the old nomadic values of hospitality can inspire us here. Hospitality functions as a ‘time-economizing institution’. Each visitor to the site is initially an unknown guest, either ‘friend or foe’. The rule nevertheless is that, in principle, every visitor is welcome and entitled to access the first section. He has to feel at home in that section, and the host should not immediately be a pushy trader keen to strike a deal. As soon as the guest has become part of the intimate circle, he is also free to call the rest of the site his home. The host creates symmetry between the guest’s and his own culture by adopting a helpful attitude, to recognise the other and (at least temporarily) to accept him as an equal. If trust and friendship develop, the cultures, mutual contributions and habits can also grow closer together. Artificial Intelligence techniques can help the host to develop models that are able early on to identify the true nature of the traveller and to construct a suitable reaction. Should the customer turn out to be an unwelcome guest, de-marketing techniques can be deployed. The visitor could for instance be shown the company rules, diverted to another more suitable site, or confronted with higher prices.

Another import issue that should be borne in mind when designing an e-formula is developments in market strategies. Court et al (1999) for instance argue, that it is no longer enough for a marketer to focus on distinguishing his products and services in terms of quality and functionality alone. An increasing distinguishing factor is how you interact with your customers. They pose, that marketers must strive to improve the process of customer interaction, thus making transactions easier, faster, cheaper and more pleasant. This is what Court et al call the ‘process benefits’. In addition, marketers should
increasingly focus their attention on building and using customer relations by creating advantages for both the customer and the provider. They call this the ‘relationship benefits’.

In order to take advantage of these process and relationship benefits, it is vital to highlight the importance of the customer and his needs. The overcapacity in the supply, and the scarcity on the demand side (Rayport and Sviokla, 1995) enforces such a shift from supply-side to demand-side thinking. Organizations have the opportunity to sense and respond to customers’ desires rather than simply make and sell products and services. The customer lays down the rules (Molenaar, 1993). The seller needs to listen to the customer, he must get to know him and his wishes. The customer must be followed and protected from all these awkward competitors. This can only be done if you know everything there is to know about your customer, build trust and cultivate a relationship with the customer. Advertising, direct marketing and sales must be tuned to this new approach. We must put ourselves in the shoes of the customer, rather than think from our own company’s point of view or our own products and services. And the Internet will be an attractive channel for a customer if it helps him run through the interaction process more easily, smoothly and faster, if he finds it more pleasant than other, alternative channels or tools available to him (Van der Blonk, 1999), or if the provided value is greater. The findings of Van de Wijngaert (1999) will probably also apply to e-formulas. She believes, that there needs to be alignment between the role played by a medium in fulfilling needs – the usage context – and the possibilities and capabilities of the medium.

We argued in paragraph 2.3 that the design of an e-formula resembles the design of the ultimate self-service outlet (Jansen, 2000). It’s a good idea to somewhat modify the term self-service. For instance, Moon and Frei (2000) postulate, that the term ‘self service’ implies, that the customer himself must carry out all activities from the interaction process. This would only frustrate and irritate the customers. Moon and Frei propose an approach, whereby a provider deploys the technology in such a way, that the customer is supported in the tasks that need carrying out. Their approach is additionally based on the assumption that a customer likes to have choices, as long as there’s not too many. The customer would most prefer to select from a number of well-constructed alternatives, which are in tune with his need(s). In addition, the customer attaches importance to only having to indicate his preferences once. All this leads us to the view that an e-formula should be focused on supporting and serving the customer as much as possible during the entire process, rather than letting the customer carry out the work himself.
3.3.2 Model for designing the interaction structure: the customer life cycle

Our research ties in with Moon’s and Frei’s (2000), in that we view the design of the e-formula in terms of the degree to which, and the manner in which, the customer is supported during an interaction process. This leads us to the question, which model we could use to concretise such an interaction process. Ives and Learmonth (1984) deploy a Customer Resource Life Cycle in their research, which is focused on a single relationship between a provider of goods and a consumer. Ives and Learmonth pose, that a provider can mark himself out by assisting the customer to choose, acquire, use and dispose of a product or service with the aid of information and communication technology. They conclude, that the customer resource life cycle is both a useful tool for researchers to order aims and objectives, and shape the purchasing process, as well as being a model of inspiration for organisations: “as a firm examines its role from the customer resource life cycle perspective, it discovers opportunities to enhance its overall strategy”. In addition, Ives and Learmonth deduce that the way in which each section of the life cycle is shaped is “surprisingly similar” in a variety of different industries and sectors, making a customer life cycle model an interesting candidate for our research to model the customer interaction architecture.

Gonsalves et al (1999) build on Ives’ and Learmonth’s work. Their research concludes that the life cycle is a good tool to carry out research into the impact of web sites on the competitiveness of organisations, and recommend refining the four phases used by them.

A more refined description of purchasing processes can be found mainly in marketing literature, which describes a variety of purchasing cycles (Grönroos (1990), Moriarty and Moran (1990), Kotler (1994), Stone and Woodcock (1995), Lovelock and Wright (1999), Schubert and Selz (1999), Liu and Arnett (2000), Psionos and Smithson (1999, 2000), Wan (2000) and Ives and Learmonth (1984)).

Although the above authors differ greatly in their approach, we are able to define a ‘greatest common denominator’ of the sections from the customer interaction process. This is highlighted in Figure 5. In so doing, we are able to distinguish eight sections of the customer interaction process. The only section that we will not consider separately is the product ‘disposal’ after use, as described by Ives and Learmonth: this could be seen as a sections of use or retention.
As far as our central research question is concerned, we shall from now on focus the customer interaction process on the interaction process via e-formulas. The eight sections are to be aggregated into a model, which we shall call the Customer Life Cycle model (Figure 6). The content of the sections will be briefly characterised (a more in-depth analysis of each section will follow in the next paragraphs).

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<td>Being informed and inspired</td>
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<td>Decide to commit to a transaction, definitive choice of products, services and supplier</td>
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<td>Close transaction</td>
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<td>Pay, receive and accept</td>
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<td>Use</td>
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<td>Start a relationship</td>
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<td>Suppliers learn about the interest, behaviour and needs of prospects and customers</td>
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Figure 5: Differences and similarities in a number of life cycle approaches
Figure 6: Customer Life Cycle model as operationalisation of the customer interaction architecture

- **Traffic**
The (potential) customer/visitor is made aware of the existence of the e-formula, and is encouraged to pay a visit. In marketing communicative terms, the main focus of attention is on influencing the knowledge of the target group;

- **Consider & Inspire**
A visitor has a latent or manifest need, causing him to consider whether to purchase a product or service. A site can respond to this by offering information about the organisation, its products and services, the marketing-communicative aim being to influence the knowledge and attitude of the visitor;

- **Conversion**
The visitor is tempted into purchasing something. For an online shop, this means that the visitor is actively stimulated to add a product to his electronic shopping basket. It could however also mean that a visitor is expressly invited to visit a ‘bricks and mortar store’ to purchase the product or service there. The marketing communicative aim is to influence behaviour;

- **Order**
The seller and buyer conclude a transaction with one another;

- **Fulfil**
Fulfilment means that the product or service is being paid for and delivered; the customer and client are fulfilling their mutual promises to each other. To support the fulfilment via the e-formula, information can be exchanged on tracking and tracing, stock and payment;

- **Use**
For many types of products or services, the Internet provides the opportunity to
support the use or increase the ease and/or enjoyment of use. This ties in with what is highlighted in paragraph 3.2.2;

- **Retention**
  Retention implies building a long-term relationship with the customer, by among other things encouraging him once again to consider products or services, which will once again inspire him (‘consider & inspire’); we can now speak of a customer life ‘cycle’;

- **Learn**
  It is possible to increase the knowledge about the (potential) customer for the duration of the customer life cycle. In the course of time, this will create a complete picture of customer interests and behaviour, which in turn can be deployed in all sections of the life cycle to enable a better ‘fit’ between information and communication and the individual. This explains why learning is the focal point of the Customer Life Cycle model. This is highlighted in Figure 6, in which the learning section is placed in the centre of the model.

An e-formula can to a greater or lesser extent be focused on supporting one or more of these sections of the customer life cycle. McBride (1997) concluded his research by saying that web sites were hardly ever deployed for primary business activities and that the main focus of attention was on providing (marketing) information. Gonsalves et al (1999) arrived at a slightly broader scope, supporting approximately half of the customer life cycle.

The customer life cycle and the purchasing process differ from one another in that the latter deals with acquiring and using one product or service. The customer life cycle involves running through the interaction process a number of times in succession, so that a relationship can be enhanced.

An interesting question is whether the customer life cycle is the ideal model for researching interaction processes in all industries. The customer life cycle as defined in this study is based on product marketing and service marketing life cycle models. As stated, Ives and Learmonth (1984) concluded that their life cycle model could be applied to all the industries they researched. Even interaction processes from the not-for-profit sector regularly display an orientating, decision-making, use and relationship-building section, although it is less common in those sectors to speak in terms of ‘customers’ and ‘transactions’. It is for this reason that we have decided to use the customer life cycle as our model, and to define as a separate research class the sectors in which transactions are less important (see paragraph 4.7).
It is worth noting that, from an analytical point of view, it is useful to make a clear distinction between the sections of the cycle, even if in reality these segments are interwoven and can strongly influence one another. As Kierzkowski et al (1996) point out: “marketers can leverage the Internet to identify attractive self-selected users/prospects, enhance loyalty by providing value added services, and use what they learn about their customers to customize existing cross-sell new products and services”. Molenaar (1993) also supports the thesis, that the sections of the cycle influence each other, and that an activity aimed at one section can influence other sections. For instance, the establishment of a service desk, help line and money-back-guarantee can enhance customer security and increase trust. This follow-up care is however not only a tool to keep the customer satisfied with the purchased product; it can also create a positive attitude, thus stimulating conversion and retention.

Lastly, we would like to draw attention to the potential synergetic strategies if a physical presence is combined with a virtual presence (Steinfield et al, 2000). This implies that it is possible to consider for each separate section of the customer life cycle whether it could interact in both a physical formula and an e-formula (Moriarty and Moran, 1990, van Duyne, 2001, and paragraph 3.2.6). Our research will narrow customer contacts down to digital customer contacts via the e-formula (our research object). As such, we shall only discuss physical contact moments in passing, without wishing to imply that these are less important.

Our research will assess the position taken by researchers in the shaping of each section of the customer life cycle. It appears that many authors have opted for a phenomenological interpretation, by describing how the relevant section could be shaped. As Gonsalves et al (1999) point out, little scientific research has been carried out into the correlation between the support of the customer life cycle via e-formulas and the success that can be achieved with this. This underlines the importance of our research to develop greater understanding of this issue.

3.3.3 Traffic
The (potential) visitor is made aware of the existence of the e-formula and is encouraged to visit the e-formula. In marketing communicative terms, this means that the main emphasis is on influencing the knowledge of the target group.

We shall now go on to discuss the different measures an e-formula can take to stimulate traffic.
A commonly used method for generating brand awareness of, and traffic to, e-formulas is through conventional mass communication media such as the radio, television, print, billboards, public relations and sponsoring, or more personal media such as direct mail. Although advertising using mass media is the most expensive and least direct way for any organisation to attract visitors, it is still the most effective way to address a large target group or approach people who hardly ever go online (Hoffman and Novak, 2000). For target groups that are already online, the Internet can be used to stimulate traffic, for instance through banners, links, advertorials, search engines and direct e-mail. Word of mouth advertising, both online (‘mail this page to a friend’) and physical, appears to be a good way of generating traffic (Hoffman and Novak, 2000).

Compared with advertising in traditional media, the Internet variants of advertising reveals a whole range of opportunities. Hoffman and Novak (2000) for instance write, that it is not only possible to measure the number of delivered adverts, but also the amount of consumed adverts. A prospect can be followed from the moment he clicks on a banner to the moment he makes a potential purchase. This is where the Internet can finally do something about John Wanamaker’s much quoted statement: “I know half the money I spend on advertising is wasted, but I can never find out which half.” By establishing a direct link between banners and sales, the web offers an insight into which half works.

Bannering can be purchased site for site, but a provider could also contemplate entering into a strategic collaboration with content or service providers that operate banner and content space on web sites. Within the collaboration, it can be agreed upon that the provider is to be given exclusive rights to refer his target group from a certain piece of content to his e-formula via banners or even via links integrated in the content. Such exclusive deals are more efficient than general banner ads or advertising in mass media for channelling customers to your site, but remain very expensive (Hoffman and Novak, 2000).

Another way of deploying banners more effectively is to use them as an immediate storefront, rather than merely as an attention-getter and link generator. In this case we can speak of ‘bannered storefronts’. The underlying idea that you can immediately select one of the products and services displayed on the banner, or immediately purchase a product or service. This often takes place in combination with an affiliation programme, as discussed in paragraph 3.2.4. Affiliation programmes are extremely useful tools for stimulating traffic and in a wider context carrying out customer acquisition. Hoffman and Novak (2000) pose that owing to network effects, affiliation produces a substantial number of potential marketing partners, through whom it is possible to advertise to prospects that a provider would otherwise never have been able to reach. Neither suppliers, nor advertising intermediaries are able to deal with the red tape involved in
buying advertising space on such a large and diverse number of sites in a similarly cost
effective way. One advantage highlighted by Hoffman and Novak is that affiliation
programmes, unlike banner ads, are by nature ‘webby’. They build on the inter-
connections intrinsic to the web and on the web’s ability to monitor and track activity in
real time. A supplier knows for a fact how many visitors arrive from each member’s site
and how many visitors are converted into buyers. Armed with the number of visitors, the
number of new customers, the number of repeat customers referred from each member’s
web site, and its own data on the average profit per customer, a supplier has everything it
needs to estimate the lifetime value of a customer by source of acquisition.

The Internet also offers various ‘free’ ways of stimulating traffic. Langford (2000)
researched the effectiveness of traffic generation to the site by means of free traffic
builders such as search engines, directories, newsgroups, list servers, bulletin boards and
chatrooms. The results of his research indicate that this is hardly effective and of little use
to serious marketers. It is however possible to improve the effectiveness of search engines
as a medium for generating visitors. Haarman and Peelen (1999) for instance showed, that
the searchability and generated traffic improves if a web site is properly prepared for
search engine indexing with the aid of meta-information and clever use of basic HTML.

Approaching prospects personally with the aid of direct (e-)mail appears to be an effective
way of generating traffic. An important issue when generating traffic with this type of
push media is that it could potentially irritate the recipient. Research carried out by Mittal
(1994), which focuses primarily on TV advertising, shows that the irritation levels are
significantly lower if the content of the advertising message is believable, is tuned to the
viewer’s environment and is well presented. Mittal indicates, that these factors can be
applied to a broader field than just advertising. As such, we can argue that his findings
also apply to direct (e-) mail. That way, one could avoid recipients labelling the direct e-
mail action as junk mail or ‘spam’. It is also worth mentioning the ‘opt-in’ and ‘opt-out’
principle in this context, which stands for the option of only sending direct e-mails to
subscribers and/or enabling recipients to remove themselves from the list at all times
(Wilson, 2000).

3.3.4 Consider & Inspire
A visitor has a latent or manifest need, causing him to contemplate whether or not to
purchase a product or service. A site can respond to this by providing information about
the organisation, its products and services, the marketing-communicative aim being to
influence the visitor’s knowledge and attitude.
‘The information delivery opportunity’ is one of the Internet’s biggest opportunities (Kierzkowski et al, 1996). Information about products, services or organisations can be offered at a relatively low cost. The amount of information that could be offered is virtually infinite and could be opened up by means of intelligent interactive tools. Evans and Wurster (1999), when discussing quantity, detail and form, speak of the ‘richness’ of information.

Providing information via an e-formula has one big advantage, in that the information can vary in detail, whereby the visitor himself can select the required level of depth. Leong et al (1998) conclude their extensive research into Australian e-entrepreneurs by saying that this is one of the Internet’s strongest points. They see a web site as a rational medium, where content and depth are of particular importance. They pose, that television and outdoor advertising are much better suited to influencing the feelings and changing or enhancing the attitude of the target group. However, their research focused mainly on textual informative web sites with few graphical illustrations. It is therefore unclear whether this thesis still holds any relevance with the increased bandwidth and the attendant rise of multimedia opportunities of the Internet. A balanced use of multimedia communication via the Internet could also influence attitudes. Due to the limited technical capabilities at the time of Leong et al’s research, multimedia was merely seen as a fun gadget, and as such not used to its optimum effect. As early as 1991, Yager stated: “Multimedia isn’t about turning business and educational presentations into Oscar-winning material or spoon-feeding sugar coated information to an audience of presumed dullards. It’s about condensing a large amount of information and packaging it in a way that makes it more palatable and understandable.” Hoogeveen (1993) states, that the different multimedia information types must be able to enhance one another.

Evans and Wurster (1999) focus on the different ways in which providers (or producers) and navigators shape the information provision of their products and services. Navigators will generally have a stronger base in terms of the breadth of their supply (reach) and the affinity with user needs (or, in Evans’ and Wurster’s terms, ‘affiliation’). Providers on the other hand will have more information available about their products and services (richness). A provider can use this advantage in richness to create a rich perception as well as product-centred information (3.2.2). Taking advantage of this richness does however not guarantee that the providers’ e-formulas will succeed. Imagine for example, that a supplier brand is based on the statement ‘our product is always innovative and of the highest quality’ and the navigator, on the basis of his reach and user affinity (affiliation) proves time and time again that other providers are just as innovative or offer products/services of an even better quality. The customer would at a certain point place greater trust in the navigator than in the supplier’s brand.
Another way to give substance to the ‘consider & inspire’ section of the life cycle is to deploy interactive agents (Maes, 1999). Agents can help identify the need, compare products and advise on selecting a specific product and supplier. Maes sketches a shift from server based agents to customer based agents, the emergence of sharing information across different sites, the integration of online and offline systems and the application of agents in mobile computing. These developments ensure that customers are being increasingly better supported during the ‘consider & inspire’ section.

3.3.5 Conversion

In this section of the life cycle, the visitor is tempted into making a purchase. For an online shop, this implies that the visitor is actively stimulated to place a product in his electronic shopping basket. It could however also mean that the visitor is expressly invited to visit a 'bricks and mortar store' to purchase the product or service there.

How does conversion relate to ordering? In his definition of electronic contracting, Runge (1998) distinguishes two sections. Firstly, there is the negotiation between buyer(s) and seller(s) about issues such as price, exact specifications and delivery date. The second section concerns the actual signing of contracts, the entering into an agreement. Our research ties in with this division and incorporates the first section as the section of conversion, and the second section as ordering.

Conversion is concerned with winning over a visitor, for instance by making clear that you are the best provider who can offer the best deal. Kierzkowski et al (1996) indicate that the issue of ‘winning over’ is an interesting feature of the Internet, as you can influence the customer the moment he is ‘one click away from entering into a transaction’. Leong et al’s extensive research into Australian e-entrepreneurs (1998) confirms this. They pose, that an e-formula is less effective than point-of-purchase or telemarketing when it comes to stimulating conversion, but significantly more effective than traditional media such as television, outdoor, magazine, or the press in precipitating action. Agrawal et al (2001) conclude their research by stating that a significant number of e-formulas “suffered from a kind of fatal attraction: they were successful at luring visitors to their sites but not at getting these visitors to buy or at turning occasional buyers into frequent ones. Indeed, the more visitors the sites drew, the more money they lost”.

Nonetheless, many e-formulas are not optimally tuned to stimulating conversion. Visitors are usually only informed of the products and services, and provided with an ordering functionality. There are as yet few built-in triggers to tempt the visitor to proceed to a transaction (Van der Blonk, 1999). That is why the Internet is at present still predominantly used as a selection tool and not as a purchasing channel. Van der Blonk
poses, that if a company wishes to use the Internet as a fully-fledged new channel to successfully exploit communicative and commercial activities, it will have to show more interest in the way in which interactive orientation- and purchasing behaviour can be stimulated.

One of the ways to stimulate conversion is to increase trust (Nöteberg et al, 2000). This applies to both the physical world and the online world. Wallage (1999) for instance argues, that the security of transactions and protection of personal data (privacy) are the biggest barriers preventing consumers from carrying out e-trade. This appears to be particularly true for the more experienced web user. Szymanski and Hise (2000) pose, that the perceived security of visitors that a transaction is processed safely greatly influences their decision as to whether or not to purchase a product or service. Hoffman et al (1999) indicate, that new Internet users do not buy online because they can’t see the use or fun in doing so, don’t know how to shop online and believe that it’s much easier to shop in conventional bricks and mortar stores. As soon as they become better versed in using the Internet, these functional obstructions diminish, but the worry of personal details becoming lost in cyberspace becomes a much greater hurdle to overcome. To ease this worry, confidence can be increased by using the reputation of the type of e-formula, deploying technical protection such as secure servers, or by adding a ‘seal’. Such a so-called ‘trust seal’ is issued by an independent, reliable third party such as consumers’ associations or accountants, who guarantee a specified level of reliability (See for instance Nöteberg et al, 2000). Trust can also be stimulated by measures that inspire confidence, such as for instance publishing interviews with satisfied customers, the ‘track record’ of services rendered or distinctions and awards won.

Another way of stimulating conversion is to offer the visitor greater support during the selection process. Research carried out by Truijens (2000) highlights a number of successful instruments for offering customers a personal proposal to purchase additional products. This involves focusing the customer’s attention on related products, or products purchased by people in a similar group or in a group to be selected (e.g. the occupational group). Truijens additionally describes a number of successful valuation instruments to help the customer determine the value of a product or service, such as considerations, assessments and proven degree of relevance for specific users.

And last but not least, as important as stimulation of conversion are the appeal and the value of the product or service that can be provided, as well as the possibility of negotiating on specifications and price. These issues were highlighted in paragraphs 3.2.2 and 3.2.3.
3.3.6 Order
Although the ordering section is an essential part of the customer life cycle, research literature pays little or no attention to it, pausing only to mention whether it is possible to place an order online (Niks et al (2000), Psionos and Smithson (2000), E. Huizing (2000) and Palmer and Griffith (1998)). In principle, the only issues dealt with are concluding a transaction and agreeing with one another on the legalities of the value and countervalue to be delivered.

A further distinction can be made in terms of the different types of ordering, which differ primarily in the legal terminology they deploy. A wealth of different terms can be used, including contract of sale (including resolutive), definite contract of sale, online ordering, online purchasing, reservations and orders. This degree of detail is not relevant to our research aim. As such, we shall define the word ordering in general terms: a provider and customer agreeing to provide a certain value and countervalue.

3.3.7 Fulfil
Fulfilment means paying for and delivering a product or service, whereby the customer and supplier fulfil their promises to one another. The passing on of fulfilment costs is highlighted in paragraph 3.2.3. To support the fulfilment section, one could for instance use the e-formula to exchange information on tracking and tracing and payment (Schubert and Selz (1999), Wan (2000) and Liu and Arnett (2000)). This can cut costs as well as improve the quality of the service provision, as a customer can follow the status of his order from any location, 24 hours a day, 7 days a week. Kierzkowski et al (1996) for instance worked out, that UPS would pay 2.6 million Dollar a year if they processed 4 million tracking and tracing queries using a phone-based system, compared to 0.9 million Dollar using an Internet-based solution, a saving of over 65%.

It is worth mentioning in this respect that many e-entrepreneurs fail to pay sufficient attention to the e-commerce process of returned goods (Psionos and Smithson, 2000).

Fulfilment could also mean the digital distribution of goods, as is the case for instance with software, music or information (Palmer and Griffith, 1998, Psionos and Smithson, 2000), Choi et al (1997). These types of fulfilment aspects fall outside the scope of our research.

3.3.8 Use
The user experiences the value proposition while using the product or service. The Internet can support him in using a product or service, so that the overall use experience
can be improved. This ties in with our study into the user’s perception as part of the value proposition, highlighted at length in paragraph 3.2.2. We shall therefore restrict ourselves in this paragraph to considering user support.

Online customer service (Liu and Arnett, 2000), online helpdesk (Wan, 2000) and online technical support (Palmer and Griffith, 1998) are measures frequently mentioned in the field of user support.

Molenaar (1993) points out that, in order to interact with customers, many organisations are organised according to the time-honoured push principle: the organisation has a message or offer that it would like to relay to the customer, for instance via direct marketing. It however seems ill-prepared for customers who decide to take their own initiative, for instance with questions, complaints or remarks they might have when using the product or service. According to Molenaar, this is where organisations lose out, as it is the perfect opportunity to learn about the needs and experiences of the customer, and could be a starting point for building a sustainable and good relationship with the customer.

3.3.9 Retention

According to Kierzkowski et al (1996), one of the Internet’s greatest strengths is that it enhances relationships. After all, the Internet enables user-to-user interaction and personalised communication, and the collecting of information via the digital network is much more effective and efficient than in the physical world.

The customer life cycle model is focused on strengthening a relationship with the customer by passing through all the stages of the customer contacts more than once. Peelen (1999) quotes Dwyer et al (1987) to describe the five phases in the construction and deconstruction of a relationship:

- The parties become aware of each other, as the phrase suggests, during the awareness phase. They are both in the process of positioning themselves and undertaking action to demonstrate their appeal;
- The exploration phase is entered into as soon as bilateral interactions take place and the parties are sounding one another out. Parties are attracted to one another by virtue of e.g. the perceived personality of the other party or possibly as a result of shared goals, values and norms. The value proposition or the track record could also increase the appeal. In this second phase, negotiations play an important part. The fact that parties are prepared to negotiate illustrates their mutual interest. The future orientation of the relationship is however still limited, and the collaboration can still
easily be broken. This explains why both parties draw up regular mid-term reviews in this phase to see whether they are still satisfied with one another;

- During the expansion phase, the interaction processes from the previous phase are continued. There is still a mutual appeal, negotiations are still taking place, norms and expectations will be further specified and in this phase both parties will once again assess the relationship. The most important difference between this phase and the exploration phase is that more risks are now being taken, the relationship is being tried out and put to the test. Mutual dependency is increasing and more and more resources are being exchanged;

- During the commitment and saturation phase, the relationship reaches its maximum level of commitment, mutual dependency, trust and respect. Many resources, including personal and less tangible ones (see paragraph 3.2.4), are being exchanged. Problems (if any) are openly discussed and a constructive solution is sought. The (social) environment also contributes towards the stability of the relationship;

- The dissolution phase is one of decline. Directness and focus on the other party could indicate, that the continuity of the relationship is coming into play. The seeds of a potential rift could lie in different expectations and individual traits of the partners, such as a need for freedom or innovation that are at odds with each other. External influences could also be an influencing factor.

Webster (1992) describes seven – increasingly solid – marketing relationships, thereby covering Dwyer’s first four phases: transactions (run through the customer life cycle once), repeated transactions (run through several times), long-term relationships, buyer-seller partnerships (mutual, total dependence), strategic alliances (incl. Joint ventures), network organizations and vertical integration. E-formulas will have to determine what type of relationship they would like to have with their customers.

In order to be able to construct a sustainable, respectful and solid customer-supplier relationship, a number of preconditions will have to be met (Peelen, 1999). These preconditions are applicable both in the business market and in the business to consumer market:

- The products should have a good price/value ratio;
- A provider must occupy a sufficiently distinguishing position;
- A provider must be able to offer products and services that are tuned to the needs of the customer;
- The customer should not be dissatisfied with (parts of) the service;
- The customer must be keen to enter into a relationship. He must enjoy being part of the supplier’s consumer ‘club’;
- Customers must accept that they differ from each other, and that the level of service offered by the provider will vary depending on the intensity of the relationship,
because good customers are served better and rewarded. If the customer continues to refuse to accept this, it will be difficult to respond to individual relationships. Especially in the consumer markets, a differentiated approach appears to cause irritation among consumers.

An e-formula has various instruments at its disposal to build up a strong relationship with its customers. Truijens (2000) highlights a number of these instruments and makes a case for their success. He focuses primarily on instruments that are based on visitors to the e-formula exchanging information, such as virtual communities, ‘mail-a-friend’, newsgroups, chat opportunities and drawing up wish lists. The idea behind these instruments is that loyalty is stimulated if the customer himself helps add value to the total value proposition of an e-formula and/or the delivered products and services. Kelly (1998) uses the term ‘prosumer’ to describe this.

This prosumer function of the customer comes to the fore in e.g. virtual communities. Hagel and Armstrong (1997) highlight a number of negative and positive aspects of virtual communities as an instrument of loyalty.

- Negative aspects include less emphasis on the value of the brand, the simplification of price comparisons, exposure of the products and services to accessible ‘and public’ commentary and the pressure on the organisation’s information and communication flows;
- Positive aspects include greater attention for the products and services, improved word-of-mouth advertising (which we earmarked as being one of the best traffic stimulating devices), the amount and quality of customer feedback, the increased ability to find out about relevant issues in the target group, the disparaging distance between communication and transaction, and the fact that customers view this form of advertising as useful instead of intrusive.

Another instrument used to create loyalty is the offering of rewards. O’Brien and Jones (1995) highlight this issue by asking themselves: “do rewards really create loyalty? They do, if a company understands how to share value”. According to them, a good loyalty programme will select and approach valuable customers and appeal to this target group. At the same time, the programme saves the provider money, because it discourages less valuable customers. O’Brien and Jones pose, that a loyalty programme must be tuned to the possibilities of the organisation, produce perceived value for the customer and be difficult for the competition to improve on. Any reward programme that fails to meet these criteria will not succeed. They conclude by stating that customers particularly value reward programmes that offer cash value, relevance, a range of choices, aspirational value and ease.
Van der Blonk (1999) also considers the loyalty programmes and poses, that the emphasis in marketing has shifted increasingly towards transaction-based loyalty systems, such as trading stamps, air miles and price-offs for club card holders. Here, offering customers economic advantages creates loyalty. Van der Blonk is however more impressed with customer intimacy or relationship marketing. Compared with transaction-based marketing, relationship marketing focuses on the longer term and will only succeed if the importance of a mutually appealing and desired relationship is recognised. In this context, loyalty is a logical consequence of the fact that the customer and organisation are in a win-win relationship. The emotional component of loyalty “…they know me, they know what I mean to them, they appreciate me and want to invest in me …” is of relatively greater importance to the customer than the economic mainspring of the umpteenth savings programme, and therefore much more powerful.  His research ties in with O’Brien’s and Jones’ belief, that it is especially important to consider how extra value can be given to loyal customers.

When striving for a one-to-one relationship, an organisation must remember that it is not the only one keen to do this. “The number of one-to-one relationships that companies ask consumers to maintain is untenable. As a result, many marketing initiatives seem trivial and useless instead of unique and valuable” (Fournier et al, 1998).

We can conclude this paragraph by stating, that the collaboration using ever changing combinations of short-lived relationships as described in paragraph 3.2.5, can also apply to the collaboration with customers.

3.3.10 Learn

The previous paragraph dealt with relationship marketing. Peppers et al (1999) pose, that relationship marketing is based on constructing a learning relationship with each customer, starting with the most valuable customer. In order to do this, the customer must be identifiable, known and understood. However, it is much more difficult to understand and position the customer’s environment in present-day society than it was a few decades ago.

Increased prosperity in western civilisation has meant that the motives for purchasing a product or service have shifted away from primary needs (survival and the need to develop -the bottom layers in Maslow’s pyramid of need) to more abstract factors such as perception, emotion and experience (the top layers of Maslow’s pyramid, see also 3.2.2). The customer and his interests are no longer characterised by objective features such as income, education, sex or age. As a result, it has become increasingly difficult to characterise and contact target groups. The development of new methods of analysis,
neural networks and ‘profiling engines’ can help analyse the current behaviour of visitors and customers, creating an insight into their environment and interests, their search and purchasing behaviour. This forms the basis for being able to approach customers with the right message and the right value proposition. The collecting and analysing of data, the ‘learning’ about visitors, ties in well with one of the Internet’s most appealing strengths, namely the ability to monitor visitor behaviour and request direct feedback (Kierzkowski et al, 1996).

Learning by analysing online behaviour cannot be accomplished without striking blows (Hoffman et al, 1999). Unlike the monitoring of behaviour in the physical world, many customers are afraid of seeing their privacy infringed by excessive registrations of their behaviour in the virtual world of the Internet (Evans and Wurster, 1999). According to Hoffman et al, the difference between saving and registering customer information in the physical and virtual world has to do with:

- the capabilities of the Internet to follow the entire ‘clicking behaviour’, every virtual step that is taken, and saving these details (in their millions);
- the smaller diversity of database formats compared with the physical world, making it easier to hook up information from different systems;
- the fact that the Internet, as well as registering information that is similar to the physical world’s (such as identity and credit history), can also register information that is completely different (for instance products and services that the visitor glanced at at some time in the past, detailed information requested, the order history and other sites visited).

Evans and Wurster (1999) refer to this increase in quantity, diversity and degree of detail as the Richness of information that can be registered. Molenaar (1993) also underlines the differences between registering physical and virtual customer behaviour. In the physical world, it has to be in the customer’s interest to register. There has to be some form of compensation, such as a guarantee, an opportunity to save money, a payment facility or discounts. In online purchases, purchasing details are automatically at the disposal of the supplier, and can in many cases even be linked to the search behaviour.

It seems sensible to put the degree to which registration is possible into perspective, because the Internet does have obvious limits when it comes to following the behaviour of an individual person across different visits (sessions). Cookies can be used to identify whether a site has been accessed before from a certain computer, but tell us nothing about the person sitting behind the computer, or whether that person has visited the site on a previous occasion from a different computer. This is why Hoffman and Novak (2000) make a distinction between anonymous visitors and visitors that can be identified (visitors
CHAPTER 3 - THEORETICAL FRAMEWORK

you can ‘tag’). This can for instance be done if the visitor logs in with a username, or if somewhere during the session an (order) form is filled in, revealing the visitor’s identity.

E-formulas use a variety of different forms, such as order forms, registration forms and market research forms. Abela and Sacconaghi jr. (1997) carried out research into the Fortune 500 organisations, which are aimed at consumers. By and large, most of these organisations failed to collect information about individual customers. And of the ones that did, the majority appeared to acquire no new information other than the information already available from conventional market research. Approximately a third of respondents were able to collate additional demographic information.

What sort of customer information should an e-formula collect and maintain? Peelen (1999), basing himself on e.g. Hughes (1994) and Hoekstra (1998), points out, that it is important to collect and improve information on the following topics:

- **Identify the customer or prospect**
  Who is the customer and how can I contact him? The most basic information consists of the name, physical contact details such as address, town and telephone number or the virtual contact details such as his e-mail address (in general, physical contact details have a longer shelf life than the rather transient virtual details). In order to effectively implement one-to-one marketing and develop a customer-supplier relationship, it would be wise to collect additional information about the customer’s environment, such as the composition of his household, living environment, hobbies and the like.

- **Segment**
  To which segment does the customer belong? The ability to categorise a relationship in a certain segment is crucial if you wish to make him a differentiated offer. It can be noted, that it is more difficult these days to determine segments, and that the relevance of segments are based on completely differently criteria than they were twenty years ago (Molenaar, 1993).

- **Marketing channel preferences**
  What do the customer’s marketing channel preferences look like? How does he view physical formulas and e-formulas? In what situations and at what times will he prefer a certain channel?

- **Transaction history and customer values**
  What goods and services has the customer bought in the past from the organisation (or competitors)? How can the payment behaviour of the relationship be characterised? More summarising measures can be calculated to describe the transaction history, such as recency frequency monetary value scores, lifetime values, share of wallets and customer contribution margins. Direct marketing practice has
shown, that the historic purchasing behaviour is one of the best ways to predict future purchasing behaviour.

- **Communication history**
  What form has the communication with the customer taken up to now? In order to pursue an ‘ongoing dialogue’ and to avoid repetition, it is important to record the communication carried out with the customer. In order to do this properly, it is necessary to construct the communication history across various channels and formulas. In addition, a communication overview provides a pretext for determining how to make the conversation more profound, so that more personal details can be exchanged.

So far, we have discussed e-formulas that try to learn about the customer. However, one development which cannot go unmentioned is that customers themselves are going to save and manage their personal profiles, and lend the right to certain providers who they trust to make use of this data (Evans and Wurster, 1999).

In conclusion we can state, that the collecting of information about the customer, learning about his behaviour and needs, is important. We are still on a learning curve when it comes to maximising our advantage. This ties in with Peelen (1999), who considers it ‘a challenge’ to collect reliable information about the quality of the customer-supplier relationship in an accessible way, on a regular basis and at little expense.

### 3.4 Success of an e-formula

The (lack of) success of e-formulas has been particularly well documented by the popular press, where the term ‘new economy’ is in common usage. Before going on to determine the success of individual e-formulas, it would be a good idea to ponder on the discussion of ‘new success values’ in the ‘new economy’. We shall then consider the way in which the value or the success of investments in information and communication technology is assessed. From this starting point, we can explore the contribution made by the e-formula to the effectiveness and firm performance.

#### 3.4.1 Thoughts on the new economy

As the economist Clark noted as early as 1927, information is the only production factor that isn’t subject to the prevailing economic law of diminishing returns. However, until now that insight could not be given any practical relevance, because knowledge, in order to be exploited, had to be epitomised in physical products, means of production or
As a result, the use of knowledge remained subject to economic laws including the law of diminishing returns.

Owing to the digitalisation of information and the (potentially) universal accessibility of the Internet, this restriction has now been lifted. This gave rise to a world-wide discussion on the ‘new business economics’ with ‘new profit models’ for ‘the new economy’. This new economy would be responsible for an unprecedented combination of macro-economic figures: a growth of GNP and increase in production, as well as low inflation and unemployment (Strikwerda, 2000). Strikwerda however correctly argues, that the term ‘new economy’ is used incorrectly in this case. His suggestion is to make a clear distinction between the second industrial revolution (also known as the information revolution) and the new economy.

During the second industrial revolution, we see that value-adding activities of conventional businesses are split into a physical and information-processing section (Porter and Millar, 1985). The information processing section comprises the acquiring, manipulating and transporting of data needed to carry out an activity. The industrial revolution has especially influenced the physical tasks, while the information revolution has primarily influenced the information processing section. During the industrial revolution, the time it took to travel from Boston, Massachusetts to Concord, New Hampshire, was reduced from 5 days to 4 hours, a factor of 30. Between 1958 and 1980, electronic processing became 80 million times faster. This has however not brought about a fundamental change in the economy. A second issue relevant to the information revolution is that the Internet contributes to a transparency of prices and product information, so that information asymmetry (in theory, in any case) is virtually phased out (paragraph 3.2.3). According to the neo-classical market model, this asymmetry was one of the reasons why the market did not function properly. Greater transparency not only caused a lowering of transaction costs and prices, but in particular also a better allocation and coordination of resources. Strikwerda argues that, despite being one of the causes of increased economic growth, we can’t speak of a new economy in this case.

Strikwerda bases this belief on the fact that during the second industrial revolution information merely formed the basis for a product or service, while information (also known as content) in the new economy is itself the product, without needing to be embodied in physical products (Strikwerda, 2000). A series of products are being created, such as music, electronic newspapers and encyclopaedias, the physical production of which does not involve any material. This means, that numerous traditional laws from the business economy, such as the U-curve, the law of diminishing returns or ‘learning-curves’ no longer rings true, resulting in a different relationship between fixed costs and variable costs. The latter frequently tend to be nil, resulting in other profit models than...
those of traditional production, as well as other cost dynamics or scalability. In the old
economy, profits were achieved on the basis of ‘Ricardian rents’, where the entrepreneur
had at his disposal scarce raw materials for which there was a great demand, enabling him
to demand a premium price, or on the basis of ‘Schumpeterian rents’, where the
entrepreneur was able to bring to the market new products by combining different
competencies, for which he could demand a premium price (Collis and Montgomery,
1997). The new economy is characterised by information products of a non-physical
nature, which require no material to multiply them. They take up no space and as such do
not exist in a specific location in space and time. Information products have the potential
to be differentiated at low marginal costs to specific groups or even individual customers,
and still command a ‘premium price’. According to Strikwerda, it is possible in this case
speak of a ‘new economy’.

In this context, it would be interesting to fall back on the value proposition of an
e-formula (paragraph 3.2.2). We pointed out, that a digital service provision is being
increasingly created around physical products – for instance to increase the emotional
perception of the customer – and that these digital services sometimes become more
important than the actual physical product itself. For these digital services, the ‘new laws’
as described by Strikwerda could be applicable.

Our research ties in with Strikwerda’s belief, that most businesses do not operate in the
new economy, because they do not (exclusively) deliver information products that are
subject to the new economic laws. This means that, in order to determine the success of
e-formulas, we can simply carry on using ‘old’ economic terminology.

3.4.2 General definition of success of the investments in information and
communication technology

The success generated by investments in information and communication technologies for
an organisation has long been a topic of discussion in the broad area of information
management. It is within this discussion that Baily and Gordon (1988) introduced the
‘productivity paradox’. The nature of the paradox is that business organisations
demonstrate ever-higher levels of investment in information and communication
technology in the absence of measured productivity gains. Soh and Markus (1995) and
Mooney et al (1995) have produced a research anthology in this field, with the latter
concluding that the overall findings from this research are contradictory, ranging from
instances of insignificant or negative relationships between investment in information and
communication technology and various performance ratios, to bi-modal distribution of
impacts for firms operating in the same industry, to conclusions of significant returns on
investment.
That is why it is a good idea to return to the basis: what might at the heart of the benefits of information and communication technology? Van Irsel and Swinkels (1992) indicate that, generally speaking, benefits are primarily gained from substitution (efficiency), improvement (effectiveness), transformation (competitive advantage, competition need and customer-friendly behaviour) and transparency (reaction and flexibility). Mooney et al (1995) make a comparable distinction by describing three influencing factors of information technology on business processes, with which the investment in technology creates its value. First of all, there is the automation effect, in which labour is replaced by technology. Secondly, there are the informational effects, arising from the potential of technology to collect, save and process information. Thirdly, we have the transformational effects, enabling processes to be carried out differently as a result of the use of technology. These technical effects can influence the organisational performance of the firm.

Van den Hooff (1997) deduces from his research into the implementation of e-mail in organisations, that the first order effects and the second order effects follow one another in chronological order. First order effects are effects that are directly related to individual activities, such as changes in efficiency of the activity, in productivity of individual employees and the organisation as a whole. Using Irsel’s and Swinkels’ terminology, we could in this context speak of substitution and improvement. Second order effects are concerned with changes in the social structure of the organisation, such as changing communication patterns, new communication patterns, new roles within social networks, new patterns of independence between players, etc. These are the transformation and transparency effects of Van Irsel and Swinkels (1992).

According to Bharadwaj et al (1995), the influence of these effects on the firm performance can be researched in different ways. The classic ‘main effect’ perspective states, that there is a direct link between investing in information and communication technology and the firm performance. The ‘intermediate effect’ model poses, that technology first of all influences a number of intermediate outcome variables, and secondly the organisational performance measures such as market share and return on assets. This ties in with the findings of Van den Hooff (1997).

We have decided to use a combination of the classic ‘main effect’ and ‘intermediate effect’ approach. This means that we can look at intermediate measures and at general organisational performance measures. This ties in with the approach taken by Barua et al (2000) in their survey into drivers for e-business value.
Before we delve deeper into these two types of measures, it would be a good idea to repeat the marginal note from paragraph 2.4, which states, that many e-formulas hardly measure their success (Gonsalves et al, 1999, Larsen and Bloniarz, 2000).

3.4.3 Success by achieving aims: the effectiveness of the e-formula

The first way to assess the success of e-formulas is to use so-called intermediate outcome variables (Bharadwaj et al 1995). We have decided to opt for an approach of assessing whether or not an e-formula is able to achieve its aims of concluding customer contacts. The rationale in this context is that, if an e-formula is genuinely able to properly conclude customer contacts, he stands a greater chance of achieving a high firm performance.

Various authors advance (more or less explicitly) that you must set yourself the target of serving customers as best as possible during every stage of the customer life cycle (Liu and Arnett (2000); Psionos and Smithson (1999 & 2000); Schubert and Selz (1999); and Wan (2000)). Here, it is interesting to highlight the Customer Life Cycle as a model for setting and achieving goals. In this context, the effectiveness of the e-formula represents the degree to which an e-formula is able to appropriately serve the customer for the duration of the customer life cycle.

This ties in with the thesis advanced by Peppers et al (1999), that “one-to-one marketing is basically oriented around making it increasingly convenient for a customer to buy”. Larsen and Bloniarz (2000) also point out that, as well as using figures such as visitor numbers and sales, which are easy to measure, it would be a good idea to think about the success of an e-formula in terms of the value of an e-formula and its offer of making life easier or more appealing for the customer than other formulas are able to. They note, that this is difficult to measure quantitively.

As far as we know, Gonsalves et al (1999) are the only ones to have carried out scientific research into the aims set by the e-formulas to support a customer life cycle and the degree to which these aims were achieved. Their measuring instrument consisted of items to measure the extent to which respondents expected their web sites to help their customers accomplish the associated customer life cycle stages when they made the decision to implement, and items to measure the extent to which respondents felt that their web sites had actually helped customers accomplish the stages. Gonsalves et al conclude, that e-formulas, though created with the aim of generating sales, are in actual fact primarily used by visitors as an information medium. They presuppose, that a subsequent purchase takes place through conventional formulas. Gonsalves et al do not delve into multi channelling and the effect of the Internet on offline sales.
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Research carried out by Price Waterhouse Coopers (2000) shows a clear distinction between the targets set by organisations and the actual measures taken to achieve those targets. For instance, the issue of ‘understanding user needs’ was seen as the most important ambition of Internet operations, yet the investment needed to achieve this aim are at the bottom of the pile of current Internet investments. Extending the service to the customer using online tools, and external electronic communication and online sales were most heavily invested in.

3.4.4 Success by contributing to the firm performance

The term firm performance implies the degree to which an e-formula is successful in achieving well-known business performance success measures. Our research ties in with that of strategy researchers who generally use economic measures for business performance, as opposed to organisation experts who use the broader concept of organisational effectiveness (Venkatraman and Ramanujam, 1987).

What successes can be generated in the area of firm performance using e-formulas? Shi and Salesky (1994) list two important possible benefits, starting with the potential of earning money by increasing revenue, for instance by selling more products and services to existing customers, or by attracting more customers. Peppers et al (1999) tie in with this approach by using measures such as more cross-selling, increased average customer tenure and increasing the expected subsequent purchases. Secondly, they suggest saving money by lowering operational costs and fixed costs.

Research carried out by Price Waterhouse Coopers (PWC 2000) also cites ‘making money by increasing revenue’ as an important e-formula success measures (69% of their respondents considered this an important measure of success) and ‘lowering the internal costs’ (68%). Mention is also made of building potential in order to remain successful in future by increasing customer loyalty (65%). They conclude, that the most important success measure is the degree to which the customer is served in a pleasant manner (79%). This last measure can be interpreted as the degree to which to customer is served in a pleasant manner for the duration of the life cycle (paragraph 3.4.3), but also as a measure of customer satisfaction. In general, Customer satisfaction is also an important success measure for organisations (see for instance Reichheld and Sasser (1990), Jones and Sasser (1995) and Grant and Schlesinger (1995)). Reichheld and Sasser even go so far as to argue that in the long-term, customer satisfaction reports a far more significant correlation with profit than other, widely used measures for competitive advantage. Peppers et al (1999) indicate, that customer satisfaction is a ‘soft’ rating, as such difficult to measure objectively, but that it is a standard which provides insights quickly.
It can be noted, that the shaping of the firm performance success measure can vary per type of formula. For instance, performance will be viewed differently in a non-profit formula than a commercial formula. This underpins our decision to classify e-formulas.

We can conclude this paragraph by stating that little is as yet known about the extent to which e-formulas actually contribute to the success of organisations. In addition, whenever success is discussed, it is usually from a phenomenological point of view or non-scientific descriptions of random occurrences. This illustrates the need to develop greater awareness and hypotheses in this area.

### 3.5 Summarising the conceptual framework

We are now able to summarise the conceptual framework as illustrated in Figure 7.

![Conceptual framework](image)

**Figure 7: Conceptual framework**

### 3.6 Reflecting on literature

This chapter has offered an anthology of research literature on strategy, as well as on the design and success of e-formulas. We shall now summarise and discuss the most important points.

For existing organisations, e-formulas are seen as a means to tap into and serve new (geographic) markets. No further insight is however granted into the successes that can be achieved with this. In addition, theory appears to show that the value propositions most suited to being offered via e-formulas are those that are tuned to the features of the
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Internet. An important place is occupied in this context by digital or partly digitised value propositions, based for instance on emotions, experiences and service provision, set up from the viewpoint of the customer’s needs. This implies, that innovating the value proposition is necessary for many existing providers.

Looking at research literature, we can deduce, that there are no clear solutions as to the pricing and quality perception e-formulas should deploy. Researchers do however make frequent mention of the possibility of individualising the offered value proposition in terms of price and quality. The term ‘stuck in the middle’ was introduced in the model for distinguishing values, where we indicated the divide in research literature: some researchers argue, that it isn’t viable to position yourself as a supplier of competitive prices, superior quality and individual pricing and quality, while others argue in favour of the assumption, that a combination of distinguishing values is indeed achievable and successful.

Research literature focuses heavily on the different types and combinations of revenue models to justify their investments in the e-formula, and also pays a great deal of attention to the different means of exchanges that play a part in the revenue model. As yet, little is known however about the success levels of the various approaches when it comes to recouping the costs of investments made in e-formulas.

We found research literature to heavily underpin the thesis that e-formulas are to be primarily exploited in an organisational network of small specialised parties, each with their own, sharply focused core competencies. This thesis is chiefly based on the transaction cost theory. Researchers additionally describe various ways in which the operations of the formula are to be organised. There appears to be little agreement as to what policy should be used.

We introduced the customer life cycle as a model to shape the customer interaction structure. We focused on different measures highlighted by researchers to support the different sections of the life cycle. For instance, the generating of traffic usingbannered storefronts and affiliation programmes were mentioned as successful ways to acquire new customers, while the (free) possibilities for traffic generation such as search engines and directories are considered seldom effective. An e-formula should be able to properly advise a visitor by offering information on various levels, whereby the different multimediainformation forms of text, illustrations and dynamic information are deployed synergetically to transfer information. According to research literature however, visitors are seldom sufficiently triggered to genuinely proceed to purchase a product or service, so that – even with the presence of an order functionality – the conversion from viewer to buyer remains illusive. Of great importance to stimulating conversion are increasing
confidence in the e-formula, the appeal of the product or service on offer (compared for instance with other formulas) and the proper supporting of the selection process. It appears that many e-formulas have not arranged their after sales and user support properly, thus missing out on the opportunity to build up a relationship with the visitors. This is a great pity, because research literature appears to underpin the enhancing of relationships as one of the most important potential strengths of e-formulas. Relationships should not so much be set up to offer economic stimuli (savings programmes), but rather to provide added value and better individual communication, which increase the emotional perception and involvement of regular and loyal customers. In order to achieve this, it is of vital importance to learn about the behaviour and interests of the visitors. From a technical point of view, this can be achieved via e-formulas, but in practice it appears to be rather a challenge to collect reliable information about the quality of the customer-supplier relationship on a regular basis, at low costs, and in an accessible manner.

Supporting as best as possible all sections of the life cycle is considered by researchers to be a prime factor for the e-formula’s success. The Conversion, Retention and Learn sections are generally considered to be of particular importance if organisations wish to succeed.

Although researchers have so far failed to concretise the term ‘successful’ for e-formulas, they do draw attention to new success potentials in the framework of the ‘new economy’. We can conclude from research literature, that the new economy is characterised by information products, which have no physical features, and as such require no material to multiply them, take up no space and as such do not exist in a specific location in time and space. Information products have the potential to be differentiated to specific groups or even individual customers at low marginal costs, while at the same time commanding a ‘premium price’. This differs distinctly from the trade in physical products. We concluded, that there are as yet few e-formulas with a truly digital value proposition. As such, there are at present hardly any e-formulas that truly operate in this new economy and might achieve extra success through this. The majority of the e-formulas are simply subject to the same economic law as conventional formulas.

E-formulas manage to achieve success in general measures, such as earning (more) money by selling or through traffic exploitation, saving money by working more efficiently, or creating the potential for future success by building up a circle of satisfied customers and a valuable organisation. However, we found research literature to be filled almost exclusively with phenomenological or non-scientific definitions of success. We found hardly any general theories about choices and how they relate to success, nor did we manage to collect information on the successes that are being achieved. Research
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literature did however appear to underpin the view, that e-formulas hardly ever measure their success.

We can conclude this chapter by stating that research literature, though focusing on most of the sections of the problem definition of our research, leaves a number of issues unanswered. A phenomenological approach is adopted for many of the sub-issues, often combined with a subjective description of random cases. Few concrete, founded statements are made concerning the correlation between strategic and design questions on the one hand, and the success of an e-formula on the other. This illustrates why it is important that our research develops greater understanding and hypotheses in this area.
4 RESEARCH SET-UP AND SUBSTANTIATION METHODOLOGY

This chapter is concerned with substantiating the way in which we carried out our research, the methods and techniques used, and the choices made. This enables us to demonstrate how we arrived at our conclusion, and also benefits repeat studies, one of the most important features of scientific research.

We shall begin by describing the empirical research aim, before going on to justify our decision to opt for an explorative quantitative survey (4.2). Next, we shall substantiate the use of a questionnaire (4.3), the population (4.4), the way in which data was collected (4.5) and the representativeness of the response (4.6). By setting up a classification for e-formulas (4.7), we can answer research question Q4, before going on to describe how we carried out our general analysis per class (4.8). Next, we shall describe the approach taken in defining archetypes for each class (4.9). We shall conclude the chapter by substantiating a number of other issues (4.10).

4.1 Empirical research aim

Our empirical research aim is to answer research questions Q5 to Q8, namely:

- What strategic and design choices are made per class of e-formulas? How does the archetypal success configuration of strategic and design choices manifest itself per class of e-formulas?

- Does a greater degree of fit with the archetypal success configurations correlate to a higher degree of success?

- What hypotheses can be drawn up for the correlation between strategy and design choices, and success?

4.2 Substantiating explorative quantitative survey

Judging by the preceding two chapters, there appears to be a need for greater understanding for the strategic and design choices that can be made for e-formulas, and
the degree to which these choices relate to success. As yet, precious little well-founded research has been carried out into this area, with phenomenological articles appearing to make up the bulk of research literature. This means that, although there are as yet no accepted theories that can be tested, it is possible to draw up ‘sensitising concepts’ (Doorewaard and Verschuren, 1999). This is reflected in our central research question, which focuses mainly on the search for the definition of, and correlation between, the concepts of strategy, design and success. De Groot (1975) poses, that an explorative research is the obvious method to use in this respect.

Explorative research can be characterised as a hybrid between a ‘descriptive’ and ‘verifying’ research. As it’s still early days, it’s hard to adopt an existing theory, and consequently formulate clear hypotheses. However, the researcher is able to outline a number of concepts, i.e. the ‘sensitising concepts’ of Doorewaard and Verschuren. This means that, in the spirit of the times and using the scientific knowledge available to us, explorative research relating to the strategy and design of e-formulas is a usable and useful approach.

We have opted for a survey-based approach, as this is highly suited to explorative research (De Groot (1975), Baarda and de Goede, 1995). Surveys involve collecting data from a large number of research units through systematic questioning or observation. This usually comprises a large number of features.

Survey-based research can have a qualitative and quantitative set-up, and be both structured and unstructured. According to Baarda and De Goede, qualitative unstructured data collection is especially suitable if the researcher knows little or nothing about a topic, as it is a good way to get to know the problem domain and on the basis of this draw up the sensitising concepts. Baarda and De Goede point out, that structured quantitative data collection is the obvious choice if you know what information you would like to collect and the answers you can expect. When carrying out our research, we had no scientific information and framework at our disposal, but did have extensive professional knowledge and clear ideas on the issues relevant to this field of study. In addition, we carried out a preliminary research first in order to get to know the field better (see for example Jansen et al, 2000). That is why we have used a quantitative form of data collection that was primarily structured but with a few open questions to offer room for additional information.

Our research approach ties in with that of Poon and Swatman (1999), who also opted for an explorative quantitative survey and justified their choice by referring to Galliers (1991), who believes that this approach is ideal for managing large sample sizes and a large number of variables at the same time. Incidentally, Poon and Swatman eventually
turned their research into a longitudinal one, by carrying out a number of qualitative in-depth case researches after their first explorative survey, before subsequently concluding their research with another quantitative survey. We would recommend that other researchers take these steps.

4.3 Substantiating questionnaire

The questionnaire was formulated by interpreting the research literature, as described in chapter 3. The questions are enclosed as appendix 11.3. The questionnaire was originally drawn up in Dutch and translated into English by a native English speaker from a reputable translation agency. This English questionnaire was tested in a pilot group of five potential respondents from the target group to verify that the questionnaire was comprehensible and well structured, as well as to get an indication of the answering time (conveyed to all the respondents in advance). As it turned out, only a few small phrases needed to be altered in the questionnaire. The pilot group consisted solely of native Dutch speakers who checked the English questionnaire. The use of English is a risky business in international research, as not all countries have a solid grasp of the English language. We therefore decided to draw up a glossary of terms relating to all core concepts of the questionnaire, which served as an online help function and could be retrieved from the online survey.

Following in the footsteps of Gonsalves et al (1999), we have formulated most of the questions as the respondent’s perception, making use of the five-point Likert scales. The labels in the scales relating to the perceptions are derived from Poon and Swatman (1999).

As regards the questions concerning the contributions made by the e-formula to the firm performance, we asked the respondents to what extent they believe that the e-formula contributes to the success of the underlying organisation(s). We decided to opt for this approach because, as stated in paragraph 3.4, Gonsalves et al (1999), Price Waterhouse Coopers (PWC 2000) and Larsen and Bloniarz (2000) show, that many e-formulas, for a variety of reasons, have no figures at hand about their success. Given the fact that we are using this research to arrive at hypotheses, this subjective approach is justified.

4.4 Substantiating the population

The aim of our research is to enhance our understanding of the correlation between the strategic and design choices of an e-formula and success. We have decided not to confine our research to a specific group of e-formulas, but to a broad, diverse population to collect the most varied data possible. Verschuren (1986) points out that this approach is
especially suited to explorative research when trying to paint a broader picture. Amit and Zott (2001) also incorporated an international, wide scope into their research, believing that this not only reflects the decreasing importance of geographic boundaries in virtual markets, but also strengthens theory development in the current research state on e-formulas: “Theory building on value creation in e-business from inductive case studies is less idiosyncratic if one allows for cases from different economic environments”. That is why in principle we have chosen as our population all Internet e-formulas (we shall narrow this down at a later stage for practical reasons). We can create greater depth by dividing the population in the analysis stage into classes of e-formulas, as described in paragraph 4.7.

This research emphasises the market side of an organisation, where we examine e-formulas aimed at consumers as well as those targeting business clients. Observers occasionally opine, that the business market is especially interesting, because this is where big profits can be made quickly. Strikwerda (2000) however believes it to have disadvantages, in that the business to business e-formulas optimise many (interorganisational) business processes that fit in with old markets yet not necessarily new markets, where the dynamics of new consumer preferences, products and services are important.

This means that our research population shall in principle be constructed from all e-formulas in the world. From a practical point of view however, it isn’t possible to carry out a random sample survey using all e-formulas. Firstly, the e-formula is a new concept without a clear, commonly accepted definition, i.e. there is no index incorporating all the e-formulas. We can solve this problem by selecting a website URL as a way of identifying the e-formula. However, due to the distributed organisation of the Internet architecture, there is no database in circulation that contains all the URLs of all the websites at any given moment in time. This is why we decided to narrow down our research population. The Fortune 500 might for instance have been a suitable candidate for research, as this has a fixed list. The problem with this is that the Internet is governed by many young or relatively small initiatives that do not appear in the Fortune 500. In the end, we decided to use a subset of all e-formulas that is composed as systematically as possible.

We ended up deploying a group of 360 students, all reading Information Management at the University of Amsterdam. They were asked to collect web URLs (acting as an identification of e-formulas). For reasons of organisation, the 360 students were divided into 18 lab groups of 20 students. Each lab group was assigned the task of collecting web addresses of approximately 1000 e-formulas of a certain type of activity. This classification of activities is an interpretation of the classification used by the Nederlandse
Kamer van Koophandel (Dutch Chambers of Commerce), adapted to the number of lab groups.

Each lab group was divided into 10 duos, creating a total of 180 duos. Within this lab group (and as such within this type of activity), each duo was given responsibility for collecting web addresses within a pre-determined geographical region. This classification into geographical regions was not done so that the differences between the countries of origin could be researched, but solely to approach e-formulas from all over the world. The clustering of countries and regions was done so that the student duos were given roughly the same amount of work. The country of origin will not play a further part in this research. One recommendation for further research would be to apply the outcome of our research to different regions.

The student duos made use of international search engines, region-specific search engines and industry-specific directories to compose their lists of URLs. This resulted in a collection of 16383 URLs of e-formulas and matching email addresses with which the e-formulas could be approached. Once all the double entries had been removed, 15753 unique URL’s remained.

This approach resembles the method used by Gonsalves et al (1999), who obtained e-mail addresses from well-known online malls. They concluded, that their population represented all the sites signed on to the malls. Following this line of reasoning, our population could represent all e-formulas that can be found using search engines and directories for their country and sector.

### 4.5 Data collection

The 15753 e-formulas were contacted via e-mail and asked to complete the online survey. A reminder was sent out a month later. Of the 15753 e-mails, 2614 were bounced by mail servers because the address no longer existed, leaving a total of 13139 delivered e-mails.

The email expressly requested that the survey be completed by the person responsible for the Internet strategy:

> "The survey should ideally be completed by the person responsible for your Internet strategy. If you are not the person responsible, we would appreciate it if you could forward this email to the appropriate person."

In response, we received (after removing all the double entries from the forms posted twice by mistake, a common error in online questionnaires) 1129 virtually completed questionnaires, in addition to a few hundred e-mails with personal questions in response to
our research, as well as messages stating that the person in question had neither the time nor inclination to take part. Taking this into account, the ultimate response rate was 1129, approximately 9% of the emails sent. This also bears similarities to Gonsalves et al (1999), who used a comparable approach for their research. They contacted 5124 organisations via e-mail, and received 472 completed questionnaires, thus also obtaining a response rate of 9%.

We decided not to send the questionnaire via email, but to use an online questionnaire in Lotus Notes that could be completed online using most web browsers. An important advantage of this method is that all responses are immediately fed into the database and respondents receive a relatively short e-mail referring to the online database, thus minimising the amount of inconvenience and irritation caused.

4.6 Representativeness of the response

We might now ask ourselves, whether we should comment solely on the 1129 e-formulas that were assessed, or whether we can apply the findings to the 13139 formulas originally contacted. Put another way: are the characteristics of the respondents different from those of the e-formulas we approached but who did not reply? We are also interested in finding out whether the 1129 respondents represent the total population of all e-formulas the world over.

In order to test the representativeness, we defined three groups of e-formulas:

- **Respondents**
  A randomly selected subset of 50 e-formulas from the 1129 respondents;

- **Non-response**
  A randomly selected subset of 50 e-formulas from the 13139 mailed e-formulas minus the 1129 respondents;

- **All the e-formulas in the world**
  A randomly selected subset of 50 e-formulas from the AltaVista web database.

The third group needs a little further explanation. As we highlighted in paragraph 4.4, it is not possible to choose a randomly selected subset of all e-formulas. However, in order to get the most random test population possible, we used the index database of AltaVista, one of the most heavily used Internet search engines. By filling in a completely random search phrase, i.e. the letter ‘n’, a relatively random result appeared. From this result, we selected the 1st, 11th, 21th etc URL. Of each URL, we left out all page extensions or subdirectory file extensions (for instance: /eng/index.html) in order to be left with a list of 50 homepages of e-formulas.
To test the representativness of these three groups, we created a measuring unit, with which an e-formula could be objectively characterised. The measuring unit defines a number of functions of which, by studying the web site of the e-formula, it is possible to objectively determine the functions present (see appendix 11.2.3). This concerns functions that support the various sections of the customer life cycle and a number of general functions. By counting the number of sections supported by each e-formula, an interval scale (0..9) is created, which can be compared for the e-formulas of the three groups. That way, we managed to fill in the measuring instrument for all three groups of e-formulas (De Goede, 2001).

The representativeness test is based on the theory, that in the event of the respondents group deviating from the non-response group, the support given by functions will also deviate. This is formulated in the following hypothesis:

H₀ The e-formulas of the group of respondents support the same number of functions as the non-response group

H₀ was tested using the Mann-Whitney U-test (Figure 8). We can conclude with a confidence level of 95%, that the e-formulas of the respondents offer the same functions as the non-response group. This means that it is justified to apply the research results to the mailed group of 13139 e-formulas.

Next, we tested whether the e-formulas of the respondents deviates from all the e-formulas in the world. This is formulated in the following hypothesis:

H₀ The e-formulas of the group of respondents support the same number of functions as a randomly selected e-formula

H₀ was again tested using the Mann-Whitney U-test (Figure 9). We can conclude with a confidence level of 95% that the e-formulas of the respondents offer the same functions as randomly selected e-formulas. This means that it is justified to apply the research results to the total population of all e-formulas.
4.7 Substantiating the classification of e-formulas

As stated in paragraph 2.5, the environments and settings in which e-formulas operate differ from one another, and that different avenues can therefore be explored for becoming a successful e-formula. To this end, we formulated research question Q4 to set up a classification for e-formulas, based on the assumption that an archetype can be set up for each class, i.e. a success pattern of strategic and design choices. This ties in with Doty and Glick (1984), who pose, that the creating of a theory based on archetypes provides the opportunity to incorporate equifinality. Equifinality is a feature of open systems and implies that an organisation can achieve the same result (what we call success) in different ways. The setting in which an organisation operates could for instance play a part in this. This is also known as the contingency approach.

Basing ourselves on Doty and Glick, we can pose, that an e-formula classification uses patterns of variables to determine the group to which an e-formula belongs. Next, the archetype describes which pattern of answers to strategic and design questions this e-formula should ideally follow.

The question we now have to answer is: what classes can we distinguish and what variables can we use to assign an e-formula to a certain class?

In principle, many classifications are possible, as are the variables that make up a classification, such as the size of the organisation, the age, the industry or country from which it operates. The strength of the archetypes lies in finding a number of highly distinctive criteria, thus leaving a small number of archetypes. The finding and selecting of these classification variables can be done using empirics, for example with a cluster analysis, or on the basis of theory and conceptual reasoning. In view of the fact that making typologies on the basis of empiricism is complex and largely subjective (Baarda and De Goede, 1995) we have opted for the theoretical and conceptual approach.

Research carried out by Gonsalves et al (1999) shows that the way in which the customer life cycle was supported by their selected contingency factor (‘industry’) differed little. As this leaves ‘industry’ out of the equation as a selection variable, we have selected as the selection variables the degree to which, and manner in which, an e-formula is aimed at...
generating revenues, and the e-formula brand. We will substantiate this choice in the following paragraphs.

4.7.1 Aimed at revenue

We noted in paragraph 3.4 that the shaping of the organisational success measure can vary per type of e-formula. For instance, a non-profit formula will view firm performance differently from a commercial formula. An e-formula aimed at stimulating conversion and transactions will probably design the e-formula differently compared to an organisation that is not. This turns being focussed on generating revenue into a candidate for a selection variable, as we can expect the choices to be made to differ considerably, thus creating different success patterns.

On the basis of the revenue model, described in paragraph 3.2.4, we decided to distinguish three ways of targeting revenue, namely:

- **Commerce**
  The group of e-formulas where the revenue model is based on generating sales, either online or offline, supplemented (if necessary) with other forms of revenue such as traffic exploitation, affiliation programmes or savings on executing processes;

- **Traffic exploitation**
  The group of e-formulas where the revenue model is based on exploiting the number and make-up of visitors by exploiting advertising space and affiliation programs, supplemented (if necessary) with savings on the execution of processes, but in any case not primarily focussed on generating sales;

- **Not aimed at revenue**
  The group of e-formulas where the revenue model is not based on generating revenues through sales or traffic exploitation, but through savings on processes or even without any form of revenue generation. This could for instance be e-formulas aimed at charitable causes and/or formulas that are financed with the aid of subsidies (incidentally, many non-profit organisations do appear to generate sales, for instance with items of merchandise such as t-shirts, signifying that non-profit organisations might actually be revenue-conscious).

The reasoning behind the three-part division is that, although Commerce and Traffic exploitation can indeed be compared on the basis of their firm performance – they are both aimed at generating revenue – the way in which they do so differs, i.e., the way in which they view the life cycle of customer contact moments differs. Traffic exploitation and e-formulas that are not aimed at revenue might view customer contact moments in the same way, but differ in their definition of firm performance because, unlike traffic exploitation (and commerce), e-formulas that are not aimed at revenue do not strive to generate revenue.
4.7.2 E-formula brand

We introduced the term e-formula to emphasise the importance of a clear, own position of a face to the customer. In paragraph 2.2, we posed that an organisation can have either one face to the customer, or many faces. Marketing uses the term ‘multibranding’ for this (Kottler, 1994): more than one face to the customer, each with its own brand and own position.

We can identify two types of brands:

- **Pure Internet brand e-formula**
  i.e. a new Internet brand that exists only for the Internet or a new Internet brand that has the potential to be extended to the bricks and mortar world;

- **E-formula with parallel use of brand in conventional world**
  i.e. an existing brand that is being extended to the Internet or a new Internet brand that is currently being extended to the bricks and mortar world.

It is conceivable, that a pure Internet brand e-formula will have different strategic and design choices than an e-formula operating under a parallel brand and as such by definition operates parallel to other, bricks and mortar formulas. This is because pure Internet brand e-formulas are not bound by the positioning of the parallel formulas and as such have more freedom of choice and can choose to take full advantage of the possibilities of the Internet. Success will also be viewed differently, because a pure Internet brand would have to draw its success entirely from the Internet. We can thus expect the archetypal success patterns for the two types of brands to differ from each other, making brand a suitable selection variable.

4.7.3 Six classes of e-formulas

We decided to develop the two variables into six classes of e-formulas, as shown in Figure 10.

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pure Internet Brand</td>
</tr>
<tr>
<td></td>
<td>Multi Channel Brand</td>
</tr>
<tr>
<td>Commerce</td>
<td>Sales-oriented pure Internet brand e-formula</td>
</tr>
<tr>
<td></td>
<td>Sales-oriented multi channel brand e-formula</td>
</tr>
<tr>
<td>Traffic Exploitation</td>
<td>Pure Internet brand e-formula aimed at traffic exploitation</td>
</tr>
<tr>
<td>Not aimed at generating revenues</td>
<td>Pure Internet brand e-formula not aimed at revenue</td>
</tr>
<tr>
<td></td>
<td>Multi channel brand e-formula not aimed at revenue</td>
</tr>
</tbody>
</table>

*Figure 10: Six classes of e-formulas*
In conclusion, it is of course possible to draw up more classifications than just those described above. However, we believe that the selected classification is sufficiently varied and as such will yield enough differences among the groups. This also ties in with the definition of the e-formula and discussions in our field of study, making this a justified choice.

4.7.4 Operationalising the classification

The next step involves operationalising the classification. The revenue model is based on the ‘sinvtoos, sinvtooc, sinvtot, sinvadv and sinvaff’ variables, which indicate the way in which investments in the e-formula are recouped (Appendix 11.3). Using the ‘obrand’ variable (the brand of the e-formula), we can determine whether a brand exists specifically for the Internet, or whether we are dealing with a multi channel brand.

4.7.5 Training set and Verification set

From the total database of respondents of 1129, we took a random subset of 66% as the basis for our analyses. We shall call this group of 66% the training set, comprising of 688 respondents. All general analyses (see paragraph 4.8), as well as the analyses to set up the archetypes (see paragraph 4.9), are carried out on this training set. The remaining 34% shall be used to test the archetypes, and shall be called the verification set.

Within the training set of 688 e-formulas, we split the e-formulas into six groups, resulting in the following number of respondents per group:

<table>
<thead>
<tr>
<th>Class of E-formula</th>
<th>Number of respondents in class</th>
<th>Percentage of training set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales-oriented multi channel brand e-formula</td>
<td>380</td>
<td>55%</td>
</tr>
<tr>
<td>Sales-oriented pure Internet brand e-formula</td>
<td>111</td>
<td>16%</td>
</tr>
<tr>
<td>Multi channel brand e-formula aimed at traffic exploitation</td>
<td>19</td>
<td>3%</td>
</tr>
<tr>
<td>Pure Internet brand e-formula aimed at traffic exploitation</td>
<td>19</td>
<td>3%</td>
</tr>
<tr>
<td>Multi channel brand e-formula not aimed at revenue</td>
<td>136</td>
<td>20%</td>
</tr>
<tr>
<td>Pure Internet brand e-formula not aimed at revenue</td>
<td>23</td>
<td>3%</td>
</tr>
</tbody>
</table>

Looking at the training set, we can see that the classes of e-formulas aimed at traffic exploitation, and the pure Internet brand class of e-formulas not aimed at revenue, are too small to be used as a basis for the analyses that should result in archetypes. For the benefit of our analyses, we shall therefore focus solely on the Commercial multi brand e-formulas (chapter 5), the Commercial pure Internet brand e-formulas (chapter 6) and on multi
channel brand e-formulas that are not aimed at revenue (chapter 7). Just for purposes of ease, we will call the latter also ‘non-commercial multi channel brand e-formulas’.

### 4.8 Substantiating the general analyses per class approach

In this paragraph, we shall discuss the approach of the general analyses that describe the features and the strategic and design choices per class of e-formula. In doing so, we will be able to answer research question Q5.

#### 4.8.1 Characterising respondents and e-formulas in the research

First of all, we ran a number of analyses to characterise the respondents and e-formulas contained in the research database. In our e-mails and the introductory text of the questionnaire, we requested that the survey be completed as much as possible by people in charge of the e-formula, such as marketing managers, webmasters or e-commerce managers. Most respondents appear to have heeded this request (Figure 12).

<table>
<thead>
<tr>
<th>Management</th>
<th>74%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management (no further specification)</td>
<td>44%</td>
</tr>
<tr>
<td>Marketing, sales and communication Manager</td>
<td>12%</td>
</tr>
<tr>
<td>IT Manager and CIO</td>
<td>6%</td>
</tr>
<tr>
<td>E-business Manager</td>
<td>5%</td>
</tr>
<tr>
<td>Project Manager or Consultant</td>
<td>4%</td>
</tr>
<tr>
<td>Business Development and R&amp;D Manager</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operations</th>
<th>26%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Master</td>
<td>11%</td>
</tr>
<tr>
<td>Other operational functions</td>
<td>8%</td>
</tr>
<tr>
<td>Office Manager, Assistants and secretaries</td>
<td>6%</td>
</tr>
<tr>
<td>Web Developer, Art Director or Content Editor</td>
<td>2%</td>
</tr>
</tbody>
</table>

Figure 12: Function of respondents

Figure 13, Figure 14 and Figure 15 have been incorporated to form a picture of the number of employees (converted to full-time employment equivalents) that manage, operate and maintain the e-formula, the sectors in which the e-formulas researched are operating, and the age of the e-formulas.
CHAPTER 4 - RESEARCH SET-UP AND SUBSTANTIATION METHODOLOGY

<table>
<thead>
<tr>
<th>Number of full time employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>small [0-1 fte]</td>
</tr>
<tr>
<td>medium [1-5 fte]</td>
</tr>
<tr>
<td>large [&gt;5 fte]</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

*Figure 13: Size of e-formulas*

The number of employees per e-formula ties in with the results from other research. Gonsalves et al (1999) conclude their research by stating that organisations employ an average of 4 people. Poon and Swatman (1999) found, that 70% of the responding organisations employed fewer than 5 people.

<table>
<thead>
<tr>
<th>The sector our e-formula operates in is best described as:</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Business services</td>
</tr>
<tr>
<td>Financial services</td>
</tr>
<tr>
<td>Education &amp; research</td>
</tr>
<tr>
<td>Trade and retail</td>
</tr>
<tr>
<td>Communities &amp; special-interest groups</td>
</tr>
<tr>
<td>Travel &amp; transport</td>
</tr>
<tr>
<td>[semi] Governmental services</td>
</tr>
<tr>
<td>Industry &amp; manufacturers</td>
</tr>
<tr>
<td>Content &amp; information creators</td>
</tr>
<tr>
<td>Hotel, Catering &amp; entertainment</td>
</tr>
<tr>
<td>Healthcare</td>
</tr>
<tr>
<td>Agriculture &amp; fisheries</td>
</tr>
<tr>
<td>Logistics services</td>
</tr>
<tr>
<td>ICT services</td>
</tr>
<tr>
<td>[Virtual] Market Places</td>
</tr>
<tr>
<td>Domestic services</td>
</tr>
<tr>
<td>Hire companies</td>
</tr>
<tr>
<td>ICT infrastructure providers</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

*Figure 14: Sectors in which the e-formulas operate*
4.8.2 Composition of constructs

Following the general characterisation of the respondents, the next step in our analysis is to verify the construction into research concepts (as described in chapter 3) of the questions contained in the questionnaire to their empirical validity. To this end, we first of all carried out a principal components analysis on all Likert scale questions relating to strategic choices and aims to support the customer life cycle. We can justify this approach, because the Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.87. The principal components analysis is aimed at assessing whether the concepts, as distinguished on the basis of theory as described in paragraph 3.2 and 3.3, tie in with the underlying factors in answering the questions concerning strategy and aims to support the life cycle. The principal components analysis was ran with “own value” (1), which means that the SPSS program keeps adding components that explain greater variance than an individual item (de Heus et al, 1995). As a result, we can distinguish ten components, which together explain 61% of the variance.

Because of its size, we have incorporated the results of the principal components analyse in the appendix, Figure 77. Assessing the component loads, we see that most of the theoretically distinctive terms resemble the results of the principal components analysis. Choices concerning the value proposition and market arena combinations score well on component level (8), so that this component tells us something about the growth strategies of Ansoff. The choices within the model for distinguishing values score on three different components (1, 7 and 9). From this, we can deduce that the strategic course of using individual price levels differs from the strategy of distinguishing prices in general or focusing in particular on (individual) quality. We can also see that the questions relating to the justifying of investments in the e-formula score well on two components (5 and 10). This outcome resembles the classification described in 4.7.1, supporting the choices we made there.
We also see that the aims of the e-formulas to support the customer life cycle can be characterised by four sections: a section (6), on which the “traffic and consider” aims score particularly well, a section on which conversion aims score well (3), a section (2) on which “fulfilment and use” aims score well, and the section (4) on which the “learn and retention” aims score well.

We can deduce from this that the phasing of the customer life cycle is reflected fairly accurately in the underlying factors of the respondents’ replies. This explains why we are interested in finding out whether the customer life cycle as a model also describes the underlying factors for the Likert scale questions relating to the design of the customer life cycle. To this end, we shall once again carry out a principal components analysis. This analysis may be carried out considering the Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0.92. The principal components analysis is once again produced with own value (1). The explained variance with eight factors is 58%. We can characterise the sections as follows: ‘Learn’, ‘Consider, Inspire and Conversion’, ‘Order and fulfil’, ‘Traffic via Internet means’, ‘Retention’, ‘Fulfil and Use’, ‘Traffic via Direct Mail and Direct e-mail’ and ‘Traffic via search engines’.

Looking at the results of both principal components analyses, we can deduce that the sections are similar to the conceptual framework as described in chapter 3. Given the fact that, in such cases, it is preferable to use theory-based constructs, we have decided to define constructs on the basis of theory. This is reflected in Figure 16 for the measures to support the customer life cycle. All these constructs appear to be sufficiently reliable (Cronbach Alpha >= .60), apart from the “measures to enable ordering” construct. We discovered that omitting the measure to “enable ordering in conventional formulas” leads to a rise in the Cronbach Alpha to .58. Seemingly, the measures to enable ordering differ too much to justify incorporating them into one construct. We have therefore decided to make a dichotomous construct for the measures to enable ordering, which indicates whether at least one of the order measures can be taken.

Another important combined construct is the ‘firm performance’ success measure used to define the archetypes. This comprises the contribution the e-formula offers to revenue, profit, productivity, market share, customer satisfaction and (shareholder) value of the underlying organisation(s) (Cronbach Alpha: .88). For non-commercial e-formulas not aimed at revenue, the success measure comprises productivity, customer satisfaction and the value of the underlying organisation(s) (Cronbach Alpha: .76).

Other composed constructs will be discussed in Figure 78 of the appendix.
4.8.3 Descriptive analyses
We went about answering research question Q5 per class of e-formula by producing frequency tables for all questions based on the concepts introduced in the literature discussion in paragraphs 3.2 and 3.3, and to single out noticeable points. In the frequency tables, we made consistent use of the ‘Valid Percent’ column of SPSS.

In addition, we assessed (for all questions and constructs) whether the frequencies differed significantly for e-formulas depending on the number of employees, whether the e-formulas provide a digital product that can be distributed and purchased digitally, and whether the e-formulas target business or consumers groups. Noticeable, significant differences were described.

In determining correlation, our research ties in with De Heus et al (1995) who pose, that we can simply view our Likert scales as interval scales (a superlative form of ordinal), because most statistical techniques are sufficiently robust to absorb possible margins in the answer categories.

4.9 Substantiating approach of defining archetypes per class
In order to be able to answer research questions Q6, Q7 and Q8 we must set up an archetype per class of e-formulas. We defined an archetype as being “a textbook configuration, consisting of a pattern of choices to strategic questions and design questions, which are related to each other, and which maximise success within the context of the surroundings”. Such an archetype can be derived from theory or from empirics (Van de Ven, 1985). In view of the fact that we observed in paragraph 3.6 that researchers...
as yet know little about the correlation between choices and success, we have in this research opted for an empirical deduction.

Our approach is to identify (per class of e-formulas) those strategic and design choices that are strongly related to success. These were identified in the training set, which consists of a randomly selected subset of two-thirds of 1129 cases (see paragraph 4.7.5). From these, we selected (per construct) the so-called remarkable choices, for example choices that had the strongest correlation with success. The combination of remarkable, successful choices were defined as a temporary hypothetical archetype, answering research question Q6. Next, we verified whether e-formulas of a particular class that have a better fit with this hypothetic archetype reported more success significantly more often than e-formulas with a lesser degree of fit. This was verified by counting the number of strategic and design choices of an e-formula that correspond with the hypothetic archetype. A low number implies a low fit, a high number indicates a firm fit. If a high degree of fit in the training set does indeed denote a high firm performance, we are dealing with a hypothetical archetype for the relevant class of e-formulas, meaning that we can answer research question Q7.

In order to ascertain whether it is interesting for subsequent researchers to test and highlight the hypothetical archetype further, we verified the hypothetical archetype on the verification set comprising the remaining third of the 1129 cases not belong to the randomly selected trainings set. This was done in two steps. First of all, the choices within the archetype were tested: do these choices also correlate to success in the verification set? Next, we tested whether e-formulas showing a higher degree of fit also recorded a higher level of success in the verification set compared with e-formulas with less fit. On the basis of these two tests, we can translate the hypothetic archetype to a (for this research definitive) description of the archetype for the relevant class of e-formulas.

4.10 Other substantiations

We could ask ourselves, why we are discussing the strategy of an e-formula, when it could be argued that not all of the e-formulas researched operate according to a clear strategy. As Heene (1995) points out, all managers make choices, consciously or unconsciously, explicitly or implicitly. He goes on to say that every organisation has a strategy, no matter how flawed its formulation or how badly thought out it may be. We support this view and thus believe that every e-formula has a strategy.

It can be noted that our research does not delve into the role played by interaction design in the success of e-formulas. Although various researchers (e.g. Hoque and Lohse (1999), Szymanski and Hise (2000)) indicate, that the success of electronic commerce and online
shopping depends on user interfaces and how people interact with computers, we have
decided to ignore this factor. Furthermore, in order to narrow down the scope of our
research, we have chosen not to research other factors that might potentially influence
success, such as management style or corporate culture, without wishing to imply that
these factors are irrelevant.

5 SUCCESS MODEL 1: SALES-ORIENTED MULTI CHANNEL BRAND E-FORMULAS

This chapter focuses on e-formulas that operate with a multi channel brand, and to a large extent justify their investments in the e-formula through sales via the e-formula and/or expressly stimulate sales in parallel formulas. Out of the training set of 66% of the 1200 e-formulas researched, 380 meet the criteria of a multi channel brand and a revenue model, in which selling plays an important part (see paragraph 4.7). References further on in this chapter to ‘the’ e-formula refer to this class of sales-oriented multi channel brand e-formulas.

This class of e-formulas can be characterised as follows:

Most important sectors
- business services (17%);
- trade and retail (10%);
- education and research (10%);
- financial services (10%).

Size
- 47% of the e-formulas employ up to one full time member of staff to maintain and operate the e-formula, while 36% have one to five employees covering this task, and 14% employ more than 5 full time employees.

Age

We shall begin by describing the strategy and design choices made by the 380 e-formulas, thereby answering research question Q5 for this class of e-formulas (Paragraphs 5.1 and 5.2). In paragraph 5.3, we shall discuss the effectiveness of the customer interaction infrastructure: to what extent is the e-formula able to achieve its aims of supporting the customer for the duration of the customer life cycle? Next, we shall describe in paragraph 5.4 those choices that report a significant correlation with the firm performance. This in turn will enable us in paragraph 5.5 to formulate the hypothetical archetype for the sales-oriented multi channel brand e-formulas. The generic nature of the hypothetical archetype will be verified in paragraph 5.6. We shall conclude this chapter by discussing this class of e-formulas.
5.1 Description of strategic choices

This paragraph discusses the strategic choices made by sales-oriented multi channel brand e-formulas (we shall discuss whether these choices are successful in paragraph 5.4).

5.1.1 Market arena and Value proposition

The geographical market focus of sales-oriented multi channel brand e-formulas is split roughly 50-50. 53% of the formulas have no geographical market focus and try to serve the entire world, while 47% are aimed at a restricted geographical region such as a country or language area. 26% of the e-formulas serve the business-to-business market, while 29% are aimed at consumers, and 45% serve both businesses and consumers.

Most e-formulas offer physical products; 22% deliver products or services that can be distributed digitally. The longer e-formulas remain active, the more they offer a digital value proposition ($r= .26$, $p< .001$).

The growth strategy model of Ansoff (1965) inspires us to create a multi channelling matrix to indicate whether the e-formula provides the same value proposition (products and services) and serves the same market arena as other formulas. We have christened this matrix, shown in Figure 17, the @soff matrix.

![Figure 17: @soff Matrix](image)

When we look at the matrix, we see that most e-formulas choose to continue pursuing their strategy and use the e-formulas to sell the same value proposition in the same market arena as they would using other formulas. And when e-formulas do choose to innovate, it is almost always in the area of market innovation. This ties in with our theoretical findings of paragraph 3.2.1. The value proposition is scarcely adapted to the potentials and limitations of the Internet, as research literature propagated (paragraph 3.2.2).
It would be interesting to find out whether physical products are subject to different innovation(s) than digital products. In relative terms, we see that product innovation is more prevalent in digital products than in physical products ($r=.19, p<.001$), but that this correlation does not apply to market innovation. We can therefore support the opinions expressed in paragraph 3.2.2, that innovation of the value propositions goes hand in hand with the digitising of the value proposition. We have however not researched, whether this is a causal connection, and as such are unable to comment on whether a digital value proposition results in greater innovation, or whether innovation leads to (greater) digitalisation. This would be an interesting proposition for further research.

One would expect e-formulas that offer digital products and services to be better able to take part in market innovation, as they are not subject to physical restrictions in terms of distribution. This assumption is not supported however, because digital products are not offered to new markets more often than physical products. Furthermore, there is no correlation between digital products and the desire to serve a worldwide market ($r=.9, p=.1$).

There is however a slight correlation ($r=.13, p<.01$) between market innovation and a geographical focus to serve the entire world rather than a confined region, from which we can deduce that the term market innovation occasionally implies that other geographical areas are served.

### 5.1.2 Distinguishing Value

Like Gonsalves et al (1999), we can deduce from our research that e-formulas are not positioned in the market with one distinguishing value, but rather in combination with other distinguishing values (Figure 18). This is at odds with the recommendation to focus on one distinguishing value in order to prevent getting ‘stuck in the middle’, as described in paragraph 3.2.3. Providers are very unlikely to distinguish themselves using general pricing, and are more likely to opt for individual pricing. The values most frequently used to distinguish oneself from the competition are quality and the individualisation of quality.
The distinguishing value of the e-formula is usually comparable to that of its counterpart conventional formula. Compared to the parallel formulas, the e-formula is sometimes focused a little less sharply, and at other times a little more sharply, on one of the four distinguishing values (Figure 19). Two things are noticeable here: e-formulas are slightly less often positioned in the market arena with a high quality proposition compared to conventional formulas. Conversely, individual pricing is more prevalent among e-formulas than their counterpart formulas: 24% of the e-formulas deploy individual pricing levels, while the counterpart formulas do not.
5.1.3 Revenue model

Three quarters of the sales-oriented multi channel brand e-formulas cite greater efficiency in their processes as the most important reason for justifying investments in the e-formula. In addition, two-thirds of the e-formulas justify their investments through stimulating and selling in the physical formulas. This ties in with the belief, that the Internet is still primarily regarded as a marketing communication medium (paragraph 3.3). 40% of the e-formulas justify their investments through online sales. Figure 20 offers a summary of these issues.

<table>
<thead>
<tr>
<th>Justify their investments mainly through</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater efficiency in primary, marketing and sales processes</td>
<td>74%</td>
</tr>
<tr>
<td>Increased sales in physical formulas</td>
<td>65%</td>
</tr>
<tr>
<td>Increased value of the organisation (i.e. shareholder value)</td>
<td>56%</td>
</tr>
<tr>
<td>Cannibalising effect on offline sales by stimulating customers to buy online</td>
<td>44%</td>
</tr>
<tr>
<td>Online sales</td>
<td>40%</td>
</tr>
<tr>
<td>Exploiting advertising space and affiliation programmes</td>
<td>16%</td>
</tr>
</tbody>
</table>

*Figure 20: Revenue models*

As we found in our theoretical research (paragraph 3.2.4), e-formulas tend to combine several revenue models. In addition, e-formulas frequently appear to cannibalise physical channels; 44% of the e-formulas cite this as an important way to justify their investments. This ties in with the advice given by Evans and Wurster (1999), who pose that organisations should not be afraid to cannibalise in a multi channel environment.

5.1.4 Organisational form and Channel positioning

In our population, most of the sales-oriented multi channel brand e-formulas are exploited by existing organisations (82%), i.e. organisations that existed before the e-formula was started up. Slightly fewer that 9% are spin-offs of existing organisations. Around 10% are new start-ups that have developed channels other than the Internet or entered into collaborations with other parties to enable multi channelling.

How do the e-formulas deal with potential channel conflicts with their indirect dealer or sales channel? Two-thirds of the respondents witness no change in the collaboration with their (indirect) dealer or sales channel as a result of the Internet, or have no indirect dealer or sales channel. In 14% of the cases, sales processes are streamlined with the customer’s purchasing process. A further 14% of the respondents cite the Internet as the main reason for intensifying their collaboration with the sales channel to offer a better service to the customer. In 7% of the cases, respondents choose to enter into a channel conflict by
interacting directly with the end customer, thus skipping one or more links in the channel (disintermediation). These figures differ significantly for formulas aimed at businesses compared to those that target consumers (p=.001). For instance, 15% of the consumer-oriented e-formulas are directly competing with their conventional sales channel, compared to 2% of the business e-formulas. We can deduce from this that consumer-focused e-formulas are more likely to cause channel changes than business-to-business e-formulas.

Collaborating with third parties to offer a broader service to the customer than would have been possible without this collaboration is cited by 26% of the formulas. A slightly smaller group of 22% of the formulas collaborates with others to build a communal knowledge base of the customers. Financial benefits are cited by 10% of the formulas as a reason for entering into alliances (incidentally, these three reasons for alliances often appear in combination with one another).

We can conclude this paragraph by posing that e-formulas opt more frequently for the collaborative model than the conflict model, although intensive collaborations are found in only a quarter of the e-formulas. The theories described in paragraph 3.2.6 (relating to more intensive collaborations) are also reflected in reality.

5.2 Description of design choices

This paragraph is concerned with describing the choices made by sales-oriented multi channel brand e-formulas when designing the e-formula (we shall make a pronouncement on whether these choices are successful in paragraph 5.4).

Traffic

Of all the potential ways we researched for generating traffic, e-formulas appear to rely most heavily on search engines and the web’s equivalent of the yellow pages. Affiliation programmes or syndication, of which we stated in paragraph 3.3.3 that they suit the networked nature of the Internet when it comes to generating traffic, are used sparingly as a tool for generating traffic (see Figure 21).
Which of the following measures were mainly used to increase traffic to your e-formula:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcing the web address to appropriate web yellow pages and search engines</td>
<td>77%</td>
</tr>
<tr>
<td>Preparing the homepage [or other appropriate pages] in such a way that they can be better indexed by search engines and robots</td>
<td>76%</td>
</tr>
<tr>
<td>Direct mail via email to potential or current visitors</td>
<td>45%</td>
</tr>
<tr>
<td>Conventional direct mail to potential or current visitors</td>
<td>44%</td>
</tr>
<tr>
<td>Adverts and commercials in mass media like radio, television and print</td>
<td>33%</td>
</tr>
<tr>
<td>Advertising on the web, like banners or link exchanges</td>
<td>33%</td>
</tr>
<tr>
<td>Offering sponsored content or infomercials on appropriate [community] sites</td>
<td>22%</td>
</tr>
<tr>
<td>Participating in online discussions and news groups that the target group might join</td>
<td>22%</td>
</tr>
<tr>
<td>An affiliation program, so third parties can place entries to your e-formula [in exchange for some kind of compensation]</td>
<td>21%</td>
</tr>
</tbody>
</table>

Figure 21: Measures to increase traffic

Consider & inspire
Almost all e-formulas (88%) believe that their site is designed in such a way, that visitors will have no problems browsing around and getting an impression of the products and services on offer. Slightly fewer that half the formulas (49%) make use of intelligent interactive tools to guide the visitor in his search and orientation process. One in three formulas helps the visitor configure or specify his individual demands and wishes for a (customised) product or service.

Conversion
As we pointed out in paragraph 3.3.5, there is at present little support in place to entice the visitors to purchase a product or service. The most common practice is to take special (and clearly visible) measures to increase a visitor’s trust in the formula. 41% of e-formulas take this design approach, which includes quality seals or secure servers. 37% operate according to a (clearly communicated) privacy regulation. A third of the e-formulas provide special treatment for first time visitors to help them on their way, while 24% try to increase revenue and achieve additional conversion by clearly focusing the visitor’s attention on additional cross-selling products and services. 22% endeavour to make the life of their regular customers easier by simplifying the purchasing or repeat-purchasing process (e.g. standard shopping lists, or – for business accounts – the possibility of defining in one go all the products needed to design a workplace, so that all the required items can be ordered with one touch of the button for x number of workplaces).

Ordering
Approximately 39% of the e-formulas enable customers to order products and services online. 26% of the e-formulas stimulate customers to purchase from the e-formula’s physical counterpart(s). Over 21% provide a link to online outlets of third parties, such as partners, dealers and intermediaries.
Fulfil
19% of the e-formulas provide tracking and tracing information for their customers. 14% of the e-formulas are prepared to accept returned goods as part of their standard procedure.

Use
One in three e-formulas offers online user support, for instance online manuals or an online helpdesk. 39% of the e-formulas handle visitor complaints in accordance with generally accepted guidelines.

Retention
In order to build up a relationship with a visitor, it is important to ensure that the individual visitor can be identified (see paragraph 3.3.9). A quarter of the e-formulas are able to identify whether someone is a first-time visitor or a regular visitor. Here, our comment on cookies once again rings true: although cookies allow us to see whether an e-formula has been visited before from a certain computer, we can only identify the visitor by using logon codes. We expect that most respondents regard cookies as a sufficient tool to answer positively to our question, whether they are able to identify repeat visitors.

An identical number of e-formulas (24%) are able to check whether a visitor is an anonymous visitor or a (well-known) contact. Relationships can be enhanced by making (repeat) agreements with visitors to meet one another (again) at a certain time. 23% of the e-formulas stimulate the making of these types of agreements. Only 11% of the e-formulas operate a loyalty programme.

Learn
About a quarter of the e-formulas use the e-formula to collect information on their visitors. For instance, 25% of the formulas collect information using online questionnaires, 23% collect information on surfing behaviour, a further 23% on ordering behaviour, while 26% combine the information collected online with information from other (customer) information systems. 23% collect information about customer satisfaction with products and services, while 18% collect information on how satisfied the customer is with the e-formula. 13% enable visitors to exchange information with one another online, which in turn enables the e-formula to obtain further information about its visitors.

Combinations of sections of the customer life cycle
By and large, the customer life cycle is partially supported, i.e. the e-formula mainly supports combinations of sections. There appears to be no single most common combination. In our group of 380 sales-oriented multi channel brand e-formulas, a total of
106 configurations of customer life cycle support can be identified. The most common combination supports the Consider & Inspire and Traffic sections of the life cycle, although even this combination is only present in 7% of the e-formulas. The ten most common combinations only cover 41% of the formulas. These combinations incorporate both minimal support and extensive support. The large number of combinations indicates that there are big differences in the way in which the e-formulas support the customer life cycle. We can deduce from this that e-formulas distinguish themselves from other e-formulas in terms of how they support the customer life cycle.

Another way of presenting the design of the e-formulas is to depict as a box plot the extent to which measures are taken to support the sections of the life cycle (Figure 22). The horizontal axe represents the different sections of the life cycle, the vertical axe the degree of support (1 = no measures to support this section, 5 = all researched measures to support this section).

![Box plot showing distribution of support for different sections of the life cycle with labels for N = 372 for each section: Traffic, Conversion, Fulfilment, Use, Consider & Inspire, Traffic, and Learn.]

*Figure 22: Distribution of support Customer Life Cycle*
Online ordering, either direct or through a hyperlink to a third-party online shop, has not been incorporated in the box plot, as we are dealing with dichotomous variables (paragraph 4.8.2), whose distribution isn’t relevant.

**Differences between e-formulas**

It would be interesting to consider for a moment whether e-formulas that provide digital products and services differ from those that offer physical products and services in terms of the measures they take. For almost all sections of the customer life cycle, the e-formulas with a digital value proposition take more measures, except in the Traffic and Consider & Inspire sections, where there are no significant differences. We can draw the same conclusion with regard to the size of the e-formula. In general, e-formulas with more employees take more measures than e-formulas with fewer employees, except in the Traffic and Consider & Inspire sections, where there are no significant differences.

In addition, we found no significant differences between e-formulas aimed at business visitors and e-formulas aimed at consumers in terms of the measures taken, or between e-formulas that have been active for a longer period of time and e-formulas that were recently started up.

### 5.3 Effectiveness of the customer interaction structure

Having discussed the strategic and design choices made by e-formulas, we can now focus our attention on the effectiveness of the e-formulas, in particular the effectiveness of the customer interaction structure.

Effectiveness literally means the degree to which objectives are achieved. Figure 23 shows how effective the e-formulas are in supporting the customer life cycle. The second column represents the percentage of e-formula that manage to achieve their aims of supporting sections of the life cycle. Columns three to six break down the achieving of objectives into e-formulas that cited support as an important section of the life cycle and e-formulas that indicated that support is not an objective.

We can deduce from Figure 23, that e-formulas appear to be the most effective in informing their visitors in a simple and all-encompassing way of the products and services on offer; 85% of the e-formulas achieve the Consider & Inspire objectives. Two thirds of the formulas manage to draw visitors to the e-formula.
CHAPTER 5 - SUCCESS MODEL 1: SALES-ORIENTED MULTI CHANNEL BRAND E-FORMULAS

**Effectiveness of supporting the Customer Life Cycle**

<table>
<thead>
<tr>
<th>Objective</th>
<th>General</th>
<th>Achieved objective</th>
<th>Unachieved objective</th>
<th>Achieved but not an objective</th>
<th>Neither achieved nor objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve Traffic objectives</td>
<td>66%</td>
<td>64%</td>
<td>24%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Achieve Consider &amp; Inspire objectives</td>
<td>85%</td>
<td>86%</td>
<td>13%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Achieve Conversion objectives</td>
<td>20%</td>
<td>22%</td>
<td>23%</td>
<td>1%</td>
<td>55%</td>
</tr>
<tr>
<td>Achieve Fulfil objectives</td>
<td>25%</td>
<td>25%</td>
<td>16%</td>
<td>3%</td>
<td>56%</td>
</tr>
<tr>
<td>Achieve Use objectives</td>
<td>32%</td>
<td>35%</td>
<td>14%</td>
<td>2%</td>
<td>49%</td>
</tr>
<tr>
<td>Achieve Retention objectives</td>
<td>22%</td>
<td>26%</td>
<td>26%</td>
<td>0%</td>
<td>48%</td>
</tr>
<tr>
<td>Achieve Learn objectives</td>
<td>36%</td>
<td>36%</td>
<td>23%</td>
<td>2%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Figure 23: Effectiveness of supporting the Customer Life Cycle

The far right column of Figure 23 incorporates an interesting finding: here, we see that between 39% and 56% of the e-formulas have not (yet) made it their aim to support other sections of the life cycle other than Traffic and Consider & Inspire (and as a result to not achieve these objectives). From this, we can deduce that both the ambition and the achieved support of customer interaction are still limited in the e-formulas studied.

Figure 24: Percent of e-formulas, which achieved objectives in indicated number of CLC sections

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Figure 24 represents the number of sections of the life cycle where aims are achieved. We can see that almost three quarters of the e-formulas achieve objectives in zero, one or two sections of the life cycle, and that only 7% manage to fulfil five or more sections.

This leads us to question, whether there is a correlation between the objectives set, the measures taken and the objectives achieved. Figure 25 gives a graphic representation of this correlation, where for convenience of comparison we have divided the number of sections of the life cycle for which objectives are set and/or met into three separate classes.

![Figure 25: Objectives and measures versus achieved objectives](image)

The more an e-formula sets itself the task of supporting more sections of the life cycle (we could call this a 'high ambition'), the more one would expect it to take measures. This only appears to be partially the case however. By and large, the measures taken by e-formulas lag behind the objectives. Of the ‘high ambition’ e-formulas (the three boxes
on the far-right in Figure 25), only 16% (the box on the far-right) take measures to genuinely support a large section of the customer life cycle. This 16% appears, within this group of ‘high ambition’ e-formulas, to be able to fulfil a significantly higher number of objectives ($r=.37$, $p=.001$) than ‘high ambition’ e-formulas taking fewer measures. We can conclude that the effectiveness of the e-formula increases when ambitions are raised and sufficient measures are taken to achieve these objectives.

5.4 Variables correlating to firm performance

In order to be able to formulate a hypothetical archetype, we shall in this paragraph set out all the strategic and design choices available to an e-formula against the success measure, which we have named firm performance (paragraph 4.8.2), thus creating an insight into the choices that might be of importance for formulating the archetype. As well as using the term ‘firm performance’ we shall also deploy the term ‘success’. These terms are used as synonyms in the framework of this chapter.

Market Arena and Value proposition

E-formulas that offer digital products or services appear to report a high firm performance significantly more often ($r=.29$, $p<.001$) than e-formulas delivering physical products or services. There is no marked difference between business-to-business and consumer-oriented formulas. Likewise, there is no difference in the level of success reported by e-formulas that are focused on a restricted geographical region and e-formulas that serve the entire world.

In terms of innovating the value proposition and the market arena, as depicted earlier in the @soff matrix, innovation of the value proposition appears to show a correlation with a high firm performance ($r=.16$, $p=.003$). As illustrated in Figure 26, there is no correlation between market innovation and success. As such, it appears that digital value proposition and product innovation are both not only related to one another (as highlighted in paragraph 5.1.1, $r=.19$, $p<.001$), but also to success. This could imply that innovating the value proposition by (further) digitising is a successful strategic choice. However, in view of the fact that we have not researched the sequence in these choices, we can only define this as a hypothesis for further research.

Distinguishing value

E-formulas that distinguish themselves from parallel (conventional) formulas using lower pricing report a high firm performance more frequently ($r=.16$, $p=.002$). This supports our statements in paragraph 3.2.3 that lower price levels (at least in these early stages of commercial exploitation of the Internet) generate more success. The other distinguishing values compared to parallel formulas report no correlation with firm performance.
E-formulas that have a clear distinguishing value compared to their competitors always report a slight correlation with firm performance. Distinguishing values can encompass lower prices ($r=0.14$, $p=0.007$), better quality ($r=0.15$, $p=0.003$), individual offers and special promotions ($r=0.17$, $p=0.001$) or individual quality ($r=0.17$, $p=0.001$). Apart from the individual correlation between these distinguishing values and success, it is interesting to look at how the distinguishing values are configured. As Figure 27 shows, there isn’t a single distinguishing value configuration that clearly reports the highest correlation with firm performance. Due to the relatively large number of configurations that have a low frequency of occurrence, it isn’t possible to carry out a $\chi^2$ test on the configurations of distinguishing values versus firm performance, even if these were to be divided into three classes, as two-thirds of the cells would have an expected frequency lower than five, meaning that no $\chi^2$ test can be carried out (de Heus et al, 1995). It is however possible to calculate a correlation by counting the number of distinguishing values used by an e-formula to profile himself in the market (creating an interval scale) and comparing this

![Figure 26: Innovation versus Firm Performance](image-url)
with the firm performance. Here, there appears to be a correlation \((r=.17, p=.001)\). We can deduce from this that an e-formula should be striving to excel in all four of the distinguishing values. We could call this ‘overall excellence’. Here, the sales-oriented multi channel e-formulas don’t appear to be bothered about being ‘stuck in the middle’, as highlighted in paragraph 3.2.3. It therefore seems sensible for e-formulas to opt for this overall excellence (as described in paragraph 5.1.2).

**Figure 27: Distinguishing value versus Firm Performance**

**Revenue Model**

Justifying investments by stimulating offline sales has a slightly negative correlation \((r=-.14, p<.01)\) with firm performance, from which we can deduce that it would be unwise to attempt recovering costs from investments in an e-formula by deploying the e-formula to increase the sales of parallel (conventional) formulas. This is an interesting finding, as we highlighted in paragraph 5.1.3 that two-thirds of the e-formulas cite this as one of the ways to justify investments. Justifying investments through traffic exploitation shows a slight correlation with success \((r=.13, p=.012)\). The other forms of revenue generation,
such as improving efficiency, online sales in general and cannibalising online sales, all have a significant correlation with success, from which we can deduce that these (possibly in combination with one another) are viable forms of generating revenue. Among other things, we can deduce from this hypotheses for further research, i.e. that multi channel e-formulas should consciously choose cannibalise sales (to a certain extent).

**Organisational form and channel positioning**

As we remarked in our theoretical outline in paragraph 3.2.5, empiricism also suggests that an intensive collaboration with partners translates to a high firm performance. Collaboration for financial reasons ($r=.35$, $p<.001$) showed the strongest correlation. Collaborating in order to furnish the customer with a wider offering and collaborating to build a communal knowledge base of the visitor have a slightly lower correlation ($r=.28$, $p<.001$).

![Figure 28: Cooperation with indirect (dealer) channel versus Firm Performance](image-url)
The graphic representation in Figure 28 shows, that it would be wise to reconsider the relationship with an indirect sales or dealer channel as a result of the Internet. E-formulas who do not change the way in which they collaborate with the indirect sales or dealer channel, and e-formulas that partner with their indirect sales or dealer channel without the Internet playing a part, report a lower correlation with firm performance compared to e-formulas that streamline the processes with the indirect sales or dealer channel, partner with the indirect sales or dealer channel and e-formulas that choose to start competing with the indirect sales or dealer channel (disintermediation) ($\chi^2$: Cramers $V=.17$, $p=.015$).

<table>
<thead>
<tr>
<th>Combined measures versus Firm Performance</th>
<th>$r$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures to increase Traffic</td>
<td>.29</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to support Consider &amp; Inspire</td>
<td>.20</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to stimulate Conversion</td>
<td>.36</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to support Fulfilment</td>
<td>.28</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to support Use</td>
<td>.23</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to stimulate Retention</td>
<td>.28</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to Learn</td>
<td>.32</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Figure 29: Combined measures versus Firm Performance*

**Design**

We described in paragraph 5.2 the measures taken by e-formulas to design the customer interaction structure. In order to establish which of these measures correlate to a high firm performance, we have set out the measures per section of the customer life cycle against firm performance (Figure 29). Measures always appear to report a correlation, from which we can deduce that “there is nobility in labour”, even in the electronic world. Measures to support the Conversion and Learn sections of the life cycle show the strongest correlation with a high firm performance. A lower correlation is recorded by the Consider & Inspire sections of the e-formula.

Most e-formulas choose to support various sections of the life cycle. Supporting the entire customer life cycle as best as possible using various measures reports a clear correlation with firm performance. As more sections of the life cycle are supported, a higher firm performance ($r=.29$, $p<.001$) is registered. If we collate the number of supporting sections into three groups, the correlation has the following graphic representation (Figure 30).
Effectiveness

In paragraph 3.4.3, we wrote that the effectiveness of the customer interaction could be seen as an intermediate success variable. That is why we decided to assess whether there is a correlation between effectiveness and firm performance. We can deduce from Figure 31 that there is indeed a clear correlation. However, from a statistical point of view, correlation tells us nothing about sequence, so that we can only assume that effectiveness of customer interaction can indeed be seen as an intermediate success variable.

Figure 32 sets out the objectives set and the measures taken against firm performance. Both the ambition \((r=.31, \ p<0.000)\) and the number of sections for which measures are taken \((r=.29, \ p<0.001)\) show a positive correlation with firm performance. A high ambition, coupled with a strong support of the life cycle with measures (the far-right box) appear to report a correlation with high firm performance compared to e-formulas with a lower ambition or that take fewer measures \((r=.14, \ p=.006, \ \text{the other boxes})\).
Correlations achieved support Customer Live Cycle and Firm Performance

<table>
<thead>
<tr>
<th>Correlation</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieved increased Traffic</td>
<td>0.35</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved support for Consider &amp; Inspire</td>
<td>0.32</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved Conversion</td>
<td>0.33</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved support for Fulfillment</td>
<td>0.34</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved support for Use</td>
<td>0.35</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved Retention</td>
<td>0.40</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved to Learn</td>
<td>0.33</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved number of supported CLC sections</td>
<td>0.38</td>
<td>.000</td>
</tr>
</tbody>
</table>

Figure 31: Achieved objectives versus Firm Performance

We can conclude from Figure 32 that e-formulas with no objectives and who fail to sufficiently furnish the customer interaction structure with measures are less successful.

Figure 32: Objectives and measures versus Firm Performance
5.5 Formulating hypothetical archetype

According to Van de Ven (1985), it is possible to set up an ideal theoretical or empirical pattern. When selecting the empirical pattern, he posits to assess high performance organisations on their communal choices. We support this approach and have constructed a provisional archetype out of the most eye-catching variables or constructs for each section of our research model that reports a correlation with success, as described in paragraph 5.4.

- Market arena
  None of the variables correlate with success. As a result, we shall not incorporate it into our definition of the provisional archetype;

- Value Proposition
  The provision of a digital product reports the highest correlation with success within the value proposition. As we haven’t researched whether digitising is a conscious decision in the e-formula’s strategy, or whether the value proposition was digital in the past, we are unable to define whether the digitising of the value proposition is a realistic option for every e-formula researched. Given the fact that we want the choices from the archetype to apply in principle to each e-formula of this class, we have decided not to incorporate digitising for the archetype, but to go for product innovation instead, even though this has a lower (but nevertheless significant) correlation than a digital value proposition;

- Distinguishing Value
  All four distinguishing values compared to the competitors’ have a slight correlation with success (distinguishing on the basis of individual pricing being the strongest). Within the four most successful configurations of distinguishing values (Figure 27), individual pricing is the only distinguishing value to appear in all four configurations. We shall therefore incorporate this into the provisional archetype;

- Revenue Model
  All the different ways of justifying investments report a correlation with success. Especially noticeable is the justifying of investments through stimulating sales in parallel formulas, because this is the only one to report a significant negative correlation with the firm performance. We have therefore decided to incorporate this into the provisional archetype;

- Channel positioning
  Of the different relationships with the (indirect) sales channel, partnering is the most successful;

- Organisational Form
  The construct of alliances has a clear correlation with success and will be provisionally incorporated;
CHAPTER 5 - SUCCESS MODEL 1: SALES-ORIENTED MULTI CHANNEL BRAND E-FORMULAS

- **Design**
  Although all measures report a slight correlation with firm performance, measures in the Conversion and Learn sections report the highest correlation.

We have thus identified seven strategic and design choices that report a clear correlation with success. We shall define these seven choices as the provisional success pattern.

Next, we shall assess (still using the training set of 66% of the e-formulas) how this provisional success pattern appears in the class of e-formulas researched, and its correlation with success. For convenience of comparison, we have divided the degree of fit with the provisional archetype into four classes. It transpires that a tighter fit with the provisional success pattern report a clear correlation with the firm performance ($r=.43$, $p<.000$). This is illustrated in Figure 33.

*Figure 33: Fit with hypothetic archetype versus Firm Performance in training set*
We are now able to define the hypothetical archetype for the sales-oriented multi channel brand e-formulas:

\[ H_0 \text{ Multi Channel Brand Sales} \]

A successful sales-oriented multi channel brand e-formula opts for product innovation, individual pricing, conversion measures, learning measures, collaborations with the indirect dealer or sales channel, enters into alliances and chooses \textit{not} to justify investments using parallel formulas.

### 5.6 Verifying hypothetical archetype

In order to answer research question Q7, we shall concern ourselves in this paragraph with verifying the generic nature of the hypothetical archetype \( H_0 \text{ Multi channel brand Sales} \) on the verification set of 34% of the respondents. First of all, we researched whether the constructive elements of the archetype, the strategic and design choices that reported a high correlation with success in the training set, also reported a correlation with success in the verification set (Figure 34, see appendix 11.3 for abbreviations).

<table>
<thead>
<tr>
<th>Brand</th>
<th>MC Sales</th>
<th>( H_0 \text{ Multi-channel brand Sales} )</th>
<th>MC Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales-oriented</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Training set 66% n=380</td>
<td>Verification set 34% n=180</td>
<td></td>
</tr>
</tbody>
</table>

| Market Arena   | -        | -                                        |          |
| Value Proposition | sproduct \( r=0.16, p=0.003 \) * | \( r=0.15, p=0.041 \) |          |
| Distinguishing Value | sconiade \( r=0.17, p=0.001 \) * | \( r=0.16, p=0.04 \) |          |
| Revenue Model   | sinvtocs \( r=-0.14, p=0.006 \) * | \( r=-0.24, p=0.001 \) |          |
| Interaction Structure | mconver \( r=0.36, p<0.001 \) * | \( r=0.29, p<0.001 \) |          |
|                | mlearn \( r=0.32, p<0.001 \) * | \( r=0.25, p<0.001 \) |          |
| Channel positioning | ochannel = 3 Cramer's V=.17, p<.015 * | Not possible |          |
| Organisational Form | ocalliam \( r=0.36, p<0.001 \) * | \( r=0.21, p=0.005 \) |          |

\[ Figure 34: \text{Correlation successful choices in training set and verification set} \]
Verifying the correlation between the individual success variables and the firm performance indicates that most of the variables for sales-oriented multi channel brand e-formulas also report a correlation with success in the training set, from which we can conclude that the correlation of these variables applies to the entire population. The channel positioning variable (occhannl) is a little unclear. It isn’t possible to carry out a $\chi^2$ test for this variable in the training set, as a cross table with firm performance (in 3 classes) contains too many cells with a minimum expected count lower than five (20%). According to De Heus et al (1995), this means that it isn’t possible to carry out a reliable test. The uncertainty surrounding this channel variable can be explained by the fact that, on reflection, this variable might not be beneficial to all e-formulas, because not all the e-formulas have an indirect dealer or sales channel, thus creating an unclear picture. We will however incorporate it, including this marginal note.

![Figure 35: Fit with hypothetical archetype versus Firm Performance in verification set](image)

Having verified the individual success variables, we can now examine the hypothetical archetype as a whole. Although there is only one e-formula in the verification set of 34%
of the respondents showing a ‘tight fit’ with the archetype, fit with the hypothetical archetype also appears to report a significant correlation with success in the verification set ($r=.34$, $p<.000$), as illustrated in Figure 35. We can conclude that $H_0$ Multi channel brand Sales does not need to be rejected and therefore that a successful sales-oriented multi channel brand e-formula opts for product innovation, individual pricing, conversion measures, learning measures, collaborates with the indirect dealer or sales channel (if expedient), enters into alliances and chooses not to justify investments using parallel formulas.

5.7 Conclusion and discussion on sales-oriented multi channel brand e-formulas

The sales-oriented multi channel brand e-formulas are only marginally innovative. Most of the e-formulas choose to offer the same products and services in the same markets as they would using other formulas. This strategy of continuation does not appear to be the most successful, as innovation of the value proposition correlates to a high firm performance, confirming the theory outlined in paragraph 3.2.2. Product innovation is done primarily in combination with a digital (or digitised, we are unable to deduce those dynamics from this research) value proposition. Although one would expect digital products and services to be offered more often to new, international markets because physical logistics is not a limiting factor, there appears to be no correlation.

A hypothesis for further research is that multi channel formulas, to be successful, must use the e-formula in particular to offer a digitised value proposition or a value proposition that is geared in other ways to the Internet.

The e-formulas usually attempt to position themselves against other e-formulas using a combination of distinguishing values. This is a wise move, because, in general, the desire to score in all four of the distinguishing values is recommended (we have called this overall excellence), given the positive correlation between the number of distinguishing values and the firm performance. Multi channel e-formulas achieve success by distinguishing themselves with a lower pricing level than is customary in parallel (conventional) formulas. E-formulas decide more often to individualise prices than parallel conventional formulas. However, this individualisation reports no significant correlation with success. Distinguishing on overall quality is more prevalent in normal formulas than in e-formulas.

A hypothesis for further research is that e-formulas have more difficulty creating a quality proposition than conventional (physical) formulas. A further hypothesis for further research is that e-formulas have to use lower pricing levels than conventional (physical) formulas.
Sales-oriented multi channel brand e-formulas try to recoup their investments in the e-formula primarily through more efficient primary and marketing/sales processes. E-formulas are also frequently deployed to achieve higher sales in parallel (physical) formulas. The latter appears to be an unwise move however, given the negative correlation with firm performance. We therefore suggest, that multichnelling requires the e-formula to clearly generate its own revenue. An e-formula that is only assigned the task of achieving higher sales in parallel (physical) formulas is less successful. Multi channel formulas that accept cannibalisation through the e-formula are able to achieve a higher firm performance than formulas that don’t accept cannibalisation. Furthermore, successful e-formulas are those that justify investments through selling online and/or striving to improve their efficiency. One interesting feature is that justifying through improved efficiency occurs almost twice as often as justifying through online sales.

*A hypothesis for further research is that multi channel formulas must define their own revenue model for the e-formula using online (cannibalising) sales or by improving efficiency, and should – in terms of revenue – not depend on increasing turnover in parallel (conventional) formulas. (This does not take away the fact that it is possible to strive for synergy between the different formulas to further increase overall success, but this falls outside the scope of our research.)*

The Internet changes the positioning of organisations in the channel. Cooperating, both upwards and with parallel players in the chain reports a correlation with firm performance. Collaborations are a more frequent occurrence than entering into channel conflicts through disintermediation and competition with (indirect) sales channels. On the basis of our research, we are as yet unable to draw any definite conclusions on the effects of the e-formula’s competitive (conflicting) positioning in relation to the (indirect) channel. We are however able to state that such a competitive channel positioning is more prevalent in consumer-oriented e-formulas than in business-to-business e-formulas.

*A hypothesis for further research is that organisations must work intensively with each other to offer an optimum value proposition to the customer using an e-formula, whereby all parties are focussed on their own (core) activities and (core) competencies.*

It seems a good idea to use the e-formula in a multi channel environment not simply as an information channel, but as an all-encompassing offering, which the customer can rely on for the duration of most of the sections of the customer life cycle. We have deduced this belief from the positive correlation between the number of sections that are supported and the firm performance. In particular, measures to learn about the visitors and customers (both in terms of their surfing behaviour, purchasing behaviour and via online questionnaires and polls) and to stimulate conversion (e.g. stimulation trust in the quality,
which we expect is difficult to achieve through an e-formula) report a high correlation
with success, but are taken by only a small group of respondents, possibly because most
of the e-formulas are not interested in achieving conversion and retention, or learning
about visitors, but are solely interested in supporting the consider & inspire section and
stimulating traffic. This ties in with the revenue model, where investments in the
e-formula are justified through stimulating sales in parallel conventional formulas, and the
e-formulas therefore play a subordinate role to parallel formulas (we referred to this as
‘limited ambition’). This limited ambition appears to correlate to a lack of success. A high
firm performance is most often recorded by e-formulas that are effective in creating a
relationship with the visitor, and as a result genuinely able to achieve their retention aims.
An e-formula would therefore be wise to strive for retention (as well as taking measures to
learn from visitors and stimulating conversion). Equally striking is that e-formulas
distinguish themselves from other e-formulas through the measures they take to support
the visitor during the customer life cycle, as virtually all respondents take different
measures.

A hypothesis for further research is that multi channel formulas should use the
e-formula to focus on supporting the customer during all sections of the
Customer Life Cycle, focusing in particular on the measures to stimulate
conversion, learn about the needs and behaviour of visitors, and build up a
relationship with the visitor.

A further hypothesis for further research is, that the way in which the Customer
Life Cycle is supported is an important distinguishing factor for e-formulas.

One interesting observation we made, is that business-to-business and consumer-oriented
e-formulas are virtually identical in the way they support the customer life cycle. This
applies both to e-formulas that have been active for a longer period of time and e-formulas
that were recently started up. By and large, e-formulas with a digital value proposition and
e-formulas with a larger employee base take more measures than e-formulas with fewer
employees and e-formulas offering physical products and services. On the basis of our
research, we can only observe this correlation, and as such do not know whether there is
any sequence in this finding.

A hypothesis for further research is that business-to-business and consumer-
oriented e-formulas take similar measures to support the Customer Life Cycle.

We can conclude this chapter by stating that, although sales-oriented multi channel
e-formulas can make choices on virtually all strategic and design levels that relate to
success, the number of e-formulas taking these “success choices” is at present few and far
between. The challenge therefore lies in achieving genuinely successful multi channel
formulas using the archetype and the other results of this research, resulting in a potential
increase in the number of successful multi channel e-formulas.
6 SUCCESS MODEL 2: SALES-ORIENTED PURE INTERNET BRAND E-FORMULAS

This chapter focuses on pure Internet brand e-formulas, which to a large extent justify their investments in the e-formula through proceeds from sales. Out of the training set of 66% of the 1200 e-formulas researched, 111 meet this criterion (see paragraph 4.7). References further on in this chapter to ‘the’ e-formula refer to this class of sales-oriented pure Internet brand e-formulas.

This class of e-formulas can be characterised as follows:

Most important sectors
- business services (15%);
- trade and retail (13%);
- content and information creation (11%);
- financial services (10%).

Size
- 25% of the e-formulas employ up to one full time member of staff to maintain and operate the e-formula, while 42% have one to five employees covering this task, and 27% employ more than 5 full time members of staff.

Age
- 20% of the e-formulas started before 1997, 8% started in 1997, 21% in 1998, 41% in 1999, and 9% in 2000.

We shall begin by describing the strategic and design choices made by the 111 e-formulas, thereby answering research question Q5 for this class of e-formulas (paragraphs 6.1 and 6.2). In paragraph 6.3, we shall discuss the effectiveness of the customer interaction infrastructure: to what extent is the e-formula able to meet its aims of supporting the customer for the duration of the customer life cycle? Next, we shall describe in paragraph 6.4 those choices that report a significant correlation with firm performance. This in turn will enable us in paragraph 6.5 to formulate the hypothetical archetype for the sales-oriented pure Internet brand e-formulas. The generic nature of this archetype will be verified in paragraph 6.6. We shall conclude the chapter by discussing sales-oriented pure Internet brand e-formulas (6.7).
6.1 Description of strategic choices

This paragraph discusses the strategic choices made by sales-oriented pure Internet brand e-formulas (we shall discuss whether these choices are successful in paragraph 6.4).

6.1.1 Market arena and Value proposition

A third of the e-formulas are aimed at the consumer market, 19% on the business-to-business market, and half on both business-to-business and consumers. Just over 50% of the e-formulas are aimed at serving the entire world market (54%), and a little over half deliver a digital value proposition (55%), although these two findings are not related in any way, shape or form. Although digital distribution is not restricted by physical limitations, digital products and services are offered more frequently to the entire world than physical products and services.

We noted in paragraph 5.1.1 that the growth strategy model of Ansoff (1965) had inspired us to create a matrix – called the @soff matrix – to indicate for multi channel brands whether the e-formula provides the same value proposition and serves the same market arena as other formulas. The majority of the e-formulas (81%) use a new value proposition to aim themselves at a new market arena, because to them there is no such thing as an 'existing’ situation, in the process choosing a diversification strategy. However, this still leaves a group of 13% that have chosen to pursue a strategy of continuation. This seems to be a rather odd choice for a pure Internet brand e-formula, and deserves further explanation. We classified this class of e-formulas by stating that these e-formulas operate under a new brand aimed specifically at the Internet. This encompasses many pure play start-ups, which explains the high percentage of e-formulas pursuing a strategy of diversification. However, existing organisations are also occasionally found to market an e-formula on the Internet under a new brand name. One such example is ‘Jansen en Jansen’, a firm of civil-law notaries, who have initiated the e-formula www.notaris.com (a new ‘brand’ for the office), including general information on notarial services, supplemented with a more or less explicit invitation to visit the initiating firm of civil-law notaries for specific advice. Another example is a group of furniture shops that have set up a joint e-formula in the shape of www.one-stopfurniture.com (another new brand). Looking at it from this point of view, the occurrence of a continuing @soff strategy is easily explained.

E-formulas that pursue a strategy of continuation on the whole offer physical products (67% physical), while e-formulas with a strategy of diversification usually provide a digital offering (61% digital). It should be noted that we have only researched correlation, and as such are unable to draw any conclusions on sequence. We are therefore unable to
determine whether the digitalisation of the value proposition is the result of diversification or that the opportunity to diversify is the result of a digital value proposition. Future research could assess sequence in more detail.

6.1.2 Distinguishing Value
Like Gonsalves et al (1999), we can deduce from our research that e-formulas are not positioned in the market with one distinguishing value, but rather in combination with other distinguishing values (Figure 36). The e-formulas have chosen to excel as much as possible on a number of different fronts, known as overall excellence. Over 68% wish to distinguish themselves from the competition on three or all four points of our ‘model for distinguishing values’ (paragraph 3.2.3). Quality provision and frequently also the individualisation of quality are the most widely chosen distinguishing points in this respect, as highlighted in Figure 36.

<table>
<thead>
<tr>
<th>Distinguishing Value compared to competitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Price &amp; Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>Price &amp; Individual Price &amp; Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>Quality</td>
</tr>
<tr>
<td>No Distinguishing Value</td>
</tr>
<tr>
<td>Individual Price &amp; Individual Quality</td>
</tr>
<tr>
<td>Price &amp; Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>Price</td>
</tr>
<tr>
<td>Price &amp; Quality</td>
</tr>
<tr>
<td>Individual Price &amp; Quality</td>
</tr>
<tr>
<td>Price &amp; Individual Price &amp; Quality</td>
</tr>
<tr>
<td>Price &amp; Individual Price &amp; Individual Quality</td>
</tr>
<tr>
<td>Individual Quality</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Figure 36: Distinguishing values compared to competitors

The distinguishing positioning of the e-formulas resembles the positioning chosen by the underlying organisations in their umbrella corporate strategies. This can be explained by the high number of pure players in this class, whose strategic choices are aimed entirely at the e-formula and therefore by definition correspond to the strategic choices of the e-formula. Deviations (if any) usually involve the e-formula being positioned more frequently with an individual pricing (Figure 37), as was the case with multi channel brand e-formulas.
### 6.1.3 Revenue model

Online sales and increased value of the organisation are the two most important ways in which investments in the e-formula are justified. The latter could be explained through the striving of the many start-ups in this class of e-formulas to become listed on the stock exchange. E-formulas usually choose a combination of revenue models, as is summarised in Figure 38. Here, we are able to underline our findings of paragraph 6.1.1, where we found that this class of e-formulas relate to physical formulas, given that the investments are partly justified by stimulating sales in other, physical formulas.

![Figure 38: Revenue models](image)

<table>
<thead>
<tr>
<th>Justifying investments primarily through</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Online sales</td>
<td>79%</td>
</tr>
<tr>
<td>Increased value of the organisation (i.e. shareholder value)</td>
<td>76%</td>
</tr>
<tr>
<td>More efficient primary, marketing and sales processes</td>
<td>60%</td>
</tr>
<tr>
<td>The cannibalising effect on offline sales by stimulating customers to purchase online</td>
<td>50%</td>
</tr>
<tr>
<td>Increased sales in physical formulas</td>
<td>39%</td>
</tr>
<tr>
<td>Exploiting advertising space and affiliation programs</td>
<td>39%</td>
</tr>
</tbody>
</table>

### 6.1.4 Organisational form and Channel positioning

Over 50% of the e-formulas in this class are new Internet start-ups (56%), of which 13% are a spin-off of an existing organisation, and the remaining 31% are operated by a (partnership between) existing organisations.

How do the e-formulas deal with potential channel conflicts with their indirect dealer or sales channel? 48% of the e-formulas witness no change in the collaboration with the (indirect) sales channel, either because there is no such channel or because the Internet doesn’t play a part in the collaboration. 45% of the e-formulas collaborate with a sales channel to streamline the processes or to offer a better service to the customer. 7% of the e-formulas enter into a channel conflict by competing with a sales channel.
The sales-oriented pure Internet brand e-formulas actively collaborate: 61% collaborate with third parties to offer the customer a better and broader value proposition, while 36% collaborate mainly to increase the knowledge base of their visitors and customers. 26% of the e-formulas see the collaboration mainly from a financial point of view.

We can conclude this paragraph by posing that e-formulas frequently collaborate with sales channels and third parties. Given that there are a significant number of new players in this class of e-formulas, the number of channel conflicts entered into with parties in the (indirect) sales channel is relatively low (which obviously does not mean to say that e-formulas do not operate in a competitive market, although we have not carried out any research into those types of market features).

### 6.2 Description of design choices

This paragraph highlights the design choices made by sales-oriented pure Internet brand e-formulas (we shall discuss whether these choices are successful in paragraph 6.4).

#### Traffic

The most important measures taken by e-formulas to attract visitors to their website is to exploit the potentials of search engines and online indexing, as well as make active use of banners and link exchanges.

<table>
<thead>
<tr>
<th>Which of the following measures were mainly used to increase traffic to your e-formula:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing the homepage [or other appropriate pages] in such a way that they can be better indexed by search engines and robots</td>
<td>81%</td>
</tr>
<tr>
<td>Announcing the web address to appropriate web yellow pages and search engines</td>
<td>73%</td>
</tr>
<tr>
<td>Advertising on the web, like banners or link exchanges</td>
<td>57%</td>
</tr>
<tr>
<td>An affiliation program, so third parties can place entries to your e-formula [in exchange for some kind of compensation]</td>
<td>39%</td>
</tr>
<tr>
<td>Direct mail via email to potential or current visitors</td>
<td>37%</td>
</tr>
<tr>
<td>Offering sponsored content or infomercials on appropriate [community] sites</td>
<td>37%</td>
</tr>
<tr>
<td>Adverts and commercials in mass media like radio, television and print</td>
<td>36%</td>
</tr>
<tr>
<td>Participating in online discussions and news groups that the target group might join</td>
<td>31%</td>
</tr>
<tr>
<td>Conventional direct mail to potential or current visitors</td>
<td>26%</td>
</tr>
</tbody>
</table>

*Figure 39: Measures to increase traffic*

Other forms of traffic stimulation, such as directly approaching potential visitors using direct mail (paper or by email) or participating in online discussions and newsgroups visited by the target group, occur more sporadically (Figure 39).
Consider & inspire
Almost all e-formulas (86%) believe that their site is designed in such a way, that visitors will have no problems browsing around and getting an impression of the products and services offered by the e-formula and the underlying organisation(s). Approximately half (56%) make use intelligent tools to support the visitor when browsing and selecting, sometimes combined with tools to specify wishes and demands for a (customised, if needed) product or service.

Conversion
60% of the e-formulas offer special functionalities for first-time visitors to their site to persuade them to make their first purchase. 37% offer special functionalities, seducing the visitors to purchase supplementary products and services, 39% by increasing repeat purchases. Two thirds of the e-formulas take special (and clearly visible) measures to increase trust in the e-formula. A further 56% operate with a (clearly communicated) privacy policy.

Ordering
59% of the e-formulas enable visitors to purchase the products and services shown directly online, while 37% use intelligent links to direct the visitor to third parties, and 23% to physical outlets.

Fulfil
E-formulas take few measures to support the fulfil section. A mere 27% provide tracking and tracing information for their customers, while 29% are prepared to accept returned goods as part of their standard procedure.

Use
47% offer online user support (for products and services), for instance online manuals or interactive helpdesk and e-mail. 57% of the e-formulas handle visitor complaints in accordance with generally accepted guidelines.

Retention
42% of the e-formulas can identify if a visitor is a first-time visitor or a frequent visitor. In addition, 42% of e-formulas are able to identify whether a visitor is an unknown visitor or a well-known contact. 32% attempt to invite visitors to return to the site, while 25% operate a loyalty programme.

Learn
33% use the e-formula to collect information on customer satisfaction with the e-formula, 37% on how satisfied each customer is with the products and services. 23% of the
e-formulas make use of an online questionnaire to collect information on their visitors, while 41% analyse the surfing behaviour and 31% the purchasing behaviour. 28% merge the information collected via the e-formula with other information systems. 29% of the e-formulas enable visitors to exchange information with one another online, which in turn enables the e-formula to obtain further information about its visitors.

**Figure 40: Distribution of Customer Life Cycle support**

**Combinations of sections of the customer life cycle**

Most of the e-formulas support more than one section of the customer life cycle. In total, we have identified 54 combinations of support. We can thus pose that e-formulas distinguish themselves in terms of how they support the life cycle. The most frequently occurring combination, found in 21% of the e-formulas, is support of the entire life cycle. 5% support the entire life cycle minus the conversion section, and 5% support everything apart from traffic. In addition, we have identified a group of 5% that only covers the traffic and consider & inspire sections. The remaining 50 combinations only occur in one or two (smaller) groups.
Another way of presenting the design of the e-formulas is to use a box plot to show the extent to which measures are taken to support the different sections of the life cycle (Figure 40). The horizontal axle contains the different sections of the life cycle, while the vertical axle shows the (distribution of the) degree of support (1 = no measures to support this section, 5 = all measures researched to support this section).

The figure tells us that the traffic, consider & inspire, conversion and user support sections all receive above average support. Fulfilment and learning measures are least supported.

Online ordering, either direct or through a hyperlink to a third-party online shop, has not been incorporated in the box plot, as we are dealing with dichotomous variables (paragraph 4.8.2), whose distribution isn’t relevant.

**Differences between e-formulas**

It would be interesting to pause for a moment and assess whether there is a difference in the measures taken by e-formulas offering digital products and services and those offering physical products and services. E-formulas with a digital value proposition generally take more measures. We can draw the same conclusion when looking at the size of the e-formula: In general, e-formulas with a larger employee base will take more measures than e-formulas employing fewer people. This conclusion does not ring true for the consider & inspire section of the life cycle, where we found no significant difference.

In addition, we found no significant differences between e-formulas aimed at business-to-business visitors and e-formulas aimed at consumers in terms of the measures taken, nor did we observe any significant differences between e-formulas that have been active for a longer period of time and e-formulas that were recently started up.

**6.3 Effectiveness of customer interaction structure**

Having discussed the strategic and design choices made by e-formulas, we can now move on to assess the effectiveness of e-formulas, in particular the effectiveness of the customer interaction structure.

Effectiveness literally means the degree to which objectives are achieved. Figure 41 shows the effectiveness of e-formulas in supporting the customer life cycle. The second column represents the percentage of e-formula that manage to achieve their objectives of supporting sections of the life cycle. Columns three to six break down the achieving of objectives into e-formulas that cited support as an important section of the life cycle and e-formulas that indicated that support is not an objective.
We can conclude from Figure 41 that e-formulas are particularly struggling to achieve their conversion aims: 29% cited conversion as an objective, yet fail to achieve this aim (coincidentally, an equal number (29%) do manage to meet the conversion objectives set, although, at 29%, conversion is the least successful section in terms of achieved aims). Although this class of e-formulas by definition expressly tries to recoup its investments through generating sales (see paragraph 6.1.3), 38% of the e-formulas do not set any conversion objectives.

In addition, we find that the e-formulas have difficulty achieving their retention objectives. 57% meet the objectives set, while 25% fail to achieve their retention objectives. In general, objectives that are not set, are not met.

Figure 42 represents the number of sections of the life cycle where aims are achieved. The results vary widely. For instance, we identified a group of 51% that achieved the aims of none, one or two sections and as such is fairly ineffective. In addition, we have a relatively large group that is extremely effective and manages to cover a substantial section of the life cycle: 25% of the e-formulas managed to fulfil the objectives of five, six or even seven sections of the life cycle.

---

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Figure 42 represents the number of sections of the life cycle where aims are achieved. The results vary widely. For instance, we identified a group of 51% that achieved the aims of none, one or two sections and as such is fairly ineffective. In addition, we have a relatively large group that is extremely effective and manages to cover a substantial section of the life cycle: 25% of the e-formulas managed to fulfil the objectives of five, six or even seven sections of the life cycle.
This leads us to the question, whether there is a correlation between the objectives set, the measures taken and the objectives achieved. Figure 43 gives a graphic representation of this correlation, where for convenience of comparison we have divided the number of sections of the life cycle for which objectives are set and/or met into three separate classes.

The more an e-formula sets itself the task of supporting more sections of the life cycle (we could call this a ‘high ambition’), the more one would expect it to take measures. This only appears to be partially the case however. By and large, the measures taken by e-formulas lag behind the objectives. In addition, the figures show us that the taking of measures does not always imply that the e-formula will achieve its objectives better. It is only when the measures are in line with the objectives set, that more aims are achieved. For instance, the highest significant effectiveness ($r=.41$, $p<.000$) was recorded by e-formulas that properly support the customer life cycle with effective measures and have a high ambition (the 11 cases in the far-right box of Figure 43). Low ambition e-formulas (the three boxes on the left) or moderately ambitious e-formulas (the middle three boxes) on the other hand report no correlation between the taking of more measures and a higher effectiveness ($p=.30$ and $p=.42$ respectively). We can deduce from this the hypothesis for further research, namely that a high ambition coupled with a high support of the customer life cycle are essential prerequisites for effectiveness.
6.4 Variables correlating to firm performance

In order to be able to formulate a hypothetical archetype, we shall in this paragraph set out all the strategic and design choices available to an e-formula against the success measure, which we have named firm performance (paragraph 4.8.2), thus creating an insight into the choices that might be of importance for formulating the archetype. As well as using the term ‘firm performance’ we shall also deploy the term ‘success’. These terms are used as synonyms in the framework of this chapter.

Market Arena and Value proposition

If we set out the choices made for the market arena and the value proposition against firm performance, we appear to find little correlation. For instance, there is no correlation between the different choices from the @soff matrix and firm performance. This could be explained by the substantial number of e-formulas pursuing a strategy of diversification.

Figure 43: Objectives and measures versus achieved objectives
No correlation exists between the type of target group (consumer or business-to-business) and success, or between a geographical focus and success. E-formulas with a digital value proposition do however report a slightly more frequent high firm performance ($r=.22$, $p=.021$).

A closer analysis of (the absence of) correlation tells us that this class of e-formulas report a non-linear correlation with firm performance in terms of their strategic choices. One such example is innovation of the value proposition, as shown in Figure 44. Here, we have found a group of e-formulas that manage to record a reasonable degree of correlation with success without innovating. By breaking down innovation of the value proposition into digital products and physical products, we find that product innovation reports no correlation with success for e-formulas offering digital products and services (product innovation reports a similar non-linear correlation for physical products and services as depicted in Figure 44). However, due to the small numbers per group, we are unable to carry out a $\chi^2$ test and draw any definite conclusions.

Figure 44: Innovation of value proposition versus Firm Performance
The lack of linearity might lead us to conclude that this class of e-formulas might not be entirely homogenous. One likely explanation is that the non-homogenous nature stems from the fact that e-formulas differ in terms of background and organisational form. If we were to pursue this line of reasoning, a (group of) existing organisation(s) setting up a (joint) e-formula with a specific Internet brand, such as the previously mentioned www.one-stopfurniture.com (paragraph 6.1.1) could be successful without innovating its value proposition, while new start-ups are almost by definition innovative. However, breaking e-formulas down into organisational form (graphically represented in Figure 45) forms no basis for this reasoning. As such, we will have to reject this line of reasoning.

![Figure 45: Innovation of value proposition per organisational form versus Firm Performance](image)

Could other factors be used to account for this lack of linearity? Breaking the e-formulas down into the sector in which they operate offers no explanation either because of the diversity of sectors in both peaks (‘all existing’ or ‘all new’ products and services), nor does a closer inspection into size and age provide us with any factors that might explain the lack of linearity. As such, we will for the moment have to conclude by stating that the
market arena and value proposition choices for this class of e-formulas report no linear and significant correlation with success (with the exception of a digital value proposition). 

**Distinguishing value**

None of the distinguishing values compared to the competitors’ incorporated in our study report a correlation with success for this class of e-formulas. A closer inspection of the individual distinguishing values does not make the picture any clearer. There does appear to be a very slight negative correlation between e-formulas that distinguish themselves on the basis of quality and firm performance, and a slightly positive correlation between low pricing and firm performance. However, neither of these results is significant (p>.05).

![Figure 46: Distinguishing values compared to other channels versus Firm Performance](image)

Furthermore, the combining of distinguishing values reports no correlation with success. Our conclusion is that none of the potential choices, i.e. focussing on one distinguishing value or overall excellence (distinguishing on a combination of all four distinguishing values), correlate to success. We could deduce from this the hypothesis for further
research, namely that “it is extremely difficult for a pure Internet brand to successfully distinguish itself from other players on the Internet”.

Hardly any correlation was found between a high firm performance on the one hand and distinguishing values compared to related formulas (such as physical formulas) on the other. Furthermore, we found a not quite significant correlation between individualisation of the quality and firm performance ($r=.19$, $p=.051$). This relation is graphically represented in Figure 46. One possible conclusion is that an e-formula does not so much profit by offering more individual quality as it would using other channels, but that an e-formula reports a lower level of success if it individualises less. Due to the low significance of the relation, we can only formulate a hypothesis for further research: “this class of e-formulas will not benefit more from individualising than conventional (physical) formulas, but will generate less success if it individualises less”.

**Revenue Model**

None of the individual revenue models researched reported a correlation with firm performance. Closer inspection reveals that we are once again dealing with non-linear correlations. Justifying through online sales, cannibalising sales or stimulating sales in conventional channels proved successful in two (extreme) cases, namely whenever the relevant sales form was completely absent and whenever it was fully exploited (i.e. if definite choices were made).

The justifying of investments through efficiency in marketing and primary processes came closest to showing a linear correlation ($r=.18$, $p=.055$). By studying the individual correlations, we are able to define a combined revenue model. In our training set, a fit with this combined revenue model clearly correlates to firm performance ($r=.41$, $p=.000$). In the combined revenue model, investments are justified through:

1. A limited form of traffic exploitation with adverts or an affiliation programme, without choosing this form as the primary justification for recouping investments;
2. Strong focus on efficiency in marketing and primary processes;
3. Strong focus on online sales or a complete absence of online sales.

Sub 1) Various studies have shown that, though effective, traffic exploitation by itself is an insufficient condition for a healthy revenue flow (see paragraph 3.2.4). This explains why a limited degree of revenue generation in the overall revenue model correlates to success.

Sub 2) A significant number of pure player start-ups that repeatedly appear in this class of e-formulas display a sporadic tendency to ‘burn money’ (chapter 2). We have seen
however that a strong focus on efficiency, coupled with good cost control, correlates to a high success level for this class of e-formulas.

Sub 3)
The discrepancy with regard to online sales deserves closer analysis. We identified a group of eight e-formulas that are predominantly active in Internet service providing or access service providing, and are able to generate success without selling online (and despite not selling online partly comply with sub 1 and sub 2). These eight parties, by answering Yes to the question ‘are you a pure Internet brand company’ should in retrospective have been characterised as an ordinary service provider with a multi channel brand and fallen outside the class researched. We can therefore conclude that further research must come up with a better definition of the variables at the basis of the classification.

![Figure 47: Fit to successful revenue model versus Firm Performance](image)

*Figure 47: Fit to successful revenue model versus Firm Performance*
Figure 47 gives a graphic representation of how e-formulas that combine two or three of the sections of the combined revenue model report a higher level of success than e-formulas that have a lower fit with the combined revenue model.

Organisational form and channel positioning
When assessing the sales-oriented pure Internet brand e-formulas, we found a correlation between firm performance and the entering into alliances with third parties to offer a broader service provision to the target groups than an e-formula would be able to do alone ($r=.22, p=.022$).

No correlation was found between changes in the channel and firm performance. One explanation for this could be the large number of pure players. We are as such unable to carry out any $\chi^2$ calculations as the expected counts in the cells are too low.

Design
We described in paragraph 5.2 the measures taken by e-formulas to design the customer interaction structure. In order to establish which measures correlate to a high firm performance, we have set out the measures per section of the customer life cycle against firm performance (Figure 48).

While the class of sales-oriented multi channel brand e-formulas reported the strongest correlation between firm performance and measures from the conversion and learn sections of the customer life cycle, we found that the class of sales-oriented pure Internet brand e-formulas recorded success using other measures. Support of the fulfilment and use phase shows the clearest correlation with firm performance. Interestingly, this class of e-formulas reported no success when using measures to build up a relationship. Similarly, the provision of information to support the consider & inspire section report no correlation with firm performance.

<table>
<thead>
<tr>
<th>Measures to increase Traffic</th>
<th>0.20</th>
<th>0.03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures to support Consider &amp; Inspire</td>
<td>0.11</td>
<td>0.24</td>
</tr>
<tr>
<td>Measures to stimulate Conversion</td>
<td>0.20</td>
<td>0.04</td>
</tr>
<tr>
<td>Measures to support Fulfilment</td>
<td>0.23</td>
<td>0.02</td>
</tr>
<tr>
<td>Measures to support Use</td>
<td>0.27</td>
<td>0.00</td>
</tr>
<tr>
<td>Measures to stimulate Retention</td>
<td>0.13</td>
<td>0.19</td>
</tr>
<tr>
<td>Measures to Learn</td>
<td>0.19</td>
<td>0.05</td>
</tr>
</tbody>
</table>

*Figure 48: Combined measures versus Firm Performance*
For the benefit of further research, we can state that “it is extremely important for a pure Internet brand e-formula to offer its users sound support, in particular in terms of organising complaints handling and to implement standard operating procedures to facilitate the easy return of goods and offer online support for using the products or services (i.e. via online manuals or online helpdesks)”. One reason this is so important might be that customers lack confidence in the quality of the services and products offered by unknown new players.

In general, we can state that better support of the entire customer life cycle correlates to a high firm performance ($r=.23$, $p=.024$).

**Effectiveness**

In paragraph 3.4.3, we wrote that the effectiveness of the customer interaction can be seen as an intermediate success variable. That is why we decided to assess whether there is a correlation between effectiveness and firm performance. We can deduce from Figure 49 that there is indeed a clear correlation. However, from a statistical point of view, correlation tells us nothing about sequence, so that we can only assume that effectiveness of customer interaction can indeed be seen as an intermediate success variable.

Looking at Figure 49, we can see that achieving the retention aim, i.e. genuinely managing to build up a relationship with the target group, records the lowest correlation with success. This is in line with our findings into the correlation between retention measures and firm performance. User support, another clear ‘after sales’ function, and the obtaining of site traffic, report the highest correlation with success.

<table>
<thead>
<tr>
<th>Correlations achieved support Customer LifeCycle and Firm Performance</th>
<th>$r$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieved increased Traffic</td>
<td>.34</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved support for Consider &amp; Inspire</td>
<td>.26</td>
<td>.006</td>
</tr>
<tr>
<td>Achieved Conversion</td>
<td>.30</td>
<td>.002</td>
</tr>
<tr>
<td>Achieved support for Fulfilment</td>
<td>.24</td>
<td>.011</td>
</tr>
<tr>
<td>Achieved support for Use</td>
<td>.36</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved Retention</td>
<td>.20</td>
<td>.032</td>
</tr>
<tr>
<td>Achieved to Learn</td>
<td>.21</td>
<td>.027</td>
</tr>
<tr>
<td>Achieved number of supported CLC sections</td>
<td>.33</td>
<td>.001</td>
</tr>
</tbody>
</table>

*Figure 49: Achieved objectives versus Firm Performance*

Figure 50 sets out the objectives set and the measures taken against firm performance. This box plot tells us that it is not the ambition that has a correlation with firm performance, but rather the number of measures taken. This could indicate the unrealistic
ambitions of this class of e-formulas. E-formulas that use sufficient measures to support the life cycle (of six or more sections, represented by the box on the far right of each ambition), and in doing so interact with the customer at as many contact moments as possible, score significantly higher \((r=.280 \ p=.007)\) on firm performance compared with e-formulas that support fewer sections (the two boxes on the left for each ambition).

![Figure 50: Objectives and measures versus Firm Performance](image)

**6.5 Formulating hypothetical archetype**

According to Van de Ven (1985), it is possible to set up an ideal theoretical or empirical pattern. When selecting the empirical pattern, he poses to assess high performance organisations on their communal choices. We support this approach and have constructed a provisional archetype out of the most eye-catching variables or constructs for each sections of our research model that reports a correlation with success, as described in paragraph 6.4.
Market arena
There is a slight correlation between market innovation and firm performance. However, as this is a non-linear correlation, we shall not incorporate it into our definition of the provisional archetype;

Value Proposition
Total innovation or total absence of innovation are extremes on the product innovation axle. Both report a high correlation with success. As this is a non-linear correlation, we shall not incorporate product innovation into our definition of the provisional archetype. The selecting of a digital or physical value proposition will also be excluded, as this is a contingency factor rather than a choice;

Distinguishing Value
We were unable to find any distinguishing values (distinguishing either from the competition’s or other channels’) that have a significant correlation with success. We shall therefore not incorporate this into the provisional archetype;

Revenue Model
The revenue model in which efficiency, online sales and traffic exploitation are combined record a correlation with success, and will therefore be provisionally incorporated;

Channel positioning
We were unable to find any channel positioning variables that correlate to success;

Organisational Form
The entering into alliances with third parties reported a correlation with success and will be provisionally incorporated;

Design
Although taking measures to support most of the sections of the life cycle reported a correlation with success, we have decided to only provisionally incorporate the two sections with the highest correlation, namely fulfilment and use.

We have thus identified four strategic and design choices that report a clear correlation with success. We shall define these four choices as the provisional success pattern.

Next, we shall assess (still using the training set of 66% of the e-formulas) how this provisional success pattern appears in the class of e-formulas researched, and the exact correlation with success. For convenience of comparison, we have divided the degree of fit with the provisional success pattern into five separate classes. E-formulas showing a firm fit with this provisional success pattern are the most successful, while less fit equals less success ($r=.40$, $p=.000$). This is illustrated in Figure 51. Of the 111 e-formulas of this class researched, 5 correspond entirely with the archetype. Of these five, four reported maximum success.
We are now able to define the hypothetical archetype for the sales-oriented pure Internet brand e-formulas:

$H_0$ e-Brand Sales: A successful sales-oriented pure Internet brand e-formula chooses a revenue model on the basis of online sales, efficiency and traffic exploitation, collaborates with third parties and uses sufficient measures to support in particular the fulfil and use sections of the life cycle.

### 6.6 Verifying hypothetical archetype

In order to answer the question, whether a higher degree of fit with the archetypal success configurations correlates to a higher degree of success (research question Q7), we shall concern ourselves in this paragraph with verifying the generic nature of the hypothetical archetype $H_0$ e-Brand Sales, on the verification set of 34% of the respondents. First of all, we
researched whether the constructive elements of the archetype, the strategic and design choices that reported a high correlation with success in the training set, also reported a correlation with success in the verification set (Figure 52, see appendix 11.3 for abbreviations).

<table>
<thead>
<tr>
<th></th>
<th>Internet Brand Sales</th>
<th>M_{e-Brand Sales}</th>
<th>Internet Brand Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Arena</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value Proposition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distinguishing Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue Model</td>
<td>sinvfooe R=.14, p=.14</td>
<td>R=.274, p=.062</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sinveff R=.18, p=.055</td>
<td>R=.01, p=.959</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sinveadaf R=.08, p=.43</td>
<td>R=.053, p=.723</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sinvecon R=.41, p=.000*</td>
<td>R=.061, p=.686</td>
<td></td>
</tr>
<tr>
<td>Interaction Structure</td>
<td>msfulfill R=.23, p=.002</td>
<td>* R=.30, p=.042</td>
<td></td>
</tr>
<tr>
<td></td>
<td>msuse R=.27, p=.000*</td>
<td>* R=.33, p=.025</td>
<td></td>
</tr>
<tr>
<td>Channel positioning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational Form</td>
<td>ocalliam R=.22, p=.022</td>
<td>* R=.31, p=.037</td>
<td></td>
</tr>
</tbody>
</table>

Figure 52: Correlation between successful choices in training set and verification set

If we set out the fit of e-formulas with the hypothetical archetype in the verification set against firm performance, we find that there is no tight fit on all four of the archetypical choices. There is however a significant correlation (r=.31, p=.034), but as Figure 53 illustrates there is no clear linear correlation.
We suspect that the absence of linearity stems from the combined revenue model, which as an individual construct reports no correlation with firm performance on the verification set (sinvcon in Figure 52, \( p=.686 \)). By removing it from this hypothetical archetype, a new hypothetical archetype is created with three archetypal choices: taking measures to support the fulfilment and use sections of the customer life cycle and the entering into alliances (msfulfil, msuse and ocalliam). In order to assess whether this adjusted archetype is a genuine hypothetical archetype, we first of all ran the degree of fit with this adjusted hypothetical archetype against success on the training set of 66%, where we found a significant linear relationship (\( r=.36, p=.000 \)), as graphically represented in Figure 54.

Figure 53: Fit with hypothetical archetype versus Firm Performance in verification set

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Next, we tested the adjusted hypothetical archetype on the verification set of 34%. Here, we found a significant linear correlation between fit with the archetype and firm performance ($r=.31$, $p=.038$), as graphically represented in Figure 55. Although we observed a large-scale distribution in the achieved firm performance for the ‘loose fit’ group, our conclusion is that we do not need to reject the adjusted hypothetical archetype.
6.7 Conclusion and discussion on sales-oriented pure Internet brand e-formulas

The sales-oriented pure Internet brand e-formulas have an innovative approach when it comes to choosing the market arena and shaping the value propositions. One explanation for this is the large number of new players in this class. E-formulas with a digital value proposition report a higher firm performance significantly more often. We were unable to find a linear correlation between innovation of the value proposition or the market arena on the one hand, and firm performance on the other. Closer analysis reveals that innovation of the value proposition is characterised by a non-linear correlation with firm performance (we shall return to this issue in the last section of this paragraph).

A hypothesis for further research is that pure Internet brand formulas must in particular offer digitised value propositions to be successful.
The e-formulas attach almost as much importance to the increased value of the organisation as they do to generating sales to justify their investments. One explanation for this could be the striving of many start-ups to be listed on the stock exchange. Our results show however that it would be unwise to use this increased value of the organisation as a basis for the revenue model, which supports the findings of Porter (2001). A combined revenue model that focuses on online sales, an efficient organisation of the primary and marketing processing, and a limited role for advertising and/or affiliation programmes on the other hand did appear successful (only in our training set).

A hypothesis for further research is that it would be unwise for pure Internet brand formulas to primarily justify their investments through (increased) shareholder value.

A further hypothesis is that pure Internet brand formulas should justify investments primarily through online sales, an efficient organisation of the primary and marketing processes and a limited role for advertising and/or affiliation programs.

The pure Internet brand e-formulas position themselves as quality providers, able to deliver individual quality at a competitive, usually individual price level. In doing so, they use a strategy of overall excellence, or a strategy approaching that of overall excellence by scoring high on three of the four distinguishing points discussed. However, none of the positioning strategies report a significant correlation with success. We could conclude from this that it is extremely difficult for this class of e-formulas to distinguish themselves from other players in terms of price, quality or degree of individualisation.

A hypothesis for further research is that pure Internet brand formulas fail to offer a successful distinguishing proposition in the market arena.

A further hypothesis is that it is unwise for pure Internet brand formulas to distinguish themselves from their competitors in terms of price, quality and individualisation.

The e-formulas distinguish themselves mainly from conventional (physical) players through individual, competitive price levels. However, this choice does not correlate to a higher success level. On the other hand, e-formulas that give less individual attention to the customer than the customer is accustomed to (from conventional channels), will generate less success. We can conclude that it is generally difficult for a sales-oriented e-formula with a pure Internet brand to achieve better results on the basis of a distinguishing position in the market arena than would be possible using conventional formulas.

A hypothesis for further research is that pure Internet brand formulas will fail to generate more success than physical formulas if they only distinguish themselves with an individual approach.
Since many of the e-formulas in this class are new players, little reference is made to the relationship with (indirect) sales channels. As our research is not aimed at the influence of new players on existing chains, we are unable to draw any conclusions. We do however notice that this class of e-formulas is actively collaborating with other parties, mainly so that they can offer the customer the best possible value proposition. This urge to collaborate shows a clear correlation with success.

A hypothesis for further research is that pure Internet brand formulas could achieve success by actively collaborating with other parties to provide the customer with the best possible service.

E-formulas mainly deploy search engines and online indexing to entice potential visitors to visit the e-formula, and in the process are usually successful in achieving their traffic objectives. In addition to offering general information, half the e-formulas include intelligent tools to simplify the selection process of products and services. With this, most e-formulas manage to meet their consider & inspire objectives. The consider & inspire measures on the other hand report no correlation with a high firm performance.

A hypothesis for further research is that pure Internet brand formulas should not waste any energy on measures aimed at supporting the visitors during the consider & inspire section, as these measures have no correlation with success.

The e-formulas have difficulty being effective in the conversion section. The most frequently occurring measures taken by the e-formulas to stimulate conversion is persuading first time visitors to purchase a product or service. A third of the formulas stimulate repeat purchases and cross selling. The percentage of e-formulas that meet their conversion objectives and the percentage that fail to achieve their objectives are exactly the same, namely 29%. We can conclude from this that the sales-oriented pure Internet brand e-formulas have difficulty persuading their visitors and stimulating them to make a purchase. One possible explanation for this is that they are not taking enough measures to support conversion.

A hypothesis for further research is that pure Internet brand formulas fail to convert their visitors into customers.

A further hypothesis is that this failure stems from not taking enough measures to support conversion.

The e-formulas are extremely interested in stimulating the visitor’s confidence in the quality and reliability of the e-formula. This is a wise move, as success depends partly on conversion measures and measures to do with fulfilment and after sales support such as complaints handling, user support and standard operating procedures for returning goods. Interestingly, retention measures do not show a significant correlation with firm performance for this class of e-formulas, and only half the e-formulas are effective in
managing to achieve their retention objectives. Sales-oriented pure Internet brand e-formulas are seemingly better at focusing on fulfillment and user support than on entering into and building up relationships.

A hypothesis for further research is that pure Internet brand formulas must primarily take measures concerned with fulfillment and use to be successful.
A further hypothesis is that pure Internet brand formulas have difficulty building up a relationship with customers.

In general, e-formulas report a higher success if they take measures to support more sections of the life cycle. A quarter of the e-formulas are able to effectively achieve their objectives of supporting five or more sections of the customer life cycle. We believe that e-formulas are not coordinating their ambitions and measures properly. A substantial number of e-formulas appear to be setting unrealistic ambitions and fail to take sufficient action to actually communicate effectively with the visitor during all the relevant customer contact moments.

A hypothesis for further research is that pure Internet brand formulas fail to align ambitions and measures, as a result reporting less success.

In conclusion to this chapter, we shall contemplate for a moment the various non-linear correlations found between strategic choices for the sales-oriented pure Internet brand e-formulas and firm performance. Our initial explanation is that this class of e-formulas is not homogenous. As far as factors such as the line of business, the organisational form, or the type of value proposition (digital or physical) are concerned however, we have been unable to explain the non-linear correlations. Our individual analysis of the respondent cases shows that this class appears to consist of three types of players:

- **Pure Play E-commerce initiatives**
  This appears to be the biggest group within this class, and concerns e-formulas that primarily justify their investments through online sales and a healthy, efficient organisation;

- **Internet companies**
  A small group within this class are Internet service providers such as web agencies and Internet access providers. Using our classification, these organisations fall under the class of sales-oriented pure Internet brand e-formulas, because their brand is specifically set up for Internet activities. A more logical line of reasoning however would be to incorporate this group into the class described in Chapter 5;

- **Virtual outlets and virtual portals for conventional (physical) companies**
  These include the examples www.notary.com and www.one-stopfurniture.com mentioned in our introduction. These examples additionally illustrate why we defined the e-formula as our research object: we introduced the concept of e-formula to
highlight the opportunities open to organisations to create more than one face to the customer, each with its own positioning.

We had no variables at our disposal to separate these three groups. One possible conclusion therefore is that further research could assess these sub-groups separately to assess whether this assessment solves the puzzle of the absence of linearity and whether the archetype found per type of player could be further defined.

A second possible explanation is that our research focus on the strategic positioning of the e-formula has shortcomings when it comes to researching the incoherence of this class. Further research – using the resource based view (paragraph 3.1.1) – could help acquire greater understanding of the organisation(s) behind the e-formula, in the process of which it will also be possible to set up a more well-defined classification.

A third possible explanation for the absence of linearity can be found in the work of Bryan Arthur (1994). Writing on the role played by increasing and decreasing returns in delivering economic value, he used theoretical research and mathematical models of arithmetic to suggest that knowledge intensive (high tech) organisations, often referred to as ‘new economy companies’ are governed by economic laws that are subject to non-linear correlations. Further research could assess whether our findings for this class of e-formulas form an empirical basis for his theories.
7 SUCCESS MODEL 3: NON-COMMERCIAL MULTI CHANNEL BRAND E-FORMULAS

This chapter focuses on multi channel brand e-formulas that choose not, or only partially, to justify their investments through sales or traffic exploitation using the e-formula. We shall call this group the non-commercial multi channel brand e-formulas.

Out of the training set of 66% of the 1200 e-formulas researched, 136 meet the criteria of a multi channel brand and revenue model (see paragraph 4.7). References further on in this chapter to ‘the’ e-formula refer to this class of e-formulas.

This class of e-formulas can be characterised as follows:

**Most important sectors**
- (semi) government (18%);
- communities and special interest groups (15%);
- education and research (12%).

**Size**
- 38% of the e-formulas employ up to one full time member of staff to maintain and operate the e-formula, while 39% have one to five employees, and 10% employ more than 5 full time members of staff.

**Age**

We shall begin by describing the strategic and design choices made by the 136 e-formulas, thereby answering research question Q5 for this class of e-formulas (paragraphs 7.1 and 7.2). In paragraph 7.3, we shall discuss the effectiveness of the customer interaction infrastructure: to what extent is the e-formula able to achieve its aims of supporting the customer for the duration of the customer life cycle? Next, we shall describe in paragraph 7.4 those choices that report a significant correlation with firm performance. This in turn will enable us in paragraph 7.5 to formulate the hypothetical archetype for the non-commercial multi channel brand e-formulas. The generic nature of this archetype will be verified in paragraph 7.6. We shall conclude the chapter by discussing this class of e-formulas.
7.1 Description of strategic choices

This paragraph discusses the strategic choices made by non-commercial multi channel brand e-formulas (we shall discuss whether these choices are successful in paragraph 7.4).

7.1.1 Market arena and Value proposition

18% of the e-formulas are aimed at business visitors, 26% at consumers and civilians, and 57% target both groups. Two thirds of the formulas are focused on a geographical area such as a region or country. 75% of the e-formulas deliver a physical product or service. Our research found no correlation between operating with a geographical focus and the physical nature of the value proposition.

We noted in paragraph 5.1.1 that the growth strategy model of Ansoff (1965) had inspired us to create a matrix – called the @soff matrix – to indicate for multi channel brands whether the e-formula provides the same value proposition and serves the same market arena as other formulas. Our findings show that the majority of the e-formulas (more than 70%) are not striving for product or market innovation (Figure 56).

![Figure 56: @soff matrix](image)

We found no correlation between market innovation and (an absence of) geographical focus. This implies that this class of e-formulas considers ‘market innovation’ to mean something different than approaching new geographical markets (approaching e.g. new demographic markets).

The @soff matrix shows a small group (less than 5%), which gears its value proposition to the possibilities and limitations of the Internet (Product innovation). Product innovation occurs most often in e-formulas that have a digital value proposition ($r=.20$, $p=.021$). We can use this finding to support our remarks made in paragraph 3.2.2, where we stated that innovation of the value propositions goes hand in hand with digitising the value proposition. We are therefore unable to comment on whether a digital value proposition...
results in greater innovation, or whether innovation leads to (greater) digitalisation. This would be an interesting proposition for further research.

### 7.1.2 Distinguishing Value

Most e-formulas distinguish themselves from other players in the market arena by providing high, individual quality, supplemented now and then with individual pricing. We also discovered a relatively large group that is not consciously trying to distinguish itself (18%). This is not entirely surprising, given the relatively large percentage of (semi) government agencies, which are usually not subjected to ‘other players in the market arena’. These findings are summarised in Figure 57.

<table>
<thead>
<tr>
<th>Distinguishing Value compared to competitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Price &amp; Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>No Distinguishing Value</td>
</tr>
<tr>
<td>Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>Price &amp; Individual Price &amp; Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>Quality</td>
</tr>
<tr>
<td>Individual Price &amp; Quality</td>
</tr>
<tr>
<td>Individual Price</td>
</tr>
<tr>
<td>Price &amp; Quality &amp; Individual Quality</td>
</tr>
<tr>
<td>Individual Quality</td>
</tr>
<tr>
<td>Price &amp; Quality</td>
</tr>
<tr>
<td>Individual Price &amp; Individual Quality</td>
</tr>
<tr>
<td>Price</td>
</tr>
<tr>
<td>Price &amp; Individual Price</td>
</tr>
<tr>
<td>Price &amp; Individual Price &amp; Quality</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Figure 57: Distinguishing values compared to competitors

The figure also shows, that e-formulas frequently choose to combine distinguishing values. 37% of the e-formulas combine three distinguishing values, 24% combine two values, while 13% are focused on one distinguishing value and 8% are striving to distinguish themselves in the market arena with both a high individual quality and a distinctive individual pricing level (referred to in previous chapters as striving for ‘overall excellence’).

The e-formulas distinguish themselves primarily from parallel (conventional) formulas by the fact that they work more often with individual pricing levels. This applies to more than
25% of the e-formulas. In addition, 20% of the e-formulas selected a lower quality proposition than parallel (conventional) formulas.

<table>
<thead>
<tr>
<th>Distinguishing Value compared to other channels</th>
<th>Price</th>
<th>Quality</th>
<th>Individual Price</th>
<th>Individual Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-formula distinguishes itself less</td>
<td>16%</td>
<td>20%</td>
<td>11%</td>
<td>20%</td>
</tr>
<tr>
<td>Equal distinguishing value</td>
<td>67%</td>
<td>68%</td>
<td>62%</td>
<td>63%</td>
</tr>
<tr>
<td>E-formula distinguishes itself more</td>
<td>16%</td>
<td>12%</td>
<td>26%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Figure 58: Distinguishing values compared to other channels

7.1.3 Revenue model

This class of e-formulas is by definition not aimed at justifying investments through commercial activities such as sales and traffic exploitation (See paragraph 4.7). It is therefore not surprising that they only cite increased value of the organisation and more efficient processes as important ways to justify investments (Figure 59). These two usually occur in combination. Interestingly, this group includes a sizeable group of e-formulas that is in no way actively aimed at justifying its investments (32%). One explanation for this could be the relatively large percentage of government and non profit formulas, although one could argue that these types of formulas would also do well to strive to justify their investments, for instance by designing their processes more efficiently in order to interact with civilians and benefactors (we shall return to this issue in paragraph 7.4). One suggestion for further research is to look into whether charity or sponsoring are the most important forms of revenue generation for this class of e-formulas, whether other revenue models are used, or whether this group perceives Internet activities merely as a learning activity and as such has no genuine revenue model.

<table>
<thead>
<tr>
<th>Justifying investments primarily through</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased value of the organisation</td>
<td>53%</td>
</tr>
<tr>
<td>More efficient primary, marketing and sales processes</td>
<td>43%</td>
</tr>
<tr>
<td>Higher sales in physical formulas</td>
<td>0%</td>
</tr>
<tr>
<td>The cannibalising effect on offline sales by stimulating customers to purchase online</td>
<td>0%</td>
</tr>
<tr>
<td>Online sales</td>
<td>0%</td>
</tr>
<tr>
<td>Exploiting advertising space and affiliation programs</td>
<td>0%</td>
</tr>
</tbody>
</table>

Figure 59: Revenue models
Interestingly, about 20% of the e-formulas indicated that they do take part – although only to a limited extent – in sales activities (e.g. merchandising) or traffic exploitation, thus creating a small revenue flow.

7.1.4 Organisational form and Channel positioning
The majority of this class of e-formulas is operated by existing organisations (95%). Only a handful involve new start-ups (3%) or spin-offs (2%).

Approximately 63% witness no change in the collaboration with the (indirect) sales channel, for instance because there is no such channel (this applies mainly to e-formulas that are focused on consumers and civilians). 9% collaborate with the channel without using the Internet, while 13% have streamlined the processes with their channels. This applies more to e-formulas that are focused on business visitors than to those aimed primarily at consumers and civilians. 10% use the Internet to generally collaborate more with the channel.

22% of the e-formulas collaborate with third parties to offer a better service to their customer, while 16% collaborate mainly to find out more about their customers. These forms of collaboration often occur in combination with one another, their mutual correlation being $r=.77$, $p=.000$. 7% collaborate with third parties for financial reasons.

We can conclude that the non-commercial multi channel brand class of e-formulas collaborates less with other parties (in the channel or, in a wider sense, in the value web) than commercial formulas.

7.2 Description of design choices
This paragraph highlights the design choices made by non-commercial multi channel brand e-formulas (we shall discuss whether these choices are successful in paragraph 7.4).

Traffic
The most important measures taken by e-formulas to attract visitors to their website is to exploit the potentials of search engines and online indexing: 69% register the e-formula, 68% index their home page or other important pages. Less than a third of the e-formulas make use of Direct Mail (both printed and via e-mail) and advertising (using both conventional media and banners). Our findings are summarised in Figure 60.

In general, we found that e-formulas with a digital value proposition were slightly more actively involved in stimulating traffic than formulas delivering physical products and
services (for instance, they sent more conventional direct mail ($r=.19$, $p=.032$), made more use of webvertising ($r=.14$, $p=.006$) and applied more often to search engines ($r=.27$, $p=.002$).

In addition, e-formulas with more full time employees reportedly make more use of affiliation ($r=.25$, $p=.007$), or offer sponsored content or infomercials on appropriate (community) sites.

<table>
<thead>
<tr>
<th>Which of the following measures were mainly used to increase traffic to your e-formula:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcing the web address to appropriate web yellow pages and search engines</td>
<td>69%</td>
</tr>
<tr>
<td>Preparing the homepage [or other appropriate pages] in such a way that they can be better indexed by search engines and robots</td>
<td>68%</td>
</tr>
<tr>
<td>Conventional direct mail to potential or current visitors</td>
<td>32%</td>
</tr>
<tr>
<td>Adverts and commercials in mass media like radio, television and print</td>
<td>29%</td>
</tr>
<tr>
<td>Direct mail via email to potential or current visitors</td>
<td>27%</td>
</tr>
<tr>
<td>Advertising on the web, like banners or link exchanges</td>
<td>26%</td>
</tr>
<tr>
<td>Participating in online discussions and news groups that the target group might join</td>
<td>15%</td>
</tr>
<tr>
<td>An affiliation program, so third parties can place entries to your e-formula [in exchange for some kind of compensation]</td>
<td>13%</td>
</tr>
<tr>
<td>Offering sponsored content or infomercials on appropriate [community] sites</td>
<td>10%</td>
</tr>
</tbody>
</table>

Figure 60: Measures to increase traffic

Consider & inspire
78% of the e-formulas believe that their site is designed in such a way, that visitors will have no problems browsing around and getting an impression of the products and services on offer. 36% contain an intelligent tool to guide visitors through their selection process. 23% contain special facilities to aid visitors in specifying or configuring a tailor-made product or service.

Conversion
Generating revenue is not the primary aim of this class of e-formulas. This means that we can expect to see few conversion measures taken. 22% offer special functions or actions to lower the threshold for first-time visitors to order a product or service. 16% contain special functions or actions to stimulate customers to place repeat orders. These functions are mostly offered by larger e-formulas ($r=.32$, $p=.000$) and e-formulas with a digital value proposition ($r=.18$, $p=.04$). 11% of the e-formulas market supplementary products and services at the right moments.

Increasing the visitor’s trust in the e-formula can be detached from stimulating conversion, implying that trust is also relevant for non-commercial e-formulas. For instance, 34% use special (and clearly visible) means to increase the perceived trust in the
e-formula, and 29% operate their e-formula according to a (clearly visible) privacy policy. These two measures are mostly taken by bigger e-formulas ($r=.30, p=.001$).

**Ordering**
30% of the e-formulas claim that visitors can purchase products and services via the e-formula. This applies mainly to e-formulas with a digital value proposition ($r=.24, p=.007$). 11% cleverly direct their visitors to other formulas where they can purchase products and services, for instance partners, dealers and intermediaries. This applies mainly to the bigger e-formulas ($r=.25, p=.006$). 17% provide a special functionality to actively encourage visiting physical outlets.

**Fulfil**
Given the almost total absence of revenue aims, we only found a small number of e-formulas that offer tracking and tracing information (8%) or have standard operating procedures to facilitate the easy return of goods (9%).

**Use**
29% offer online user support, for instance online manuals or interactive helpdesk and email, and 37% handle visitor complaints in accordance with generally accepted guidelines. These measures are mainly taken by bigger e-formulas (resp. $r=.19$ and $p=.035$ and $r=.31, p=.000$) and e-formulas with a digital value proposition ($r=.27, p=.002$ and $r=.23, p=.009$ resp.).

**Retention**
We found only a handful of e-formulas that build up a relationship with their visitors. For instance, 16% are able to identify if a visitor is a first-time visitor or a frequent visitor and 16% can identify if a visitor is just an (anonymous) visitor or a (well-known) contact. 11% of the e-formulas attempt to invite their visitors to return to their site, while 4% operate a loyalty program. The latter applies mainly to bigger e-formulas ($r=.26, p=.004$).

**Learn**
17% collect information on customer satisfaction with the e-formula, while 16% collect information on customer satisfaction with products and services. These measures are taken mainly by bigger e-formulas ($r=.20, p=.029$ and $p=.024$ resp.).

There are various ways to collect information to learn about your visitors. 14% collect information about visitors using questionnaires. This applies mainly to big e-formulas ($r=.20, p=.029$). 19% analyse surfing behaviour (this occurs more often in e-formulas with a digital value proposition ($r=.19, p=.031$) than in formulas offering physical products and services). 10% collect information about their visitors by analysing ordering behaviour.
13% of the formulas combine the information collated on their visitors with their other (customer) information systems. 10% of the e-formulas allow visitors to actively share information with one another within the e-formula.

**Combinations of sections of the customer life cycle**

In general, the e-formulas support a combination of different sections of the customer life cycle. The most frequently occurring combination is stimulating traffic and supporting the consider & inspire section (supported by 11% of the e-formulas). 8% only support consider & inspire, while a group of 6% support the traffic, consider & inspire, learn and retention sections. The 10 most frequently occurring combinations cover 53% of the e-formulas, and there are a total of 53 combinations. This means that the e-formulas differ substantially from one another in the way they support the customer life cycle.

![Figure 61: Distribution support Customer Life Cycle](image)

Another way of showing the extent to which measures are taken to support the different sections of the life cycle is to use a box plot (Figure 61). We can deduce from the figure...
that the traffic and consider & inspire sections are the best supported, but that the traffic median fails to rise above the average support score of three on a scale of one to five. Learn and retention are the measures least taken by this class of e-formulas.

Online ordering, either direct or through a hyperlink to a third-party online shop, has not been incorporated in the box plot, as we are dealing with dichotomous variables (paragraph 4.8.2), whose distribution isn’t relevant.

**Differences between e-formulas**

As in previous chapters, it would be interesting to pause for a moment and assess whether there is a difference in the measures taken by e-formulas offering digital products and services and those offering physical products and services. We have already described (in the paragraphs above) the significant differences per section of the life cycle between e-formulas with a digital or physical value proposition, small or big e-formulas, and e-formulas that have been active for a longer period of time and e-formulas that were recently started up. We found no significant differences between e-formulas aimed at business visitors or e-formulas aimed at consumers in terms of the measures taken.

### 7.3 Effectiveness of the customer interaction structure

Having discussed the strategic and design choices made by e-formulas, we can now concentrate on the effectiveness of the e-formulas, in particular the effectiveness of the customer interaction structure.

Effectiveness literally means the degree to which objectives are achieved. Figure 62 shows the effectiveness of e-formulas in supporting the customer life cycle. The second column represents the percentage of e-formulas that managed to achieve their objectives of supporting sections of the life cycle. Columns three to six break down the achieving of objectives into e-formulas that cited support as an important section of the life cycle and e-formulas that indicated that support is not an objective.
The most important objective for this class of e-formulas is to inform and inspire their visitors. Most e-formulas manage to achieve this objective, with only 10% failing to meet their target. An interesting observation is that more than half the e-formulas have chosen not to set themselves the task of building up a relationship with their visitors in order to learn about them, while one could argue that this would be an interesting objective, especially for this class of e-formulas.
Figure 63 represents the number of sections of the life cycle where aims are achieved. Here, we see that 33% of the non-commercial multi channel brand e-formulas support none of the sections of the life cycle, and that 29% of the e-formulas only support one section.

This leads us to question, whether there is a correlation between the objectives set, the measures taken and the objectives achieved. Figure 64 gives a graphic representation of this correlation, where for convenience of comparison we have divided the number of sections of the life cycle for which objectives are set and/or met into three separate classes.

![Figure 64: Objectives and measures versus achieved objectives](image)

We can see that e-formulas that take measures to support two to five sections of the life cycle (medium support), yet set themselves the task of only partially supporting the customer life cycle (we called this low ambition) are less effective than e-formulas that gear both their ambition and their measures towards offering medium support to the life cycle.
cycle. We also find that high ambition e-formulas (aiming to support six or more sections) are no more effective than medium-high ambition e-formulas that take the same number of measures. A medium ambition combined with medium support of the life cycle using measures (the middle box in the figure) on the other hand is more effective than other combinations of ambition and support (r=.421, p=.000).

### 7.4 Variables correlating to firm performance

In order to be able to formulate a hypothetical archetype, we shall in this paragraph set out all the strategic and design choices available to an e-formula against the success measure, which we have named firm performance (4.8.2), thus creating an insight into the choices that might be of importance for formulating the archetype. We would at this stage like to point out that this chapter defines the firm performance for non-commercial multi channel brand e-formulas differently compared with previous chapters. Firm performance is now

![Figure 65: Market innovation versus Firm Performance](image)

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based on the variables of increased productivity, customer satisfaction and value or reputation of the organisation. Please note that we will be using the term ‘success’ in addition to the term ‘firm performance’. The terms are used as synonyms in the framework of this chapter.

**Market Arena and Value proposition**

We found no correlation between e-formulas that have a geographical focus on a region or country and firm performance. In addition, e-formulas aimed at consumers (or civilians) and e-formulas focused on business visitors reported similar firm performances. There does however appear to be a correlation between digital value proposition and a high firm performance ($r=.38, p=.000$).

We found no linear correlation between firm performance and market innovation. As illustrated in Figure 65, significant market innovation (mostly new markets) causes a local peak. However, a $\chi^2$ test reveals that this peak is not relevant (Cramer’s $V=.20, p=.252$).
In addition, there is no linear correlation between product innovation and firm performance, although it reaches its peak at medium innovation (Figure 66). Despite the absence of a linear correlation, the \( \chi^2 \) test reveals that the two variables are not entirely independent of each other (Cramer’s \( V=.26, p=.064 \)), although this calculation isn’t significant given the small number of e-formulas interested in product innovation. We are therefore only able to express the assumption for further research that “non-commercial multi channel brand e-formulas have to opt for a slight innovation of the value proposition. Deviating too much from the existing proposition could however result in a lower success level”.

There is a slight correlation between a low firm performance (Cramer’s \( V=.29, p=.057 \)) and innovation of the value proposition in combination with market innovation (we called this strategy the diversification strategy in the \( @soff \ matrix \)). However, due to the low significance level, we are again unable to make a firm pronouncement.

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**Figure 67: Distinguishing value versus Firm Performance**
CHAPTER 7 - SUCCESS MODEL 3: NON-COMMERCIAL MULTI CHANNEL BRAND E-FORMULAS

Distinguishing value
In our model for distinguishing values (paragraph 3.2.3), we found only one distinguishing value that showed a significant correlation with success, namely a lower pricing level than other players in the market arena ($r=.31$, $p=.000$). The peak is clearly visible when e-formulas largely position themselves with a lower price level. However, the real price fighter (scoring maximum points on low pricing) reports less success.

In general, the e-formulas don’t choose just one distinguishing value, but a combination. Figure 67 sets out the position chosen by e-formulas in relation to other market players against firm performance. We find that the highest firm performance is not recorded by pure price fighters, but by the four e-formulas that position themselves in the market arena using a high, individual quality proposition combined with general low pricing.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Firm Performance</td>
<td>Count</td>
<td>19.0</td>
<td>4.0</td>
<td>6.0</td>
<td>4.0</td>
<td>13.0</td>
<td>1.0</td>
<td>33.0</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>16.7</td>
<td>2.9</td>
<td>5.8</td>
<td>4.4</td>
<td>13.8</td>
<td>2.9</td>
<td>30.5</td>
</tr>
<tr>
<td>High Firm Performance</td>
<td>Count</td>
<td>4.0</td>
<td>0.0</td>
<td>2.0</td>
<td>2.0</td>
<td>6.0</td>
<td>3.0</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>6.3</td>
<td>1.1</td>
<td>2.2</td>
<td>1.6</td>
<td>5.2</td>
<td>1.1</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Figure 68: Cross table of distinguishing value versus Firm Performance

This assumption is supported when we set out the distinguishing values against firm performance in a cross table, a summary of which is incorporated in Figure 68. This table only contains the columns of distinguishing values that appear more than three times. By comparing count and expected count we see a correlation between firm performance and e-formulas with a high, individual quality at a low price. In addition, we found that
e-formulas, which distinguish themselves by selecting overall excellence, report more success more often. However, because of the small number of counts per cell, we are unable to draw any firm conclusions and as such can only make an assumption for further research, that (insofar as pricing is relevant for this class of e-formulas) “there is a correlation between a high firm performance and a high, individual quality proposition at a low price, or overall excellence proposition”.

Due mainly to the absence of linear correlation, we are unable to form a clear picture of the e-formula’s positioning compared to parallel (conventional) formulas. A slight deviation between the two types of formulas, both in favour of the e-formula and/or the conventional formulas, usually results in a slightly higher firm performance than equal positioning. However, a lower firm performance is recorded when the deviations are more pronounced. As such, it is our belief that further research should assess multi channel positioning of this class of e-formulas in greater detail. The only position showing a significant correlation, albeit a not entirely linear one, is pricing: A lower price level compared to parallel (conventional) formulas correlates to a higher firm performance \( r = .21, p = .017 \).

**Revenue Model**

The strongest correlation with success \( r = .30, p = .000 \) is reported by justifying investments in the e-formulas through a higher (social) standing or increased value of the organisation. We also found there to be a clear correlation \( r = .24, p = .006 \) between firm performance and justifying investments through improved process efficiency. And last but not least, justifying investments through (limited forms of) online sales also reports a slight correlation with success \( r = .19, p = .026 \).

**Organisational form and channel positioning**

We found a correlation between firm performance and entering into alliances with third parties. We identified three types of alliances that could be entered into: alliances to offer a broader service provision to the target groups than an e-formula would be able to do alone \( r = .26, p = .004 \), alliances to increase shared knowledge of the target groups \( r = .25, p = .003 \) and alliances to increase the available capital \( r = .21, p = .014 \). The strongest correlation was recorded by e-formulas that combine all three types of alliances \( r = .30, p = .001 \).

We found no correlation between changes in the channel and firm performance. This is due to the low number of e-formulas selecting change in the channel (competition or collaboration), meaning that we are unable to carry out any \( \chi^2 \)-calculations due to fact that the expected counts in the cells are too low. By comparing the expected counts and actual
counts, we are however able to make the assumption for further research, that “there is a correlation between a higher firm performance and collaboration with the channel”.

Design
We described in paragraph 7.2 the measures taken by e-formulas to design the customer interaction structure. In order to establish which measures correlate to a high firm performance, we have set out the measures per section of the customer life cycle against firm performance (Figure 69). Here, we see that online support of the use section reports the highest correlation with firm performance. A high correlation was also reported by e-formulas that generate traffic, consider & inspire users and offer reliable support to the fulfilment section.

<table>
<thead>
<tr>
<th>Measures versus Firm Performance non-commercial formula</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures to increase Traffic</td>
<td>.43</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to support Consider &amp; Inspire</td>
<td>.32</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to stimulate Conversion</td>
<td>.35</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to support Fulfilment</td>
<td>.44</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to support Use</td>
<td>.52</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to stimulate Retention</td>
<td>.36</td>
<td>.000</td>
</tr>
<tr>
<td>Measures to Learn</td>
<td>.43</td>
<td>.000</td>
</tr>
</tbody>
</table>

Figure 69: Combined measures versus Firm Performance

We can also deduce from the figure that even non-commercial e-formulas (the class of e-formulas discussed in this chapter) manage to record a correlation between taking measures to support the customer life cycle and firm performance. There even appears (as is the case with other classes of e-formulas) to be a correlation between the number of sections of the life cycle supported with measures and a high firm performance (r=.385, p=.000). We can therefore conclude that it would also be wise for a non-commercial e-formula to regard interaction with visitors and customers as a cycle of interaction moments and take sufficient measures to be able to interact with the visitor during the appropriate number of contact moments.

Effectiveness
In paragraph 3.4.3, we wrote that the effectiveness of the customer interaction can be seen as an intermediate success variable. That is why we decided to assess whether there is a correlation between effectiveness and firm performance. We can deduce from Figure 70 that there is indeed a clear correlation. However, from a statistical point of view, correlation tells us nothing about sequence, so that we can only assume that effectiveness of customer interaction can indeed be seen as an intermediate success variable.
Correlations achieved support Customer Life Cycle and Firm Performance

<table>
<thead>
<tr>
<th>Objective</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieved increased Traffic</td>
<td>.30</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved support for Consider &amp; Inspire</td>
<td>.32</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved Conversion</td>
<td>.20</td>
<td>.023</td>
</tr>
<tr>
<td>Achieved support for Fulfilment</td>
<td>.34</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved support for Use</td>
<td>.49</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved Retention</td>
<td>.36</td>
<td>.000</td>
</tr>
<tr>
<td>Achieved to Learn</td>
<td>.28</td>
<td>.001</td>
</tr>
<tr>
<td>Achieved number of supported CLC sections</td>
<td>.34</td>
<td>.000</td>
</tr>
</tbody>
</table>

Figure 70: Achieved objectives versus Firm Performance

Looking at Figure 70, we see that the highest correlation with success is recorded by e-formulas that manage to achieve their aims of supporting use, with stimulate retention objectives coming second. We notice a slight discrepancy between those sections of the life cycle where measures prove successful and those sections where the ability to achieve objectives correlates to success.

Figure 71 sets out the objectives set and the measures taken against firm performance. We can see that low ambition e-formulas report the lowest success level, despite taking measures that offer medium support to the life cycle. In addition, medium and high ambition e-formulas that fail to take measures fail to report success. The highest success level is reported by medium or high ambition e-formulas that offer at least medium support and measures to the life cycle (r=.361, p=.000).
7.5 Formulating hypothetical archetype

According to Van de Ven (1985), it is possible to set up an ideal theoretical or empirical pattern. When selecting the empirical pattern, he poses to assess high performance organisations on their communal choices. We support this approach and have constructed a provisional archetype out of the most eye-catching variables or constructs for each component of our research model that has a correlation with success, as described in paragraph 7.4.

- **Market arena**
  None of the variables reported a linear correlation with firm performance;

- **Value Proposition**
  We found a not quite significant linear correlation between product innovation and success. We will therefore not be incorporating it into our definition of the
provisional archetype. We did find a correlation between digital value proposition and success, but have decided not to incorporate it, as this choice depends on the type of proposition and is therefore not a free choice for each e-formula;

- **Distinguishing Value**
  There is a significant correlation between high firm performance and low pricing compared with other players. It will as such be incorporated (even if the correlation is not entirely linear);

- **Revenue Model**
  We found two revenue models that reported the strongest correlation with success, namely justifying investments through increased standing and value of the organisation, and justifying through greater efficiency in the primary and customer interaction processes. We shall incorporate both into the archetype;

- **Channel positioning**
  None of the variables reported a linear correlation with firm performance;

- **Organizational Form**
  There is a significant correlation between success and entering into third party alliances to offer the visitor a broader value proposition. It will therefore be incorporated;

- **Design**
  The support of use section of the customer life cycle reported a clear correlation with success and will therefore be incorporated in our definition of the archetype.

We are now able to define the hypothetical archetype for non-commercial multi channel brand e-formulas:

\[ H_0 \text{ Non-Commercial Multi Channel Brand} \]

A successful non-commercial multi channel brand e-formula chooses to position itself in the market arena with a low price level, recoups its investments through increased standing and value of the organisation and through more efficient primary and customer interaction processes, actively collaborates with third parties to offer the visitor a broader value proposition and supports the customer in using the products and services on offer.

In order to verify the hypothesis on the training set, we have set out the degree of fit with the hypothetical archetype \( H_0 \text{ Non-Commercial Multi Channel Brand} \) against firm performance. The hypothesis appears to be valid, as there is a significant correlation between a tighter fit with the archetype and a higher firm performance \((r=.48, p=.000)\). This is represented graphically in Figure 72.
7.6 Verifying hypothetical archetype

In order to answer the question, whether a higher degree of fit with the archetypal success configurations correlates to a higher degree of success (research question Q7), we shall concern ourselves in this paragraph with testing the hypothetical archetype \( H_0 \) Non-Commercial Multi Channel Brand on the verification set of 34% of the respondents. First of all, we researched whether the constructive elements of the archetype, the strategic and design choices that report a high correlation with success in the training set, also report a success in the verification set (Figure 73, see appendix 11.3 for abbreviations). We found there to be no significant correlation in the verification set between success and price distinguishing. This ties in with the doubts expressed in 7.5 (low price level on the training set reported a non-linear correlation, where excessive use of low price levels resulted in lower firm performance). We have decided to provisionally regard this distinguishing value as part of the hypothetical archetype.
In order to verify the hypothesis on the verification set, we have set out the degree of fit with the hypothetical archetype $H_0$ Non-commercial Multi channel brand against firm performance. The hypothesis need not be rejected, as a tighter fit to the archetype once again reports a significant correlation with a higher firm performance ($r=.48$, $p=.000$). This is graphically represented in Figure 74 (coincidentally, the correlation in the verification set is identical to that of the training set). In conclusion, it is our belief that the archetype is valid, but that further research should scrutinize the role of low pricing further.

### 7.7 Conclusion and discussion on non-commercial multi channel brand e-formulas

We found that non-commercial multi channel brand e-formulas usually choose a strategy of continuation, offering the same value proposition in the same market arena as parallel (conventional) formulas. This is not a wise move, as we found there to be a correlation between a higher firm performance and gearing the value proposition to the possibilities and limitations of the Internet (as long as one does not lose sight of the initial proposition. In other words: “let the cobbler stick to his last”). A diversification strategy is therefore...
unwise. E-formulas that offer a digital value proposition, whereby the entire value can be purchased online, are particularly successful.

*Hypothesis for further research is that non-commercial multi channel brand e-formulas, to be successful, must use the e-formula in particular to offer a digitised value proposition or a value proposition that is geared in other ways to the Internet, without losing track of their point of departure.*

Investments are mainly justified through more efficient processes and increased value of the organisation. E-formulas that are expressly focused on justifying their investments report more success more often than the (relatively big) group of e-formulas (32%) that are in no way actively aimed at justifying their investments. The highest correlation was recorded by e-formulas that justify their investments through increased value of the organisation and improved efficiency. In addition, we found that a (limited) degree of online sales or traffic exploitations could be interesting for this class of e-formulas.
A hypothesis for further research is that non-commercial multi channel brand e-formulas should be actively focused on justifying their investments in order to be successful.

We found a reasonably large group that is not consciously trying to distinguish itself in the market arena, which is not entirely surprising given the large number of (semi) government agencies that usually have no ‘other players in the market arena’. The e-formulas that do distinguish themselves, position themselves against other players in the market arena by offering a high, individual quality, sometimes combined with individual pricing. The most successful e-formulas are those that manage to combine high, individual quality with competitive price levels, or those that position themselves as an overall excellent e-formula. In both cases, it would be wise not to let low pricing play first fiddle, and not to position the e-formula as a real price fighter.

A hypothesis for further research is that non-commercial multi channel brand e-formulas should position themselves against other players in the market arena with a high, individual quality and competitive pricing, without putting too much emphasis on low price levels.

E-formulas predominantly distinguish themselves from parallel (conventional) formulas by individualised pricing and lower quality propositions. Neither distinguishing value reports a correlation with success, although we found a slight correlation between a high firm performance and a lower price level than those of parallel formulas.

A hypothesis for further research is that non-commercial multi channel brand e-formulas should use lower price levels to position themselves against parallel (conventional) to be successful.

The non-commercial multi channel brand e-formulas collaborate less with other parties in the channel (or in a broader sense the value web) than commercial formulas researched in chapters 5 and 6. However, like other classes of e-formulas, we would recommend that this class of e-formulas conclude third party alliances to be of better service to the customer. As far as government e-formulas are concerned, this finding ties in with the statement made by Heene (1995) that government agencies rely on collaborations with their surrounding organisations.

A hypothesis for further research is that, in order to be successful, non-commercial multi channel brand e-formulas should actively collaborate with third parties to be of better service to the customer.

Most e-formulas rely on search engines and web indexing to generate visits. However, we generally found that the measures taken to support the traffic section were inadequate. One in four e-formulas is therefore not effective in achieve their traffic objectives. The
e-formulas were however for the most part able to achieve the consider & inspire objectives.

*A hypothesis for further research is that, in order to be successful, non-commercial multi channel brand e-formulas should pay more attention to generating traffic.*

There is a clear correlation between reliable fulfilment and success, and measures to support customer use and learning and success. These types of measures are however only taken sporadically, retention measures are virtually non-existent. We also found that e-formulas that set themselves the task of building up a relationship fail to achieve this objective. Another interesting finding is that over half the e-formulas have not set themselves the task of building up a relationship with their visitors and learning about them. We say ‘interesting’, because we found a strong correlation between achieving retention objectives and success. As such, this is one of the most interesting objectives for this class of e-formulas.

*A hypothesis for further research is that non-commercial multi channel brand e-formulas should in particular set themselves the target of building up a relationship with their target group with the aid of the Internet.*

*A further hypothesis is that, in order to be successful, non-commercial multi channel brand e-formulas should take fulfilment measures, offer user support and learn about the target group.*

In general, non-commercial multi channel brand e-formulas use hardly any measures to support sections of the customer life cycle. This is a pity, as we found that e-formulas from this class that do support various sections of the life cycle record a higher firm performance. We can therefore conclude that it would also be wise for non-commercial e-formulas to see the design of the interaction structure as a cycle of interaction moments, and take adequate measures to serve the customer during the appropriate number of contact moments.

A further hypothesis for further research is that, in order to be successful, non-commercial multi channel brand e-formulas should view the serving of visitors as a cycle of interaction moments, and take measures to support these moments.
8 Examination

In this final chapter of our thesis, we would like to reflect on our findings to see if we have satisfied our research aims, and to consider the learning points we can deduce for further research.

In the introduction of this thesis we demonstrated that:

• the Internet is evolving from an experimental stage to a stage where strategic decisions are made about the Internet;
• little is known about which strategic choices concerning the Internet are successful;
• little is known about the design of sound e-formulas to support all manner of conceivable customer contacts during various stages of the relationship between a provider and a customer.

Given the novelty of the research area, the need for greater know-how, and the uncertainty as to whether existing theories were still relevant, we decided to carry out a ‘formulating research’. This meant we were not going to test hypotheses, but instead were going to turn the defining of hypotheses into our research aim.

We defined our research aims as follows in chapter 2:

Develop hypotheses about how choices in strategy and design of an e-formula are correlated to the success of an e-formula.

In chapter 3, we looked at the research literature, which examines the strategic and design choices for e-formulas, and the successes that can be achieved with the aid of e-formulas. Next, using our research findings, we developed in chapters 5, 6 and 7 hypotheses for three different classes of e-formulas concerning the correlation between different choices and success. All these steps enabled us to attain new theoretic knowledge as described by Doty and Glick (1994). Although indicating that there is no well-defined, unanimously accepted theory definition, Doty and Glick pose (basing their arguments on Bacharach, 1989, among others) that three criteria must be met:

• Constructs must be identified;
• Relationships among these constructs must be specified;
• These relationships must be falsifiable.

We have thus satisfied our research aims. We still feel compelled however to supplement the results described so far with a thoughtful reflection, placing both the theoretical and
practical results in a future-oriented framework. This chapter is devoted to this aim. It has been constructed along the same lines as the other sections of our study, i.e. we shall begin by assessing the strategic choices before going on to analyse the design choices. We shall conclude the chapter with several considerations to aid further research.

8.1 Market arena

The theory tells us that existing operations deploy e-formulas primarily to tap into and serve new (geographical) markets (paragraph 3.2.1). However, the theory doesn’t underpin the success of this strategic choice. This may not be entirely surprising, given that market innovation showed no correlation with success for any of the three classes of e-formulas. Another research finding is that, although one would expect digital products and services to be offered more frequently to new geographical markets than physical products and services, as they are not governed by physical restrictions, there appears to be no correlation. With this, we can pose that popular statements such as “The Internet is changing our world into a global village” have not (yet) taken root. To summarise, it seems unwise to focus an e-formula on new geographical or demographic markets. That does not take away the fact that e-formulas are ideal for collecting information on visitors’ interests and needs (the Learn section of the customer life cycle, see also paragraph 8.6), from which we can gradually deduce whether the target group of the e-formulas is developing itself, and the e-formula’s design and positioning would have to be adjusted accordingly. This implies that innovation of the market arena is an evolutionary development caused by signals from the market arena, and not as a result of prior strategic choices.

8.2 Value proposition

In paragraph 3.2.2, we outlined that research literature takes its departure from the assumption that value propositions corresponding with the features of the Internet are suited to being offered through the e-formulas, implying that many existing players need to innovate their value proposition. The theory believes that, in doing so, an important position is occupied by digitised or partly digitised value propositions (for instance based on emotions, experiences and services) that are set up from the perspective of the customer’s needs. In this context, various authors have emphasised the importance of separating physical and digital process flows. Evans and Wurster (1999) for instance remarked that navigation (information) in most consumer businesses makes more money than producing and distributing products (physical). Werbach (2000) adds to this by stating that syndicators and navigators are good examples that many parties on the Internet do not provide value in a physical distribution, but in manipulating information.
In addition, the theory poses that the innovated value proposition corresponds with the value proposition in parallel (conventional) formulas. One way of doing this according to Porter (1996) is to look for ways to extend the strategy, which brings the existing activities system to a higher level, by offering customers extras or services that competitors are unable to imitate (and if so, only at exorbitant prices). Research carried out by Agrawal et al (2001) also indicated that best-practice players focus on deepening their current offerings and on adding complementary products or content services oriented toward the same customer segment that was targeted by their initial business model. In other words, it is not market innovation that is needed, but a ‘healthy’ degree of product innovation, where an e-formula remains close to the core business. Agrawal et al conclude their research by stating that less than 20 percent of the companies in their sample generated significant non-core revenue streams. Too much value proposition innovation will only confuse the customer and make it more difficult for management to keep steering their activities in the right direction.

Our research confirms and reinforces the theoretical statements. We found motivations for all three classes of e-formulas to argue that it would be wise to gear the value proposition to the possibilities of the Internet, and that this usually goes hand in hand with a digital (or digitising of the) value proposition. We could call this ‘e-fy your offering’, an abbreviation of ‘electronify your offering’. The three classes of e-formulas do however differ from one another in terms of the degree to which they need to innovate the value proposition. Sales-oriented multi channel brand e-formulas would do well to radically reconsider their value proposition. Non sales-oriented multi channel brand e-formulas need to incorporate a small degree of innovation yet remain close to their core business (this ties in with the findings of Agrawal, 2001). We found a non-linear correlation in the sales-oriented pure Internet brand e-formulas, which clearly illustrates that strategic choices concerning the value proposition influence success. As such, further research could assess the absence of linearity.

So what is the essence of ‘e-fy your offering’? We believe it involves creating synergy between the medium being used and the value proposition offered. In 1996, we wrote that the basic functionalities of a multimedia system are saving, processing, transporting, making accessible and presenting multimediial information (Jansen, 1996). These functionalities can be deployed to add value to data, creating a (unique) new value proposition. Our research shows that an e-formula is not just an extra channel, used to offer exactly the same value proposition. Success is only achieved when the value proposition offers a (unique) added value, which corresponds with the user context and possibilities of the medium being used. We could draw a parallel with Shakespeare. Anyone attending, or stronger still, experiencing, a theatre production of Shakespeare feels the value and power of Shakespeare. This is because Shakespeare tailored his plays
to the possibilities and limitations of the stage. If the same play was to be filmed from one camera angle using one video camera and played back on video at home, little of the power and value of the play would remain. Even literal film adaptations of Shakespeare are generally not very successful. Successful film adaptations of Shakespeare are mainly characterised by the fact that the essential elements of his plays are not used literally, but transformed to the possibilities and limitations of the medium, such as for instance the Walt Disney success ‘The Lion King’, which we could – rather cheekily – call the cartoonifying of Shakespeare’s history play. The outcome of our ‘e-fy your offering to be successful’ research doesn’t actually offer anything new under the sun, with the not exactly irrelevant comment, that only a few e-formulas understand this, and carry it through and use this to achieve genuine success.

In our eyes, the synergy between medium and value proposition goes much further than e-fy your offering for e-formulas. In our original definition of the e-formula (paragraph 2.2) we spoke of an ‘electronic outlet’, which for the purposes of our research we have restricted to web sites. E-formulas can however also make use of all sorts of wireless, mobile devices. The e-fy your offering principle is applicable here also, although it would perhaps be best to call it m-fy your offering. We believe that the essence of synergy between the features of the medium and the offered value proposition will be of vital importance to the success of the formula.

So what are the essential features of the Internet that can be used to e-fy the value proposition? This question can only be answered in general terms: each entrepreneur will have to answer this question for himself, using for instance the sheer infinite storage capacity of the medium to save product information, enabling players to offer both a broad and deep assortment (Evans and Wurster, 1999), the possibilities of implicit and explicit input and characteristics of an individual visitor to make a personalised offer, being available irrespective of place and time, etc. The outcome of our research suggests that entrepreneurs who have thought hard about this question will in particular achieve success. With this, our research supports the statements of Burke (1999): “Technology is just a platform for change. How we use the technology to create value for customers is what will determine future – and that’s the opportunity we must address.”

8.3 Distinguishing value

How should an e-formula distinguish itself on the Internet, which offers so much more transparency in products and services than the conventional world? Research literature has thrown no light on the price levels and quality appearance that the e-formulas should be using, although it does discuss the possibility of individualising the offered value proposition both in terms of price and quality, without making any firm pronouncements
on whether these methods generate success or not. To discuss this issue, we introduced the model for distinguishing values (paragraph 3.2.3), in which we can indicate whether an e-formula distinguishes itself primarily through a high, individual quality or low, individual price levels. Using the literature available, we could argue that it isn’t viable to position yourself as a supplier of both competitive prices, high quality as well as offering individual pricing levels and quality (chances are you will become ‘stuck in the middle’), as well as argue that a combination of these distinguishing values is feasible and successful. We called this ‘overall excellence’ (Gonsalves et al, 1999).

Our research findings largely support the statements of Gonsalves et al. There is a correlation between overall excellence and success for the sales-oriented multi channel e-formulas. The non-sales oriented multi channel e-formulas are successful the most often when they offer high, individual quality combined with a competitive price level, or when they position themselves as an overall excellent provider. In both cases, it seems wise not to let low pricing levels play first fiddle, or to position the e-formula as a true price warrior. Both classes of e-formulas are able to generate success if they choose lower pricing levels than their parallel (conventional) e-formulas. This ties in with the theories of Van der Kind (1999). Interestingly, both classes hardly ever opt for the successful distinguishing proposition.

It’s a different story however for the sales-oriented pure Internet brand e-formulas. Although selecting an overall excellent position, this class isn’t able to generate success. Worse still, this class of e-formulas is unable to achieve success by distinguishing itself from competing e-formulas in terms of price, quality or individualisation. Furthermore, they are only occasionally able to distinguish themselves from conventional formulas. They have to do their level best to serve the customer in the same individual manner as the customer has become accustomed to from conventional formulas. Furthermore, if they fail to achieve this level of individualisation, their success levels will drop! We can conclude by stating that sales-oriented pure Internet brand e-formulas find it difficult to achieve better results than is (currently) possible for conventional formulas using a distinguishing positioning in the market arena.

What do all these findings tell us in terms of the way e-formulas should position themselves against the competition and parallel (conventional) formulas? We can follow three lines of reasoning here. Our first line of reasoning states that the possibilities of the Internet enable e-formulas to improve their overall price-quality ratio, an effect similar to the one generated by mass customisation (Pine, 1993). Whoever is first to exploit these possibilities will be able to build up a ‘first mover advantage’ and be successful. Porter (2001) states, that if the Internet is deployed and focussed on operational effectiveness, the overall price-quality ratio in a sector would indeed go up. Although this is tempting
for the customers, none of the players will be able to achieve a sustainable competitive advantage. That is why, according to this line of reasoning, players would in the long term have to choose between higher quality, lower price levels or greater individualisation, implying that the correlation we found between overall excellence and success is only a temporary one.

A second line of reasoning states that the correlation between overall excellence and success is not subject to sequence, but that the e-formula’s positioning as an overall excellent player is a precondition. This line of reasoning argues, that the customer (for now) doubts the e-formulas, and is only prepared to do business if he is pampered with extra premiums (a lower price than conventional formulas, and more quality and individual attention compared to that offered by the competition). If this line of reasoning is to be believed, only e-formulas with an overall excellent position will be successful (for now).

A third line of reasoning argues that the Internet involves many new initiatives, which have to prove themselves and gain a share of the market. Under the hype-umbrella of ‘the new economy’, in which a big customer base had to be achieved in as little time as possible (to exploit this at a later stage with the aid of network effects), many e-formulas opted for a high, individual quality at a low, usually individual price levels, even if they had to make a loss on every customer (so-called ‘burning of money’). After all, this positioning is always most beneficial to the customer (in the short term): the best offer at the lowest price. The line of reasoning here is that e-formulas that do not go along with an overall excellent positioning will be less attractive to customers, and therefore prove less successful in the long term.

These arguments are not mutually exclusive. They only serve to illustrate that there might be different explanations for our finding, that overall excellence correlates to success. This begs the question what distinguishing positioning e-formulas should choose. The answer lies in the link between external positioning and internal competences, the two strategy approaches described in paragraph 3.1.1. Many young Internet players have probably opted for an unsustainable positioning, not based on their core competences, and bitten the dust. Further research could delve deeper into the spanning capabilities needed to establish a viable relationship between core competences on the one hand, and distinguishing positions on the other (Day, 1994).

8.4 Revenue Model

Research literature pays much attention to different types and combinations of revenue models and the different means of exchange that play a part in them. An important aspect
remains neglected however, namely the correlation between success and the different approaches to justifying investments in the e-formulas.

Our research shows that it is wise to justify investments in the e-formula through efficiency. An e-formula is the ultimate self-service outlet (both for the business and private market) to allow the customer (to a significant extent) to fulfil his own needs effectively. This form of justification goes hand in hand with the second successful form of justifying: online sales. Even if online sales of the multi channel brand e-formulas are at the expense of sales in other channels, online sales is a wise move, as is demonstrated by the clear correlation between online (cannibalising) sales and success. Interestingly, non-sales oriented e-formulas are also able to generate revenue flows by offering a certain number of products and services through the e-formulas (an example is merchandising).

In all the three classes researched, we found a substantial number of e-formulas that justify their investments through more efficient processes. In addition, multi brand e-formulas also choose to justify their investments in the e-formula through an expected increase in the sales in parallel (conventional) formulas. This is an unwise move: this way of justifying even reported a negative correlation with success. Furthermore, pure Internet brand e-formulas don’t always make the right decisions when it comes to shaping their revenue model. The majority for instance choose to justify their investments through an expected high shareholder value. Our results show that this is not a wise move, supporting the findings of Porter (2001).

We can conclude that e-formulas will in particular benefit from successful revenue models if they generate their own revenues to justify their investments. As the saying goes: “an e-formula has to stand on its own two feet”. (Too) many investments are still being made in e-formulas without a viable revenue model.

8.5 Organisational form and channel positioning

In the words of Agrawal et al (2001), partnerships are the lifeblood of e-commerce companies. This is the central message observed by research literature. There is much support for the statement, that e-formulas are mostly exploited in an organisational network (a value web) of small specialised parties, each with their own sharply focussed core competencies, collaborating across the depth and width of the channel.

Research literature also focuses on the dynamics that can be created in channels through dis- and re-intermediation. According to literature, retail channels occupy a central position in the discussions about disintermediation and re-intermediation. This is supported by our findings, where channel conflicts are reported most often by consumer-
oriented e-formulas. Internet is, by that, a disruptive technology (Christensen and Tedlow, 2000): a technology enabling innovative companies to create new business models that alter the economics of their industry. Resulting channel conflicts can be addressed in two ways (De Vries and Stegen, 1999):

- The same services can be offered in conflicting channels under different brands. The e-formula could for instance be marketed under its own, pure Internet brand;
- The e-formula could introduce (small) changes in the value proposition per channel. This could for instance be shaped in e-fly-ing the value proposition.

Our findings support the literature findings. For all three classes of e-formulas, we find a clear correlation between success and collaborating with other parties to be of better service to the customer. All three classes give substance to this collaboration, although the class of non-sales oriented multi brand e-formulas lags far behind the two classes of sales-oriented e-formulas. The pure Internet brand e-formulas choose to collaborate most often.

What do these findings tell us? Our research has shown that players in the value web are focused more on a small, specialised value proposition, and actively collaborate with other players to enable them to offer a broad proposition to their customers, and that this collaboration reports a strong correlation with success for all classes of e-formulas researched. We can add a fourth line of reasoning to our statement in paragraph 8.3, that an overall excellent positioning correlates to success. After several supplementary analyses, we can conclude that the overall excellence is achieved primarily by parties that collaborate in a network, whereby each party focuses on its core competencies. One could argue that this focusing enables each party to achieve “overall excellence” in his chosen field, and that, because they are able to communicate efficiently and effectively through the Internet, parties can function better as a network than if all activities were to be carried out by one big party. This has very clear implications for further research. After all, we defined ‘the e-formula’ as our research object because there is as yet no or too little information about individual e-formulas. Further research will have to delve deeper into the network in which the e-formula operates, thus turning this network into the research object. This also means that the success measure deployed by us, i.e. the success of the e-formula, will no longer play first fiddle. The emphasis will have to be increasingly placed on the success of the network as a whole. When using such a research object, it would also seem wisest to argue more from a resource based view than from the positioning view (as we have done).

8.6 Design of an e-formula

In chapter 3 we introduced the customer life cycle as a model to model the customer interaction structure. According to literature, providing the best possible support for all
sections of the life cycle with measures is an e-formula success factor. Furthermore, researchers focus closely on the different measures used to support different sections of the life cycle. However, only rarely is a clear connection demonstrated between measures and success. The most important success factors highlighted by literature are the measures to stimulate trust and entice customers to actually make a purchase (conversion), and measures aimed at building up a relationship (retention) and learning about the needs and behaviours of customers (learn).

Our research findings provide a more balanced picture than the one offered by current literature. Our first important finding is that the measures taken by e-formulas are hardly ever geared to the actual aims. In general, all three classes of e-formulas take insufficient measures to achieve their aims. Looking at our results, it isn’t surprising that many of the aims are not achieved, and that as a result many e-formulas aren’t effective. We are able to draw this conclusion, as we found that the classes of e-formulas researched were generally more effective when they tailored their measures to their aims. A second – corresponding – finding is that many e-formulas suffer from having too high or too low an ambition. The results show that it is important for the classes of e-formulas researched to strive to support a sufficient number of sections of the life cycle (usually around five sections). Any e-formula wishing to support fewer sections (those with too low an ambition) will seldom be successful (this also applies to non-sales oriented e-formulas). Similarly, any e-formula wishing to support more sections (those with too high an ambition) usually neglects to (or is unable to) take sufficient measures.

Our research shows that the customer life cycle is a generally useable model. Like Gonsalves et al (1999), we can conclude that the life cycle is deployed in a similar fashion to serve business visitors and consumers irrespective of sector. In addition, it is wise for non-commercial e-formulas to see the design of the interaction structure as a cycle of interaction moments, and to take sufficient measures to enable the e-formula to serve the visitor at an appropriate number of contact moments. If we combine this observation with our findings on the revenue model, where we found that the e-formula has to generate its own revenue flow (either through savings or income), we can see that the essence of the e-formula is in providing a fulfilling offering, which can be obtained and used in its entirety via the e-formula. This does not rule out that entrepreneurs should strive for synergy between the different parallel formulas (something which our research has hardly discussed due to our focus), but it does mean that an e-formula must meet the visitor’s “entire needs”. In essence, this corresponds with our reason for introducing the e-formula as our research object, namely the fact that the proposition of an e-formula must correspond with the visitor’s needs, who is usually not looking for www.companyname.com but for www.TheSolutionToMyNeeds.com.
A further motivation to use the customer life cycle as a (generic) model for further academic research or the design of the interaction structures, is that in all classes of e-formulas researched, the e-formulas clearly distinguish themselves from other e-formulas through the number and types of measures taken to support the visitor during the customer life cycle; hardly any of the respondents take exactly the same measures. This means that it is possible to categorise the e-formulas or to characterise them by the way they design the life cycle.

Although all classes of e-formulas report a correlation between the degree to which they support the life cycle and the level of success, there are differences in the sections of the cycle that show the strongest correlation with success per class. For instance, the measures that show a significant correlation with success for sales-oriented multi brand e-formulas are those concerned with learning about the visitors and customers (in terms of surfing behaviour, buying behaviour and through online questionnaires and polls) and stimulating conversion (for example inspiring confidence in the quality, which we suspect, judging by the results, these e-formulas have trouble achieving). And it is exactly these successful measures that are only taken by a small group of respondents, because most e-formulas in this class are designed to act as an information channel only (and therefore report less success). The small group of e-formulas in this class that are effectively able to build up relationships also report success. With that, our research supports and elaborates on the literature.

The measures showing a clear correlation with success for sales-oriented pure Internet brand e-formulas clearly deviate from those mentioned in research literature. For instance, there is hardly any point in this class of e-formulas building up a relationship with the target group. The most important measures determining success are related to the execution of the primary processes: inspiring confidence that the e-formula will meet its obligations (this class of e-formulas has great difficulty turning visitors into customers), actually satisfying the obligations and properly organising after sales service should any problems occur. This immediately modifies the feasibility of the most popular revenue model of this class of e-formulas (striving for high shareholder value due to the large customer base): a substantial number of e-formulas in this class are not yet ready to build up and maintain a valuable customer base, because their first challenge is to get their primary processes in order.

Our findings concerning the measures reporting a correlation with success for non-sales oriented multi channel brand e-formulas yet again only partly support the theoretical success factors. Measures showing the greatest correlation with success are the ones least taken. One interesting finding for instance is that this class of e-formulas has not set itself the aim, or indeed taken any measures, to learn about the visitors or to enter into a
relationship with them, even though e-formulas of this class that are effective in building up a relationship, or take measures to learn about the visitor, report a high level of success. This class of e-formulas is only effective in informing the target group, and as such is still in its infant stage when it comes to exploiting the possibilities of the Internet. Interestingly, this class of e-formulas has the biggest percentage of long-serving e-formulas (almost one in three of the e-formulas in this class were already trading on the Internet before 1997).

### 8.7 Archetypical success models

We concerned ourselves in the preceding paragraphs with reflecting on our findings per individual strategic and design choice. Our central research question was formulated as follows:

*What (combination of) strategy and design choices of an e-formula relate to the success of the e-formula?*

That is why it would be interesting to look whether a (and if so, which) combination of choices would provide an e-formula with optimum success. We found that all three classes of e-formulas researched have a combination, which correlates to success, but the combinations differ per class. We have recorded these combinations in the hypothetical success models, the hypothetical archetypes:

**Hypothetic Archetype 1:**
*A successful sales-oriented multi channel brand e-formula opts for product innovation, individual price levels, conversion measures, learning measures, collaborates with the indirect dealer or sales channel, enters into alliances and chooses not to justify its investments through parallel formulas.*

**Hypothetic Archetype 2:**
*A successful sales-oriented pure Internet brand collaborates with third parties and uses sufficient measures to support the fulfil and use sections of the life cycle in particular.*

**Hypothetic Archetype 3:**
*A successful non-commercial multi brand e-formula chooses to position itself in the market arena with a low price level, recoups its investments through increased value of the organisation and through efficient primary and customer interaction processes, actively collaborates with third parties to offer the visitor a broader value proposition and supports the customer in using the products and services offered.*
E-formulas with a higher degree of fit with the archetype of their class significantly more frequently reported a high level of success. We can conclude from this that genuine success is not generated by making ‘a’ good choice, but by making the right combinations of choices.

**8.8 Further research**

We believe that our research includes a number of useful learning points for further research.

Our first learning point is the way in which we viewed ‘strategy’. We opted for a positioning view instead of a resource based view (paragraph 3.1.1). This was a wise decision given our research question, but – as we highlighted in previous paragraphs – we suspect that several findings could be explained in greater detail using a resource based view or a combined view, as Day did (1994). In particular, our finding that e-formulas should serve the customers jointly by entering into alliances with other parties has turned the network of resources deployed to jointly create value into an important research object candidate. The success measure would in that case need to be engrafted onto the success that this network as a whole is able to achieve.

A second learning point can be found in how our classification of e-formulas came about. The more our research developed, the more it became apparent to us that our class of sales-oriented pure Internet brand e-formulas contain other e-formulas than originally thought. For instance, we expected this class to consist primarily of pure play, mono channel e-formulas targeted exclusively at the Internet, meaning that this class of e-formulas would have very few (if any) direct links with parallel (conventional) channels. This was not the case however, and in retrospect we can state that, above all, this emphasises the importance of introducing our research object, the e-formula: our aim was to have a research object that was placed in the market arena with its own proposition and – if required – its own brand, and that might also collaborate with other players. Should further research require a class of genuine pure players, the classification structure will have to contain mono or multi channel classification variables as well as a shareholder structure to substantiate the belief that an e-formula is a genuine pure player. We believe further research would be wise to do this, considering that synergy between different formulas is an important research theme (which our research consciously decided to leave aside).

We decided to gear our research to worldwide e-formulas, active in a wide range of different sectors. This is a good choice for our kind of research. However, further research could delve deeper into the strategic and design choices for specific sectors or countries.
In doing so, it would be wise to choose a more qualitative approach, questioning different respondents per e-formula. Another option would be to verify the success of the e-formula using objective, externally available (financial) data such as annual reports. In doing so, it is important to clearly define the term success and how it is to be measured, as our choice of perceived success would no longer be the most obvious.

Looking closely in retrospect at our concept framework and the variables and scales used, we can deduce a fourth learning point for further research. As far as the strategy of an e-formula is concerned, the characterising of the value proposition is a particularly important factor (for instance e-fying your offering), but in our research it was based on one variable only. Further research could work out this scale in more detail. Most of the scales relating to the customer life cycle were reasonably reliable, apart from the ordering scale. This might have something to do with the fact that this is more a dichotomous scale than an interval scale, which means that ordering would have to be more sharply defined for further research (especially if the e-formula is operating in a multi channel environment).

8.9 Putting into context

To round off our research, we would like to put our results into context, primarily to benefit any entrepreneurs who wish to deploy our research results to set up a more successful e-formula.

Our results could too easily be interpreted incorrectly if studied too hastily and without sufficient statistical knowledge. We consider our research results extremely valuable and view them as an important contribution to our field of study, but are also keenly aware that putting the results into practice isn’t necessarily a guarantee for success. The success models are for instance based on the performance of a (representative) group of 1200 e-formulas. If none of the e-formulas manage to achieve optimum performance, we won’t be able – using our selected approach – to find the optimum performing archetypical success model, meaning that our success models will be sub-optimum. A second consideration is that if we identified a correlation of $r=0.50$ between fit (for an e-formula with its archetype) and the success of the e-formula, we would only explain 25% of the variance. The rest of the success would presumably have to be explained by other types of success factors such as the quality and involvement of management, the presence of core competencies to ensure optimum execution of the primary processes, or the design and user experience of the site. We shall therefore conclude by suggesting that further research should provide us with greater insight into the synergy between these different types of success factors by building on our first tentative steps: the synergy between strategic and design choices of the e-formula.
9 SUMMARY

We see the Internet developing from an experimental stage to a stage where strategic decisions are being made about the Internet. However, little is known about which strategic choices concerning the Internet are successful. Also, little is known about the design of web sites to support customer contacts for the duration of a customer life cycle. In view of the novelty of the research area, the need for greater know-how, and the uncertainty as to whether existing theories are still relevant, we have decided to turn the defining of hypotheses on strategic and design choices into our research aim. Our research question can be formulated as follows:

What (combination of) strategic and design choices of an e-formula correlate to the success of the e-formula?

In addition, we have defined our research object, the e-formula, as follows:

An e-formula is a web site with a clear proposition in the market arena and a recognisable face to the customer, in addition to the organisation(s) responsible for the operations directly connected to this web site (i.e. responding to emails, order handling, placing content on the site etc.).

Our research comprises of a theoretical element and an empirical element. Our literature search introduces the central research concepts:

- **Strategic choices**
  What market arena should an e-formula serve, what value proposition should be offered, what should be the distinguishing value compared to competitors and other channels, what revenue model should be taken, what channel positioning and organisational form should be chosen?

- **Design choices**
  How should the customer life cycle be supported with measures in the field of traffic, consider & inspire, conversion, order, fulfilment, use, retention and learn?

The empirical research is based on a worldwide survey of 1129 e-formulas, spread across a variety of different sectors.
The results of the empirical research have resulted in the definitions of archetypical success models for three classes of e-formulas:

**Hypothetic Archetype 1:**
A successful sales-oriented multi channel brand e-formula opts for product innovation, individual price levels, conversion measures, learning measures, collaborates with the indirect dealer or sales channel, enters into alliances and chooses not to justify its investments through parallel formulas.

**Hypothetic Archetype 2:**
A successful sales-oriented pure Internet brand collaborates with third parties and uses sufficient measures to support the fulfil and use sections of the life cycle in particular.

**Hypothetic Archetype 3:**
A successful non-commercial multi brand e-formula chooses to position itself in the market arena with a low price level, recoups its investments through increased value of the organisation and through efficient primary and customer interaction processes, actively collaborates with third parties to offer the visitor a broader value proposition and supports the customer in using the products and services offered.

E-formulas with a higher degree of fit with the archetype of their class significantly more frequently reported a high level of success.

We can conclude that genuine success is not generated by making ‘a’ good choice, but by making the right *combinations* of choices. Furthermore, we noticed that only a very small group was making these right combinations of choices, which illustrates that we are still on a tremendous learning curve when it comes to unearthing and using the possibilities of the Internet. This could explain the disappointing success rate of many Internet initiatives. The results of our research offer many new leads for further research, and can help entrepreneurs make better strategic and design choices for their e-formulas.
10 NEDERLANDSE SAMENVATTING

10.1 Inleiding
Internet is aan het groeien van het experimenteerstadium naar het stadium waarin op strategisch niveau beslissingen over Internet worden genomen. Echter, er is nog weinig kennis over welke strategische keuzes met betrekking tot Internet succesvol zijn, en hoe klantcontacten gedurende een gehele levenscyclus op digitale wijze ondersteund zouden moeten worden.

10.1.1 Probleemstelling
Gezien de nieuwheid van het onderzoeksgebied, de behoefte aan kennisopbouw, en de onduidelijkheid of bestaande theorieën nog opgeld doen, kiezen we voor theorievormend onderzoek. Dit betekent dat we geen hypothesen gaan toetsen, maar juist het definiëren van hypothesen als onderzoeksdoel stellen. We bakenen daarbij het onderzoek af tot de ‘e-formule’:

_Een e-formule is een web site met een duidelijke propositie in de market arena en een herkenbaar gezicht naar de klant, in combinatie met de organisatie(s) die verantwoordelijk is (zijn) voor de operaties van de e-formule (zoals het content management, het beantwoorden van e-mails en het afhandelen van orders)._ 

Dit brengt ons bij het doel van het onderzoek:
_Het ontwikkelen van hypothesen over hoe keuzes op het gebied van strategie en inrichting van een e-formule samen hangen met het succes van de e-formule._

Direct hiervan afgeleid formuleren we de onderzoeksvraag:
_Welke (combinatie van) keuzes op het gebied van strategie en inrichting van een e-formule hangen samen met het succes van de e-formule._

De vraag is vervolgens welke aspecten of begrippen van strategie en inrichting we moetenonderscheiden.
10.1.2 Begripsbepaling strategie van e-formule

We besluiten de strategie van een e-formule vanuit een ‘positioning view’ te beschouwen en op een zestal punten te onderzoeken:

1. **Market Arena**
   Voor welke markten of marktsegmenten worden producten en diensten aangeboden?

2. **Value Proposition**
   Welke waarde (producten of diensten) levert de e-formule haar aannemers?

3. **Distinguishing Value**
   Op welke manier onderscheidt de e-formule zich van andere formules en e-formules die in de market arena actief zijn?

4. **Revenue Model**
   Op welke wijze worden de investeringen in de e-formule gerechtvaardigd?

5. **Organisational Form**
   In welke organisatievorm worden de activiteiten die nodig zijn om de e-formule te exploiteren georganiseerd?

6. **Channel Positioning**
   Welke plaats neemt de e-formule in in het kanaal en hoe wordt daarbij met multi channelling en channel conflicts omgegaan?

Deze ‘statements of strategy’ kunnen we populairder geformuleerd benoemen als afwegingen of keuzes die een e-formule op strategisch gebied moet maken.

10.1.3 Begripsbepaling inrichting van e-formule

Met betrekking tot de inrichting van de e-formule besluiten we te kijken naar de manier waarop de bezoeker gedurende interactieprocessen wordt ondersteund. We definiëren een model met acht onderdelen van het interactieproces, dat we het Customer Life Cycle model noemen. We karakteriseren kort de inhoud van de onderdelen:

- **Traffic**
  De (potentiële) klant/bezoeker wordt bewust gemaakt van het bestaan van de e-formule en bezoek wordt gestimuleerd. In marketingcommunicatieve termen wordt vooral gewerkt aan het beïnvloeden van de kennis van de doelgroep;

- **Consider & Inspire**
  Een bezoeker heeft een latente of manifeste behoefte waardoor de aanschaf van een product of dienst wordt overwogen. Een site kan daar op inspelen door informatie te verstrekken over de organisatie, haar producten en diensten, met als marketingcommunicatief doel de kennis en houding van de bezoeker te beïnvloeden;

- **Conversion**
  De bezoeker wordt verleid tot een aankoop. Voor een on line shop betekent dit dat de bezoeker actief wordt gestimuleerd een product in zijn elektronische winkelwagentje
te plaatsen. Het kan echter ook betekenen dat een bezoeker nadrukkelijk wordt uitgenodigd een 'bricks and mortar store' te bezoeken om daar het product of de dienst aan te schaffen. Het marketingcommunicatieve doel is het beïnvloeden van gedrag;

- **Order**
  De kopende- en verkopende partij(en) sluiten een transactie met elkaar;

- **Fulfil**
  Fulfilment betekent dat het product of de dienst wordt afgerekend en afgeleverd, waarmee de beloftes van klant en leverancier naar elkaar toe worden ingelost. Als ondersteuning van de fulfilment kan via de e-formule bijvoorbeeld informatie over tracking en tracing, voorraden en betaling worden uitgewisseld;

- **Use**
  Internet biedt voor veel soorten producten of diensten goede mogelijkheden het gebruik te ondersteunen of het gebruiksgenot of -gemak te vergroten. Dit sluit aan op wat we in paragraaf 10.1.2 schreven over de value proposition;

- **Retention**
  Het opbouwen van een langlopende relatie met de klant, onder andere door het stimuleren om opnieuw producten of diensten in overweging te nemen, waarmee de klant opnieuw geïnspireerd kan worden (consider en inspire) en sprake is van een customer life cycle;

- **Learn**
  Gedurende de gehele klantlevenscyclus kan kennis van de (potentiële) klant opgebouwd worden. Hierdoor ontstaat in de loop van de tijd een compleet beeld van interesses en gedrag van de klant, dat ook weer in alle onderdelen gebruikt kan worden om de informatie en communicatie beter aan te laten sluiten op het individu. Daarom staat het leren centraal in de Customer Life Cycle.

Een e-formule kan er in meer of mindere mate op gericht zijn één of meer van deze onderdelen van de customer life cycle te ondersteunen. Daarbij is het goed op te merken dat het analytisch nuttig is een duidelijk onderscheid te maken tussen de onderdelen van de cyclus, maar dat de onderdelen in de praktijk verweven zijn en elkaar sterk kunnen beïnvloeden.

### 10.1.4 Begripsbepaling succes van e-formule

Met betrekking tot het succes van de e-formule besluiten we te kijken naar de bijdrage die de e-formule levert aan het succes van de organisatie(s) achter de e-formule. We noemen dit de ‘firm performance’, een samengestelde succesmaat op basis van omzet, winst, klanttevredenheid, aandeelhouderswaarde en efficiëntie. De tweede succesmaat die we gebruiken is de effectiviteit van de ‘customer interaction structure’: in welke mate worden
de doelen behaald om met de klant gedurende de uiteenlopende onderdelen van de customer life cycle te interacteren?

10.1.5 Conceptueel Framework
Het conceptueel framework wordt in Figure 75 geïllustreerd.

![Figure 75: Conceptueel Framework](image.png)

10.2 Theoretisch kader
Deze paragraaf vat de belangrijkste bevindingen van het literatuuronderzoek naar strategie, inrichting en succes van e-formules samen.

10.2.1 Strategie van e-formule
E-formules worden voor bestaande organisaties gezien als een middel om nieuwe (geografische) markten aan te boren en te bedienen. Er is echter geen zicht op de successen die hiermee behaald worden. Verder blijken uit de theorie vooral value propositions die aansluiten op de karakteristieken van Internet geschikt te zijn om via e-formules aan te bieden. Een belangrijke plaats wordt daarbij ingenomen door digitale of deels gedigitaliseerde value propositions, bijvoorbeeld gebaseerd op emoties, belevenissen en dienstverlening, die opgezet zijn vanuit het perspectief van de behoefteeworld van een klant. Dit impliceert dat vernieuwing van de value proposition voor veel bestaande aanbieders nodig is.

Uit de literatuur kunnen we afleiden dat er geen duidelijkheid is over de prijsstelling en kwaliteitsuitstraling die e-formules zouden moeten hanteren. Wel wordt in de literatuur
veel gesproken over de mogelijkheid om de geboden value proposition zowel op het gebied van prijs als kwaliteit te individualiseren. We introduceerden hiervoor in het model voor onderscheidende waarden het begrip ‘stuck in the middle’. We gaven aan dat men op basis van de literatuur zowel kan beredeneren dat het niet levensvatbaar is je te positioneren als leverancier van een scherpe prijs, een hoge kwaliteit en de mogelijkheid om in individuele prijstelling en kwaliteit te voorzien, als te redeneren dat een combinatie van onderscheidende waarden wel haalbaar en juist succesvol is.

In de literatuur is veel aandacht voor de verschillende soorten en combinaties van revenuemodellen om investeringen in de e-formule terug te verdienen. Ook wordt gesproken over de verschillende ruilmiddelen die in het revenuemodel een rol spelen. Er is echter over het succes van de uiteenlopende benaderingen voor het terugverdienen van investeringen in e-formules nog weinig bekend.

We vonden in de literatuur veel onderbouwing voor de stelling dat e-formules vooral geëxporteerd zullen worden in een organisatorisch netwerk van kleine gespecialiseerde partijen, met ieder hun eigen, sterk gefocuste kern competenties. Deze stelling is vooral gebaseerd op de transactiekostentheorie. Ook worden in de literatuur verschillende vormen om de operatie van de e-formule te organiseren beschreven, zonder dat overeenstemming is over de best practice.

10.2.2 Inrichting van e-formule
We introduceerden de customer life cycle als model om de interaction structure met de klant te modelleren. We beschreven allerlei maatregelen die in de literatuur worden beschreven om de verschillende onderdelen van de life cycle te ondersteunen. Zo worden het genereren van traffic middels bannered storefronts en affiliation programma’s genoemd als succesvolle manieren om bezoekers te werven, terwijl de (gratis) mogelijkheden voor trafficgeneratie als zoekmachines en directories zelden effectief zijn.

Een e-formule zou een bezoeker goed moeten informeren door informatie op meerdere gelaagde niveaus aan te bieden, waarbij de verschillende multimediale informatievormen van tekst, illustraties en dynamische informatie synergetisch ingezet worden om de informatie over te brengen. Bezoekers worden echter volgens de literatuur zelden afdoende getriggerd om daadwerkelijk tot aanschaf over te gaan, waardoor zelfs bij aanwezigheid van een orderfunctionaliteit de conversion van kijkers naar kopers uitblijft. Voor het stimuleren van conversion zijn het vergroten van het vertrouwen van het vertrouwen in de e-formule, de aantrekkelijkheid van het aanbod (bijvoorbeeld ten opzichte van andere formules) en het goed ondersteunen van het selectieproces van groot belang. Veel e-formules zouden hun after sales en gebruiksondersteuning nog niet goed op orde hebben, waardoor ze
kansen laten liggen om een relatie op te bouwen met de bezoekers. Dat is jammer, want we vonden in de literatuur veel onderbouwing dat het opbouwen van relaties één van de belangrijke succesvolle mogelijkheden van e-formules is. Relaties moeten niet zozeer met het bieden van economische stimuli (spaarpakketten) worden opgezet, maar meer door het bieden van meerwaarde en betere individuele communicatie die de emotionele beleving en betrokkenheid van vaste klanten vergroot. Om dit te kunnen realiseren is het van groot belang om te leren over het gedrag en de interesses van de bezoekers. Technisch gezien is dat via e-formules goed mogelijk, maar in de praktijk blijkt het een uitdaging om tegen lage kosten, op een laagdrempelige manier, regelmatig betrouwbare informatie te verzamelen over de kwaliteit van de klant-leverancier relatie.

Het zo goed mogelijk ondersteunen van alle onderdelen van de life cycle wordt in de literatuur gezien als een succesfactor voor de e-formule. In zijn algemeenheid worden vooral de onderdelen conversion, retention en learn van belang geacht om succesvol te zijn.

10.2.3 Succes van e-formule
Het begrip ‘succesvol’ is voor e-formules nog weinig concreet beschreven in de literatuur. Wel wordt aandacht besteed aan nieuwe mogelijkheden voor succes in het kader van ‘de nieuwe economie’. We concludeerden uit de literatuur dat in de nieuwe economie sprake is van informatieproducten zonder fysiek karakter waardoor het geen materiaal kost om ze te vermenigvuldigen, ze geen ruimte innemen en aldus niet bestaan op een specifieke locatie en tijd en ruimte. Informatieproducten hebben de potentie om tegen lage marginale kosten gedifferentieerd te worden naar specifieke groepen of zelfs individuele klanten, terwijl tegelijkertijd een ‘premium price’ voor deze producten gevraagd kan worden waarmee een onderscheid is gevonden ten opzichte van de handel in fysieke producten. We concludeerden dat slechts weinig e-formules een echte digitale value proposition hebben en dus weinig e-formules echt opereren in die nieuwe economie en daarmee ‘extreem’ succesvol zouden kunnen zijn. Voor het grootste deel van de e-formules gelden gewoon dezelfde economische wetten als voor conventionele formules.

Het succes van e-formules kan middels algemeen geldende maatstaven worden bepaald, zoals het verdienen van (meer) geld middels verkopen of traffic exploitatie, het besparen van geld door efficiënter te werken of de potentie om in de toekomst succesvol te worden en te blijven door het opbouwen van een tevreden klantenkring en een waardevolle organisatie. Echter, we vonden in de literatuur bijna uitsluitend fenomenologische of niet-wetenschappelijke beschrijvingen van succesverhalen. Algemene theorieën over keuzes die samenhangen met succes, en in bredere zin kennis over de successen die behaald
worden troffen we nauwelijks aan. Wel vonden we in de literatuur onderbouwing dat e-formules nauwelijks hun succes meten.

Over de samenhang tussen strategische en inrichtingskeuzes enerzijds, en het succes van een e-formule anderzijds worden weinig concrete, onderbouwde uitspraken gedaan. Dit illustreert het belang van ons onderzoek om kennis en hypothesen op dit gebied te ontwikkelen.

10.3 Onderzoeksopzet en methodologische verantwoording
Voor het empirisch onderzoek zijn 13139 e-formules via e-mail benaderd om een online enquête met ongeveer 150 vragen in te vullen. Na het uitfilteren van dubbele responses en het weglaten van niet volledig ingevulde vragenlijsten bleven 1129 respondenten over, een response van 9%. Door middel van een apart ontwikkeld toetsinstrument is vastgesteld dat het aanvaardbaar is de resultaten van het onderzoek te veralgemeniseren naar de totale populatie van alle e-formules.

We vermoeden dat het succesmodel voor e-formules afhankelijk is van de context en uitgangssituatie van de e-formule. Omdat uit verschillende onderzoek is gebleken dat ‘industrie’ voor ons doel geen goede contingentiefactor is, kiezen we als selectievariabelen enerzijds voor de mate waarin en vorm waarop een e-formule zich richt op het genereren van revenueën, en anderzijds voor het merk van de e-formule. Dit brengt ons tot een opsplitsing naar een zestal klassen e-formules. We besluiten het empirisch onderzoek toe te spitsen op de drie grootste klassen e-formules:
1. op verkoop gerichte e-formules met multi channel merk;
2. op verkoop gerichte e-formules met een specifiek Internet merk;
3. niet op verkoop gerichte e-formules met multi channel merk.
Voor alledrie de klassen wordt op basis van de empirie een archetypisch succesmodel uitgewerkt.

10.4 Succesmodel 1: Op verkoop gerichte e-formules met een multi channel merk
De op verkoop gerichte e-formules met een multi channel merk zijn beperkt innovatief ingesteld. De meeste e-formules kiezen ervoor dezelfde producten en diensten in dezelfde markten aan te bieden als ze via andere formules doen. Deze continuersstrategie blijkt niet het meest succesvol te zijn, juist het vernieuwen van de value proposition blijkt samen te hangen met een hoge firm performance, waarmee de theorie wordt bevestigd. Productvernieuwing vindt vooral plaats in combinatie met een digitale (of
gedigitaliseerde, die dynamiek kunnen we uit het onderzoek niet afleiden) value proposition. Hoewel men kan verwachten dat digitale producten en diensten vaker aan nieuwe, internationale markten worden aangeboden omdat fysieke logistiek geen beperkende factor is, blijkt hier geen samenhang tussen te bestaan.

_Een hypothese voor vervolgonderzoek is dat multi channel formules via de e-formule vooral een gedigitaliseerd of anderzins op Internet afgestemde value proposition moeten aanbieden om succes te behalen._

De e-formules proberen zich veelal op een combinatie van onderscheidende waarden te positioneren ten opzichte van andere e-formules. Dit is verstandig, omdat het in zijn algemeenheid lijkt aan te bevelen op alle vier de onderscheidende waarden te willen scoren (we noemen dit algehele excellentie) gezien de positieve samenhang tussen het aantal onderscheidende waarden en de firm performance. Multi channel e-formules behalen succes door zich met de e-formule te onderscheiden met een lagere prijsstelling dan in parallelle (conventionele) formules gangbaar is. E-formules kiezen vaker voor het individualiseren van prijzen dan parallelle conventionele formules, maar deze individualisering heeft geen significante samenhang met succes. Het onderscheiden op algehele kwaliteit vindt vaker plaats bij gewone formules dan bij e-formules.

_Een hypothese voor vervolgonderzoek is dat het voor een e-formule moeilijker is om een kwaliteitspropositie neer te zetten dan voor een conventionele (fysieke) formule._

_Een andere hypothese voor vervolgonderzoek is dat een e-formule een lagere prijsstelling moet hanteren dan een conventionele (fysieke) formule._

Op verkoop gerichte e-formules met een multi channel merk proberen de investeringen in de e-formule vooral terug te verdienen via efficiëntere primaire- en marketing- en salesprocessen. Ook wordt de e-formule veel ingezet om hogere verkopen in parallelle (fysieke) formules te realiseren. Dit laatste blijkt echter onverstandig, gezien de negatieve samenhang met firm performance. We stellen daarom dat multi channeling betekent dat de e-formule een eigen, duidelijke revenuegeneratie nodig heeft. Een e-formule die uitsluitend tot taak heeft hogere verkopen in parallelle (fysieke) formules te realiseren is minder succesvol. Multi channel formules die kannibalisatie van verkopen in parallelle formules door de e-formule accepteren als revenuegeneratie voor de e-formule weten daarmee een hogere firm performance te realiseren dan formules die geen kannibalisatie accepteren. Ook e-formules die investeringen rechtvaardigen door online verkopen en/of het streven naar efficiëntieverbetering zijn succesvol. Het is interessant om te constateren dat rechtvaardiging door efficiëntieverbetering bijna twee keer zo vaak voorkomt als rechtvaardiging middels online verkopen.

_Een hypothese voor vervolgonderzoek is dat multi channel formules voor de e-formule een eigen revenue model moeten definiëren op basis van online verkopen._
(kannibaliserende) verkopen of efficiëntieverbeteringen en voor revenuen niet afhankelijk moeten zijn van omzetvergroting in parallelle (conventionele) formules.

(Dit laat onverlet dat er wel synergie tussen de verschillende formules kan worden nagestreefd om het totale succes nog verder te vergroten, maar dit valt buiten de scope van ons onderzoek).

Internet verandert de positionering van organisaties in de keten. Samenwerken, zowel upwards als met parallele spelers in de keten blijkt een samenhang met firm performance te hebben. Samenwerken komt vaker voor dan het aangaan van kanaalconflicten door disintermediation en competitie met (indirecte) verkoopkanalen. We kunnen op basis van dit onderzoek nog geen duidelijke uitspraken doen welke effecten een competitieve opstelling van een e-formule ten opzichte van het conventionele (indirecte) kanaal heeft, wel dat zo'n competitieve positionering in de channel veel vaker voorkomt bij e-formules die zich richten op consumenten dan bij zakelijke e-formules.

Een hypothese voor vervolgonderzoek is dat organisaties intensief met elkaar moeten samenwerken om gezamenlijk via een e-formule een optimale value proposition aan de klant te kunnen bieden, waarbij alle partijen zich focussen op hun eigen (kern)activiteiten en (kern)competenties.

Het lijkt verstandig de e-formule in een multi channel omgeving niet slechts als een informatiekanaal in te zetten, maar de e-formule te gebruiken om een volwaardige offering aan te bieden waarbij de bezoeker gedurende de meeste onderdelen van de customer life cycle bij de e-formule terechtkan. Dit leiden we af uit de positieve samenhang tussen het aantal onderdelen dat ondersteund wordt en de firm performance. Vooral maatregelen om te leren van bezoekers en klanten (zowel over hun surfgedrag, koopgedrag als via on line enquêtes en polls) en om conversion te stimuleren (bijvoorbeeld: vertrouwen stimuleren in de kwaliteit, waarvan we vermoeden dat dat moeilijk via een e-formule te bereiken is) blijken een hoge samenhang met succes te hebben, maar worden door een beperkte groep respondenten genomen. Dit zou kunnen komen omdat de meeste e-formules zich niet ten doel stellen om conversion en retention te realiseren of te leren van bezoekers, maar zich uitsluitend richten op het ondersteunen van de consider & inspire fase en het stimuleren van traffic. Dit komt overeen met het veelvoorkomende revenuemodel waarbij investeringen in de e-formule worden gerechtvaardigd door het stimuleren van verkopen in parallelle conventionele formules, en de e-formule derhalve een ondergeschikte rol heeft ten opzichte van parallelle formules.

We hebben dit een ‘beperkte ambitie’ genoemd. Deze beperkte ambitie blijkt samen te gaan met het uitblijven van succes. E-formules die effectief zijn in het opzetten van een relatie met de bezoeker, en daarmee daadwerkelijk de retention doelen bereiken, melden het vaakste een hoge firm performance, waarmee retention (naast het nemen van
maatregelen om te leren van bezoekers en conversion te stimuleren) als na te streven doelstelling van een e-formule verstandig lijkt. Wat verder opvalt is dat e-formules zich onderscheiden van andere e-formules door de maatregelen die genomen worden om de bezoeker gedurende de customer life cycle te ondersteunen omdat er nauwelijks respondenten zijn die gelijke maatregelen nemen.

Een hypothese voor vervolgonderzoek is dat multi channel formules zich met hun e-formule moeten richten op het ondersteunen van de klant gedurende alle onderdelen van de Customer Life Cycle, waarbij vooral aandacht wordt besteed aan maatregelen om conversion te stimuleren, te leren over de behoeften en het gedrag van bezoekers en het opbouwen van een relatie met de bezoeker.

Een andere hypothese voor vervolgonderzoek is dat de manier van ondersteuning van de Customer Life Cycle een belangrijke onderscheidende factor is voor e-formules.

Een interessante constatering is dat zakelijke en consumentgerichte e-formules de customer life cycle grotendeels op gelijke wijze ondersteunen. Ditzelfde geldt voor e-formules die reeds lang actief zijn en e-formules die recent gestart zijn. Over het algemeen nemen e-formules met een digitale value proposition en e-formules met veel medewerkers meer maatregelen dan e-formules met weinig werknemers en e-formules die fysieke producten en diensten leveren. We kunnen op basis van ons onderzoek slechts deze samenhang constateren, en weten derhalve niet of er een volgodelijkheid in deze bevinding besloten ligt.

Een hypothese voor vervolgonderzoek is dat zakelijke en consument gerichte e-formules gelijkwaardige maatregelen nemen om de Customer Life Cycle te ondersteunen.

We besluiten deze paragraaf met te stellen dat er voor op verkoop gerichte multi channel e-formules op bijna alle strategische en inrichtingsvlakken keuzes gemaakt kunnen worden die samenhangen met succes, maar dat juist deze succeskeuzes voorlopig nog door weinig e-formules worden genomen. Dit betekent dat er de uitdaging ligt om op basis van het archetype en de overige uitkomsten van dit onderzoek echte succesvolle multi channel formules te realiseren waardoor het nu nog beperkte aantal succesvolle multi channel e-formules zou kunnen toenemen.

10.5 Succesmodel 2: Op verkoop gerichte e-formules met een specifiek Internet merk

De op verkoop gerichte e-formules met een specifiek Internet merk gaan vernieuwend om met de keuze van market arena en invulling van value propositions. Een verklaring
hiervoor kan het grote aantal nieuwe spelers in deze klasse zijn. E-formules met een digitale value proposition melden significant vaker een hoge firm performance. We vinden geen lineaire samenhang tussen vernieuwing van de value proposition of de market arena enerzijds, en firm performance anderzijds. Nadere bestudering leert dat vernieuwing van de value proposition een niet lineaire samenhang met firm performance kent (hier komen we in de laatste alinea van deze paragraaf op terug).

*Een hypothese voor vervolgonderzoek is dat formules met specifiek Internet merk vooral gedigitaliseerde value propositions moeten leveren om succesvol te zijn.*

De e-formules hechten bijna even veel belang aan de stijging van de waarde van de organisatie als aan het zelf realiseren van verkopen om de investeringen te rechtvaardigen. Dit zou verklaard kunnen worden uit het streven van veel start-ups naar een beursgang. Uit onze resultaten blijkt het echter niet verstandig te zijn om deze waardestijging van de organisatie als basis van het revenuemodel te nemen, waarmee uitspraken uit de literatuur ondersteund worden. Een gecombineerd revenuemodel dat focust op on line verkopen, een efficiënte organisatie van de primaire en marketingprocessen, en een beperkte rol voor advertising en/of affiliation programma’s, bleek (in onze trainingsset) wel succesvol te zijn.

*Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk er niet verstandig aan doen de (stijging van de) aandeelhouderswaarde als dominante rechtvaardiging voor investeringen te gebruiken.*

*Een andere hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk investeringen vooral moeten rechtvaardigen door middel van on line verkoop, een efficiënte organisatie van de primaire- en marketingprocessen en een beperkte rol voor advertising en/of affiliation programma’s.*

De e-formules met een pure Internet brand positioneren zichzelf als een kwaliteitsaanbieder, die individuele kwaliteit kan leveren tegen een scherpe, veelal individuele prijsstelling. Zij kiezen daarbij voor een *algehele excellentie* strategie, of een benadering van algehele excellentie door op drie van de vier besproken onderscheidende punten goed te scoren. Géén van de positioneringsstrategieën blijkt echter significant samen te hangen met succes. We zouden daaruit kunnen concluderen dat het voor deze klasse e-formules umerate moeilijk is zich van andere spelers te onderscheiden op het gebied van prijs, kwaliteit of mate van individualisering.

*Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk er niet in slagen een succesvolle onderscheidende propositie in de market arena aan te bieden.*
Een andere hypothese voor vervolgonderzoek is dat het voor formules met een specifiek Internet merk niet verstandig is zich ten opzichte van concurrenten te onderscheiden op het gebied van prijs, kwaliteit en individualisatie.

De e-formules onderscheiden zich ten opzichte van conventionele (fysieke) spelers vooral door een individuele, scherpe prijsstelling. Deze keuze heeft echter geen samenhang met een groter succes. E-formules die de klant minder individuele aandacht geven dan de klant bij conventionele kanalen gewend is, boeten daarentegen wel in op succes. We kunnen de conclusie trekken dat het in het algemeen moeilijk is voor een op verkoop gerichte e-formule met een specifiek Internet merk om op basis van een onderscheidende positionering in de market arena betere resultaten te behalen dan met conventionele formules mogelijk zou zijn.

Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk een individuele benadering nooit succesvoller zijn dan fysieke formules.

Omdat veel van de e-formules in deze klasse nieuwe spelers zijn, wordt weinig melding gemaakt van veranderingen in de relatie met (indirecte) verkoopkanalen. Het onderzoek richtte zich niet op de invloed van nieuwe spelers op bestaande ketens, zodat op dit punt geen uitspraken kunnen worden gedaan. Wel valt op dat e-formules uit deze klasse actief samenwerken met andere partijen, vooral om de uiteindelijke klant zo goed mogelijk te kunnen bedienen. Deze drang naar samenwerking blijkt een duidelijke samenhang met succes te hebben.

Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk succes behalen door actief met andere partijen samen te werken om de uiteindelijke klant optimaal te kunnen bedienen.

E-formules zetten vooral zoekmachines en online indexen in om potentiële bezoekers te verleiden een bezoek te brengen aan de e-formule, en weten hiermee veelal hun trafficedoelen te behalen. De helft van de e-formules biedt, naast algemene informatie, intelligente tools om het selectieproces van producten en diensten te vereenvoudigen. Hiermee weten de meeste e-formules hun consider & inspire doelen te realiseren. De consider & inspire maatregelen blijken echter geen samenhang met een hoger firm performance te hebben.

Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk geen energie moeten verspillen aan maatregelen om bezoekers gedurende het consider & inspire onderdeel te ondersteunen, omdat deze maatregelen geen samenhang met succes hebben.
De e-formules hebben moeite om effectief te zijn op het gebied van conversion. De meest voorkomende maatregelen die e-formules nemen om conversion te stimuleren is door first time visitors over te halen om een aankoop te doen. Stimulering van herhaalaankopen en cross selling vindt bij een derde van de formules plaats. De groep e-formules die zijn conversion doelen realiseert is net zo groot als de groep die er niet in slaagt zijn conversion doelen waar te maken: 29%. We kunnen hieruit concluderen dat het voor de op verkoop gerichte e-formules met een specifiek Internet merk moeilijk blijkt te zijn om bezoekers over de streep te trekken en tot een aankoop te verleiden. Een mogelijke verklaring is dat zij onvoldoende maatregelen nemen om conversion te ondersteunen.

*Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk er niet in slagen bezoekers te converteren tot klanten.*

*Een andere hypothese voor vervolgonderzoek is dat dit het gevolg is van onvoldoende aandacht voor conversion maatregelen.*

Veel aandacht is er voor het stimuleren van het vertrouwen van de bezoekers in de kwaliteit en de betrouwbaarheid van de e-formule. Dit is verstandig want succes hangt onder andere samen met conversion maatregelen en maatregelen op het gebied van fulfilment en after sales als klachtenafhandeling, ondersteuning bij het gebruik en standard operating procedures voor het terugsturen van goederen. Opvallend is dat maatregelen op het gebied van retention voor deze klasse van e-formules niet significant samenhangen met firm performance, en ook dat slechts de helft van de e-formules effectief is in het realiseren van haar retention doelen. Blijkbaar kunnen de op verkoop gerichte e-formules met een specifiek Internet merk zich beter richten op een goede fulfilment en gebruiksondersteuning dan op het aangaan en opbouwen van relaties.

*Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk vooral maatregelen op het gebied van fulfilment en use moeten nemen om succesvol te zijn.*

*Een andere hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk moeite hebben een relatie op te bouwen met klanten.*

In het algemeen melden de e-formules een groter succes als ze meer onderdelen van de life cycle ondersteunen met maatregelen. Een kwart van de e-formules weet op effectieve wijze zijn doelstelling te realiseren om vijf of meer onderdelen van de customer life cycle te ondersteunen. We merken op dat de e-formules hun ambities en maatregelen niet goed op elkaar afstemmen. Veel e-formules lijken onrealistische ambities te stellen en verzuimen voldoende maatregelen te nemen om daadwerkelijk de bezoeker op alle relevante klantcontactmomenten afdoende te woord te staan.

*Een hypothese voor vervolgonderzoek is dat formules met een specifiek Internet merk ambities en maatregelen niet goed op elkaar afstemmen en daardoor inboeten op succes.*
Ter afsluiting staan we nog even stil bij de diverse niet lineaire verbanden die we vonden tussen strategische keuzes voor de op verkoopgerichte e-formules met een pure Internet merk en firm performance. Een eerste verklaring is dat de ‘niet lineaire verbanden’ zouden kunnen impliceren dat deze klasse van e-formules niet homogeen is. Op basis van factoren als de bedrijfstak, de organisatievorm, of de soort value proposition (digitaal of fysiek) hebben we echter geen verklaring kunnen vinden voor de niet lineaire verbanden.

Een tweede verklaring kan zijn dat onze onderzoeksfocus op de strategische positionering van de e-formule te kort schiet om de incoherentie van deze klasse te onderzoeken. Vervolgonderzoek op basis van de resource based view (paragraaf 3.1.1) zou uitzonderlijke gegevens kunnen bieden om meer kennis over de organisatie(s) achter de e-formule te verkrijgen.

Een derde mogelijke verklaring voor niet lineariteit kan gevonden in het werk van Bryan Arthur (1994) die schrijft over de rol die increasing en decreasing returns spelen bij het leveren van economische waarde. Hij stelt op basis van theoretische onderzoek en mathematische rekenmodellen dat er voor kennisintensieve (high tech) organisaties die wel als ‘nieuwe economie bedrijven’ worden gekenmerkt, sprake is van economische wetmatigheden waarin niet lineaire verbanden voorkomen. In vervolgonderzoek zou onderzocht kunnen worden of onze bevindingen voor deze klasse e-formules empirische onderbouwing leveren voor zijn theorieën.

10.6 Succesmodel 3: Niet op verkoop gerichte e-formules met een multi channel merk

De niet op verkoop gerichte e-formules met een multi channel merk kiezen veelal voor een continuieringsstrategie waarbij dezelfde value proposition in dezelfde market arena wordt aangeboden als via parallelle (conventionele) formules gebeurt. Dit is niet verstandig, want een aanpassing van de value proposition aan de mogelijkheden en beperkingen van Internet blijkt samen te hangen met een hogere firm performance (zolang de uitgangssituatie maar niet uit het oog wordt verloren, ofwel ‘de schoenmaker bij zijn leest blijft’). Een diversificatieroute blijkt onverstandig. E-formules die een digitale value proposition bieden, waarbij de gehele value via het on line kanaal kan worden afgenomen, blijken vooral succesvol.

Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk via de e-formule vooral een gedigitaliseerd of anderzins op Internet afgestemde value proposition moeten aanbieden om succes te behalen, zonder daarbij de uitgangspropositie te verloochenen.
Het rechtvaardigen van investeringen gebeurt vooral middels efficientere processen en een hogere waardering van de organisatie. E-formules die zich nadrukkelijk richten op het rechtvaardigen van investeringen melden vaker succes dan de (vrij forse) groep e-formules (32%) die op geen enkele manier actief gericht is op het rechtvaardigen van de investeringen. Vooral het rechtvaardigen door middel van een verhoogde waardering voor de organisatie en efficientieverbeteringen hangen samen met succes, maar ook een (beperkte) mate van on line verkoop of traffic exploitatie kan interessant zijn voor deze klasse e-formules.

Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk zich actief moeten richten op het rechtvaardigen van investeringen om succesvol te zijn.

Er is een vrij grote groep die zich niet bewust probeert te onderscheiden in de market arena, niet geheel verwonderlijk gezien het relatief grote aandeel (semi) overheidsinstanties die veelal geen ‘andere spelers in de market arena’ kennen. De e-formules die zich wel onderscheidend opstellen, positioneren zich ten opzichte van de andere spelers in de market arena door een hoge, individuele kwaliteit te leveren, soms aangevuld met een individuele prijsstelling. Het meest succesvol blijken de e-formules die een hoge, individuele kwaliteit leveren met een aantrekkelijke prijsstelling of zich positioneren als algeheel excellente aanbieder. In beide gevallen lijkt het verstandig de lage prijsstelling niet de boventoon te laten voeren en de e-formule niet te positioneren als echte prijswinnaar.

Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk zich ten opzichte van andere spelers in de market arena moeten profileren met een hoge, individuele kwaliteit en een aantrekkelijke prijsstelling, zonder daarbij een te zware focus te leggen op een lage prijsstelling.

E-formules onderscheiden zich ten opzichte van parallelle (conventionele) formules vooral doordat met een geïndividualiseerde prijsstelling wordt gewerkt. Ook wordt een lagere kwaliteitspropositie gekozen. Beide hebben geen samenhang met succes, een lagere prijsstelling dan gangbaar is in parallelle formules blijkt wel enige samenhang met een hoge firm performance te hebben.

Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk zich ten opzichte van parallelle (conventionele) formules moeten profileren met een lagere prijsstelling om succesvol te zijn.

De niet op commercie gerichte e-formules met een multi channel merk werken minder samen met andere partijen in the channel (of in bredere zin het waardeweb) dan de commerciële formules die we in paragraaf 10.4 en 10.5 beschreven. Het blijkt echter ook
voor deze klasse e-formules verstandig om allianties met third parties aan te gaan om de klant beter van dienst te kunnen zijn. Dit sluit voor de e-formules van de overheid aan op de stelling van Heene (1995) dat overheidsorganisaties zijn aangewezen op samenwerking met hun omringende organisaties.

_Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk, om succesvol te zijn, actief moeten samenwerken met third parties om de klant beter van dienst te kunnen zijn._

De meeste e-formules vertrouwen op zoekmachines en web indexen voor het genereren van bezoekers, maar gemiddeld genomen wordt de traffic fase onvoldoende ondersteund met maatregelen. Eén op de vier e-formules is dan ook niet effectief in het behalen van zijn trafficoorden. De doelen om bezoekers te informeren en te inspireren worden wel veelal gehaald.

_Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk meer aandacht moeten besteden aan het genereren van traffic om succesvol te zijn._

Een betrouwbare fulfilment en maatregelen om het gebruik te ondersteunen en te leren van de klanten vertonen een duidelijke samenhang met succes. Dit soort maatregelen worden echter maar beperkt genomen. Retention maatregelen worden helemaal nauwelijks genomen. Als e-formules zichzelf ten doel stellen om een relatie op te bouwen slagen zij hier veelal niet in. Een interessante constatering is dat meer dan de helft van de e-formules zichzelf helemaal niet ten doel stelt om een relatie op te bouwen met haar bezoekers en om van hen te leren. Dit is interessant omdat het behalen van retention doelen een sterke samenhang met succes heeft, en derhalve voor deze klasse e-formules één van de interessantste doelstellingen blijkt te zijn.

_Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk zich vooral ten doel moeten stellen via Internet een relatie op te bouwen met hun doelgroep._

_Een andere hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk, om succesvol te zijn, vooral maatregelen moeten nemen op het gebied van fulfilment, gebruiksondersteuning en het leren over de doelgroep._

Over het algemeen ondersteunen de niet op commercie gerichte e-formules met een multi channel merk nauwelijks onderdelen van de customer life cycle met maatregelen. Jammer, want het blijkt dat het nemen van maatregelen ter ondersteuning van meerdere onderdelen van de life cycle ook voor deze klasse formules samenhangt met een hogere firm performance. We kunnen daarom concluderen dat het ook voor een niet commerciële e-formule verstandig is de inrichting van de interactiestructuur te zien als een cyclus van
interactiemomenten, en voldoende maatregelen te nemen om de bezoeker op een gepaste hoeveelheid contactmomenten te kunnen bedienen.

Een hypothese voor vervolgonderzoek is dat niet op verkoop gerichte e-formules met een multi channel merk, om succesvol te zijn, het bedienen van bezoekers moeten beschouwen als een cyclus van interactiemomenten en deze interactiemomenten moeten ondersteunen met maatregelen.

10.7 Tot besluit

In de voorgaande paragrafen beschreven we per individuele strategische- en inrichtingskeuze een reflectie op onze bevindingen. Onze onderzoeksvraag was echter geformuleerd als:

*Welke (combinatie van) keuzes op het gebied van strategie en inrichting van een e-formule hangen samen met het succes van de e-formule.*

Daarom is het interessant om te kijken of een (en zo ja welke) *combinatie* van keuzes een e-formule optimal succesvol maakt. Voor alledrie de onderzochte klassen e-formules hebben we gevonden dat een combinatie inderdaad succesvol is, maar de combinaties blijken wel te verschillen per klasse. Deze combinaties hebben we vastgelegd in de hypothetische succesmodellen, de hypothetische archetypes:

**Hypothetisch Archetype 1:**
Een succesvolle op verkoop gerichte e-formule met een multi channel merk kiest voor productvernieuwing, individuele prijstelling, conversion maatregelen, learn maatregelen, samenwerking met het indirecte dealer- of verkoopkanaal, gaat allianties aan en kiest niet voor het rechtvaardigen van investeringen via parallelle formules.

**Hypothetisch Archetype 2:**
Een succesvolle op verkoop gerichte e-formule met een specifiek Internet brand werkt samen met third parties en ondersteunt vooral de fulfil en use onderdelen van de life cycle met voldoende maatregelen.

**Hypothetisch Archetype 3:**
Een succesvolle niet op commercie gerichte e-formule met een multi channel merk kiest ervoor zich te positioneren in de market arena met een lage prijstelling, verdient zijn investeringen terug door een stijging van het aanzien en de waarde van de organisatie en door efficiëntie in de primaire en klantinteractie processen, werkt actief samen met third parties om de bezoeker een bredere value proposition te bieden en ondersteunt de klant bij het gebruik van de producten en diensten die geboden worden.
E-formules met een grotere mate van fit met het archetype van hun klasse, blijken significant vaker een hoog succes te melden. We kunnen hieruit concluderen dat het echte succes niet zit in het maken van ‘een’ goede keuze, maar in het maken van de juiste samenstelling van keuzes.

We sluiten deze samenvatting af met de relativeerende constatering dat het succes van een e-formule niet alleen samenhangt met strategische en inrichtingskeuzes, maar vermoedelijk ook met andere soorten succesfactoren zoals de kwaliteit en betrokkenheid van het management, de beschikbaarheid van kerncompetenties om de primaire processen optimaal te kunnen uitvoeren, of de vormgeving en user experience van de site. Daarom sluiten we af met de suggestie om in vervolgonderzoek meer inzicht te verwerven in de synergie tussen dit soort uiteenlopende soorten succesfactoren, als aanvulling op de eerste stap die wij nu gezet hebben: de synergie tussen keuzes op het gebied van strategie en inrichting van de e-formule.
11 APPENDICES

11.1 How to read a boxplot

The number of cases is indicated at the bottom (1129). Fifty percent of these cases are within the box, ninety five percent between the 'T' and the vertically flipped 'T'. The width of the box (and the 'T') gives a visual indication of the dispersal. The black broad bar indicates the median. Outliers are illustrated by a ‘*’ or a ‘0’.

Figure 76: Example: how to read a boxplot
11.2 Tables

Tables with background information on factor loadings, scales and the instrument to measure representativeness of the respondents.

11.2.1 Factor loadings for Customer Life Cycle

<table>
<thead>
<tr>
<th>Rotated Component Matrix Likert Scales Variables Strategic Choises and Objectives on supporting Customer Life Cycle</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the e-formula mostly offer services or products you also offer via conventional channels or mostly new products and services?</td>
<td>0.05</td>
<td>0.13</td>
<td>0.21</td>
<td>0.72</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Does the e-formula serve the same markets or target groups as you serve via existing channels or are you serving new markets and target groups?</td>
<td>0.01</td>
<td>0.20</td>
<td>-0.02</td>
<td>0.05</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>A key element of our overall business strategy is to offer lower prices than competitors.</td>
<td>0.01</td>
<td>0.12</td>
<td>0.11</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>A key element of our overall business strategy is to offer better-quality products or services than competitors.</td>
<td>0.71</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>A key element of our overall business strategy is to offer more differentiation or customization of the product or service than competitors.</td>
<td>0.75</td>
<td>0.05</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>A key element of our overall business strategy is to offer more differentiation or customization of promotions than competitors.</td>
<td>0.74</td>
<td>0.04</td>
<td>0.11</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>A key element in the strategy of our e-formula is to offer lower prices than competitors.</td>
<td>0.01</td>
<td>0.13</td>
<td>0.05</td>
<td>0.14</td>
<td>0.14</td>
<td>0.14</td>
<td>0.14</td>
<td>0.14</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>A key element in the strategy of our e-formula is to offer better-quality products or services than competitors.</td>
<td>0.76</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>A key element in the strategy of our e-formula is to offer more differentiation or customization of the product or service than competitors.</td>
<td>0.73</td>
<td>0.06</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>A key element in the strategy of our e-formula is to offer more differentiation or customization of promotions than competitors.</td>
<td>0.77</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>Investments in our e-formula are justified by means of the (expected) turnover via online sales.</td>
<td>0.07</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Investments in our e-formula are justified by means of the (expected) turnover via conventional sales channels.</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Investments in our e-formula are justified by means of the (expected) transformation of turnover via conventional sales channels towards online sales.</td>
<td>0.08</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
</tr>
<tr>
<td>Investments in our e-formula are justified by means of the (expected) incomes via renting (advertising) space within your e-formula.</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Investments in our e-formula are justified by means of the (expected) incomes via affiliation programmes.</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Investments in our e-formula are justified by means of the (expected) efficiency of your primary business processes.</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>Investments in our e-formula are justified by means of the (expected) efficiency of our marketing communication processes and/or savings on promotion budgets.</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
</tr>
</tbody>
</table>
Investments in our e-formula are justified by means of the (expected) increase of the value of our organization (i.e. by society, investors, shareholders etc.).

<table>
<thead>
<tr>
<th>Goal</th>
<th>0.00</th>
<th>0.04</th>
<th>-0.19</th>
<th>0.27</th>
<th>-0.03</th>
<th>-0.07</th>
<th>0.01</th>
<th>0.16</th>
<th>0.17</th>
<th>0.55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our e-formula aims to stimulate self-service by visitors and customers via the e-formula.</td>
<td>-0.16</td>
<td>-0.61</td>
<td>-0.06</td>
<td>0.12</td>
<td>0.07</td>
<td>0.18</td>
<td>-0.01</td>
<td>0.12</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Our e-formula aims to maximize the number of visitors.</td>
<td>0.04</td>
<td>0.04</td>
<td>0.24</td>
<td>0.23</td>
<td>0.14</td>
<td>-0.48</td>
<td>-0.12</td>
<td>0.28</td>
<td>0.14</td>
<td>-0.11</td>
</tr>
<tr>
<td>Our e-formula aims to reach a bigger target group.</td>
<td>0.09</td>
<td>0.13</td>
<td>0.32</td>
<td>-0.02</td>
<td>-0.05</td>
<td>0.50</td>
<td>0.06</td>
<td>0.29</td>
<td>0.06</td>
<td>0.27</td>
</tr>
<tr>
<td>Our e-formula aims to increase the amount of information (about products, services, the organization etc.) available to visitors.</td>
<td>0.09</td>
<td>0.04</td>
<td>-0.19</td>
<td>0.14</td>
<td>-0.34</td>
<td>0.77</td>
<td>0.08</td>
<td>-0.19</td>
<td>0.04</td>
<td>0.08</td>
</tr>
<tr>
<td>Our e-formula aims to make information (about products, services, the organization etc.) more easily available.</td>
<td>0.12</td>
<td>0.16</td>
<td>-0.11</td>
<td>0.06</td>
<td>-0.07</td>
<td>0.77</td>
<td>-0.06</td>
<td>-0.14</td>
<td>0.04</td>
<td>0.08</td>
</tr>
<tr>
<td>Our e-formula aims to offer a better assortment.</td>
<td>0.12</td>
<td>0.29</td>
<td>0.19</td>
<td>0.19</td>
<td>0.16</td>
<td>0.23</td>
<td>0.17</td>
<td>0.24</td>
<td>0.11</td>
<td>-0.03</td>
</tr>
<tr>
<td>Our e-formula aims to improve the number of customers by stimulating a first purchase.</td>
<td>0.12</td>
<td>0.16</td>
<td>0.76</td>
<td>0.15</td>
<td>0.98</td>
<td>0.49</td>
<td>0.10</td>
<td>0.95</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Our e-formula aims to increase turnover per customer by stimulating cross-selling of products and services.</td>
<td>0.10</td>
<td>0.18</td>
<td>0.65</td>
<td>0.28</td>
<td>0.16</td>
<td>-0.03</td>
<td>0.12</td>
<td>-0.07</td>
<td>0.10</td>
<td>0.06</td>
</tr>
<tr>
<td>Our e-formula aims to increase turnover per customer by stimulating follow-up purchasing of products and services.</td>
<td>0.11</td>
<td>0.20</td>
<td>0.50</td>
<td>0.39</td>
<td>0.12</td>
<td>-0.02</td>
<td>0.07</td>
<td>-0.04</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Our e-formula aims to improve the information about delivery and fulfilment (such as availability and order status).</td>
<td>0.01</td>
<td>0.44</td>
<td>0.43</td>
<td>0.20</td>
<td>0.12</td>
<td>0.05</td>
<td>0.19</td>
<td>0.05</td>
<td>0.21</td>
<td>0.04</td>
</tr>
<tr>
<td>Our e-formula aims to achieve lower fulfilment cost per order than via conventional channels.</td>
<td>0.06</td>
<td>0.61</td>
<td>0.41</td>
<td>0.14</td>
<td>0.08</td>
<td>-0.03</td>
<td>0.15</td>
<td>0.11</td>
<td>0.04</td>
<td>0.06</td>
</tr>
<tr>
<td>We aim at a zero error level in the fulfilment of orders.</td>
<td>0.14</td>
<td>0.45</td>
<td>0.34</td>
<td>0.04</td>
<td>-0.03</td>
<td>0.09</td>
<td>0.02</td>
<td>0.03</td>
<td>0.01</td>
<td>-0.02</td>
</tr>
<tr>
<td>Our e-formula aims to improve the value of products-services, as perceived by our visitors-customers.</td>
<td>0.10</td>
<td>0.21</td>
<td>0.25</td>
<td>0.26</td>
<td>-0.18</td>
<td>0.31</td>
<td>0.05</td>
<td>0.10</td>
<td>0.01</td>
<td>0.27</td>
</tr>
<tr>
<td>Our e-formula aims to achieve lower after-sales and service costs than via conventional channels (such as help desks, call centres etc.).</td>
<td>0.10</td>
<td>0.70</td>
<td>0.11</td>
<td>0.27</td>
<td>0.11</td>
<td>-0.01</td>
<td>0.16</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.08</td>
</tr>
<tr>
<td>Our e-formula aims to achieve better after-sales and customer service level than possible via conventional channels.</td>
<td>0.09</td>
<td>0.63</td>
<td>0.25</td>
<td>0.32</td>
<td>0.07</td>
<td>0.03</td>
<td>0.07</td>
<td>0.00</td>
<td>0.06</td>
<td>0.17</td>
</tr>
<tr>
<td>Our e-formula aims to offer high quality online support while using our products or services.</td>
<td>0.12</td>
<td>0.51</td>
<td>0.14</td>
<td>0.44</td>
<td>0.13</td>
<td>0.09</td>
<td>0.11</td>
<td>0.01</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>Our e-formula aims to involve customers in product development and/or market research.</td>
<td>0.05</td>
<td>0.19</td>
<td>0.05</td>
<td>0.69</td>
<td>0.12</td>
<td>-0.02</td>
<td>0.06</td>
<td>-0.02</td>
<td>0.11</td>
<td>0.16</td>
</tr>
<tr>
<td>Our e-formula aims to learn from our target groups (like their search-, purchase- and use behaviour).</td>
<td>0.07</td>
<td>0.24</td>
<td>0.17</td>
<td>0.67</td>
<td>0.11</td>
<td>0.05</td>
<td>0.08</td>
<td>0.04</td>
<td>0.11</td>
<td>0.12</td>
</tr>
<tr>
<td>Our e-formula aims to build long-lasting, loyal relations with our target groups.</td>
<td>0.12</td>
<td>0.19</td>
<td>0.11</td>
<td>0.69</td>
<td>0.00</td>
<td>0.19</td>
<td>-0.06</td>
<td>0.09</td>
<td>0.01</td>
<td>0.04</td>
</tr>
<tr>
<td>We aim to increase the ratio of repeat site visitors versus the number of first-time visitors.</td>
<td>0.10</td>
<td>0.08</td>
<td>0.19</td>
<td>0.56</td>
<td>0.06</td>
<td>0.18</td>
<td>-0.03</td>
<td>0.11</td>
<td>0.03</td>
<td>-0.04</td>
</tr>
</tbody>
</table>

Figure 77: ‘Principale Componenten Analyse’ on all likert scale strategic choises and aim to support Customer Life Cycle
### 11.2.2 Reliability of constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>ocalliam</td>
<td>ocallia1, ocallia2, ocallia4</td>
<td>.78</td>
</tr>
<tr>
<td>sinvadaf</td>
<td>sinvadv, sinvaff</td>
<td>.73</td>
</tr>
<tr>
<td>sinvff</td>
<td>sinvffb, sinvffm</td>
<td>.62</td>
</tr>
<tr>
<td>sconig</td>
<td>sconivg, sconislg</td>
<td>.66</td>
</tr>
<tr>
<td>sconie</td>
<td>sconivie</td>
<td>.73</td>
</tr>
<tr>
<td>successcm</td>
<td>rprofit, rturnov, rproddy, rmrktshr, rsharval, rcustsat</td>
<td>.88</td>
</tr>
<tr>
<td>successnp</td>
<td>rprodcy, rsharval, rcustsat</td>
<td>.76</td>
</tr>
</tbody>
</table>

Figure 78: Combine items into constructs

### 11.2.3 Instrument to measure representativeness of population

<table>
<thead>
<tr>
<th>Section of CLC</th>
<th>Functionalities</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>Are &quot;keywords&quot; defined in the homepage's source?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Consider &amp; Inspire</td>
<td>Is financial information for investment relations available?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>Is the site being used for recruitment of employees?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>Are both price and graphical illustrations of products available?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>Is contact information presented on the home page?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Conversion</td>
<td>Does the site communicate about privacy policy on the home page?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>Are &quot;terms and conditions&quot; communicated on the home page?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Order</td>
<td>Does the site have a Shopping Cart?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Fulfil</td>
<td>Is tracking and tracing information available?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Use</td>
<td>Is an FAQ-section available about:</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>- Technical support?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>- Using the product?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Retention</td>
<td>Is a login function for registered users available?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Learning</td>
<td>Is a subscription service for e-mail newsletters available?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Overall functional</td>
<td>Can online feedback be provide via:</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>- an online questionnaire?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>- a guestbook?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>Is a search engine available?</td>
<td>yes/no</td>
</tr>
<tr>
<td></td>
<td>Is a site map available?</td>
<td>yes/no</td>
</tr>
</tbody>
</table>

Figure 79: Instrument to measure representativeness
### 11.3 Questionnaire

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sproduct</td>
<td>Does the e-formula mostly offer services or products you also offer via conventional channels or mostly new products and services?</td>
</tr>
<tr>
<td>Smarket</td>
<td>Does the e-formula serve the same markets or target groups as you serve via existing channels or are you serving new markets and target groups?</td>
</tr>
<tr>
<td>Sconprcg</td>
<td>A key element of our overall business strategy is to offer lower prices than competitors.</td>
</tr>
<tr>
<td>Sconprce</td>
<td>A key element in the strategy of our e-formula is to offer lower prices than competitors.</td>
</tr>
<tr>
<td>Sconquag</td>
<td>A key element of our overall business strategy is to offer better-quality products or services than competitors.</td>
</tr>
<tr>
<td>Sconquae</td>
<td>A key element in the strategy of our e-formula is to offer better-quality products or services than competitors.</td>
</tr>
<tr>
<td>Sconivlg</td>
<td>A key element of our overall business strategy is to offer more differentiation or customization of the product or service than competitors.</td>
</tr>
<tr>
<td>Sconivle</td>
<td>A key element in the strategy of our e-formula is to offer more differentiation or customization of the product or service than competitors.</td>
</tr>
<tr>
<td>Sconiadg</td>
<td>A key element of our overall business strategy is to offer more differentiation or customization of promotions than competitors.</td>
</tr>
<tr>
<td>Sconiade</td>
<td>A key element in the strategy of our e-formula is to offer more differentiation or customization of promotions than competitors.</td>
</tr>
<tr>
<td>Sconivlg</td>
<td>A key element of our overall business strategy is to offer more differentiation or customization of the service level than competitors.</td>
</tr>
<tr>
<td>Sconisle</td>
<td>A key element in the strategy of our e-formula is to offer more differentiation or customization of the service level than competitors.</td>
</tr>
<tr>
<td>Sinvtoos</td>
<td>Investments in our e-formula are justified by means of the (expected) turnover via online sales.</td>
</tr>
<tr>
<td>Sinvtocs</td>
<td>Investments in our e-formula are justified by means of the (expected) turnover via conventional sales channels.</td>
</tr>
<tr>
<td>Sinvtotr</td>
<td>Investments in our e-formula are justified by means of the (expected) transformation of turnover via conventional sales channels towards online sales.</td>
</tr>
<tr>
<td>Sinvadv</td>
<td>Investments in our e-formula are justified by means of the (expected) incomes via renting (advertising) space within your e-formula.</td>
</tr>
<tr>
<td>Sinvaff</td>
<td>Investments in our e-formula are justified by means of the (expected) incomes via affiliation programmes.</td>
</tr>
<tr>
<td>Sinveffb</td>
<td>Investments in our e-formula are justified by means of the (expected) efficiency of your primary business processes.</td>
</tr>
<tr>
<td>Sinveffm</td>
<td>Investments in our e-formula are justified by means of the (expected) efficiency of our marketing communication processes and/or savings on promotion budgets.</td>
</tr>
<tr>
<td>Sinval</td>
<td>Investments in our e-formula are justified by means of the (expected) increase of the value of our organization (i.e. by society, investors, shareholders etc.).</td>
</tr>
<tr>
<td>Saelfsrv</td>
<td>Our e-formula aims to stimulate self-service by visitors and customers via the e-formula.</td>
</tr>
<tr>
<td>Raelfsrv</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DTmaximz</td>
<td>Our e-formula aims to maximize the number of visitors.</td>
</tr>
<tr>
<td>BTmaximz</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DTRbigger</td>
<td>Our e-formula aims to reach a bigger target group.</td>
</tr>
<tr>
<td>RTbigger</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DTamount</td>
<td>The number of visitors we are aiming to receive in our e-formula per month is:</td>
</tr>
<tr>
<td>BTamount</td>
<td>The number of visitors we actually receive in our e-formula per month is:</td>
</tr>
<tr>
<td>DTpercq</td>
<td>The percentage of the target group we want to visit the e-formula each month:</td>
</tr>
<tr>
<td>BTPercq</td>
<td>The percentage of the target group that actually visits the e-formula each month:</td>
</tr>
<tr>
<td>DConvsos</td>
<td>The intended percentage of visitors that place an online order (online conversion ratio)</td>
</tr>
<tr>
<td>E-FORMULAS - STRATEGY DESIGN SUCCESS</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td></td>
</tr>
<tr>
<td>BCconvos</td>
<td>The actual percentage of visitors that place an online order (online conversion ratio)</td>
</tr>
<tr>
<td>DConvcs</td>
<td>The intended percentage of visitors that buy goods or services via a conventional channel as a result of visiting the e-formula (offline conversion ratio)</td>
</tr>
<tr>
<td>BCConvcs</td>
<td>The actual percentage of visitors that buy goods or services via a conventional channel as a result of visiting the e-formula (offline conversion ratio)</td>
</tr>
<tr>
<td>DCfirst</td>
<td>Our e-formula aims to improve the number of customers by stimulating a first purchase.</td>
</tr>
<tr>
<td>BCfirst</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DCross</td>
<td>Our e-formula aims to increase turnover per customer by stimulating cross-selling of products and services.</td>
</tr>
<tr>
<td>BCross</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DCrepeat</td>
<td>Our e-formula aims to increase turnover per customer by stimulating follow-up purchasing of products and services.</td>
</tr>
<tr>
<td>BCrepeat</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DMavaili</td>
<td>Our e-formula aims to increase the amount of information (about products, services, the organization etc.) available to visitors.</td>
</tr>
<tr>
<td>BMavaili</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DMavaliel</td>
<td>Our e-formula aims to make information (about products, services, the organization etc.) more easily available.</td>
</tr>
<tr>
<td>BMavaliel</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DMassort</td>
<td>Our e-formula aims to offer a better assortment.</td>
</tr>
<tr>
<td>BMassort</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DFinfor</td>
<td>Our e-formula aims to improve the information about delivery and fulfillment (such as availability and order status)</td>
</tr>
<tr>
<td>BCRepeat</td>
<td>Intended or not, Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DFlowcst</td>
<td>Our e-formula aims to achieve lower fulfillment cost per order than via conventional channels.</td>
</tr>
<tr>
<td>BFlowcst</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DProblm</td>
<td>We aim at a zero error level in the fulfillment of orders.</td>
</tr>
<tr>
<td>BProblm</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DJonluse</td>
<td>Our (core) products/services are to be used online (such as online news services, online banking, online television shows etc.)</td>
</tr>
<tr>
<td>BJonluse</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DJImpvr</td>
<td>Our e-formula aims to improve the value of products/services, as perceived by our visitors/customers.</td>
</tr>
<tr>
<td>BUImpvr</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DJsrvcst</td>
<td>Our e-formula aims to achieve lower after-sales and service costs than via conventional channels (such as help desks, call centres etc.)</td>
</tr>
<tr>
<td>BJsrvcst</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DJsrvqlt</td>
<td>Our e-formula aims to achieve better a after-sales and customer service level than possible via conventional channels.</td>
</tr>
<tr>
<td>BJsrvqlt</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DJSupuse</td>
<td>Our e-formula aims to offer high quality online support while using our products or services.</td>
</tr>
<tr>
<td>BJSupuse</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DRprodin</td>
<td>Our e-formula aims to involve customers in product development and/or market research.</td>
</tr>
<tr>
<td>BRprodin</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DRbehvcs</td>
<td>Our e-formula aims to learn from our target groups (like their search-, purchase- and use behaviour).</td>
</tr>
<tr>
<td>BRbehvcs</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DRloyrel</td>
<td>Our e-formula aims to build long-lasting, loyal relations with our target groups.</td>
</tr>
<tr>
<td>BRloyrel</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>DRrepvis</td>
<td>We aim to increase the ratio of repeat site visitors versus the number of first-time visitors.</td>
</tr>
<tr>
<td>BRrepvis</td>
<td>Intended or not, to what extent have you achieved this objective?</td>
</tr>
<tr>
<td>MTconvad</td>
<td>adverts and commercials in mass media like radio, television and print.</td>
</tr>
<tr>
<td>MTconvdm</td>
<td>conventional direct mail to potential or current visitors.</td>
</tr>
<tr>
<td>MTinetad</td>
<td>advertising on the web, like banners or link exchanges.</td>
</tr>
</tbody>
</table>
APPENDICES

**MTedm** direct mail via email to potential or current visitors.

**MTsearc1** announcing the web address to appropriate web yellow pages and search engines.

**MTsearc2** preparing the homepage (or other appropriate pages) in such a way that they can be better indexed by search engines and robots.

**MTspnscn** offering sponsored content or infomercials on appropriate (community) sites.

**MTdiscgr** participating in online discussions and news groups that the target group might join.

**MTagffrg** an affiliation program, so third parties can place entries to your e-formula (in exchange for some kind of compensation)

**MMchoose** We designed the e-formula in such a way that a visitor can easily learn about or choose the product or service he wants.

**MMinttls** The e-formula contains an intelligent tool to guide visitors through their selection process.

**MMconfig** The e-formula contains special facilities to aid visitors in specifying or configuring a tailor-made product or service.

**MCsfrtt** Our e-formula contains special functions or actions to lower the threshold for first-time visitors to order a product or service.

**MCrepeat** Our e-formula contains special functions or actions to stimulate customers to place repeat orders.

**MCtrust** Our e-formula contains special (and clearly visible) means to increase the perceived trust in the e-formula.

**MCprvcy** We operate our e-formula based on a (clearly visible) privacy policy.

**MCross** Cross-selling products/services are clearly presented along with the appropriate products/services.

**MOallonl** All presented products/services can be ordered online within the e-formula.

**MOprtonl** Our e-formula links our visitors who want to order online directly with online order systems of third parties (like partners, dealers and intermediaries)

**MOcnvout** Our e-formula has a special functionality to actively encourage visiting physical outlets.

**MFonldis** The product/service can be distributed via electronic means to users.

**MFretour** Our e-formula has standard operating procedures to facilitate the easy return of goods.

**MUqualitiesp** Our e-formula offers online support for using our products or services (such as online manuals, helpdesk via email etc.).

**MUcompln** Our e-formula provides for complaints to be handled in accordance with generally accepted guidelines.

**MRidrepv** Within our e-formula we can identify if a visitor is a first-time visitor or a frequent visitor.

**MRidrepc** Within our e-formula we can identify if a visitor is just an (anonymous) visitor or a (well-known) contact.

**MRscont** Within our e-formula visitors can easily be triggered to make follow-up appointments.

**MRsatfor** Via the e-formula we collect information on customer satisfaction with the e-formula.

**MRsatprd** Via the e-formula we collect information on customer satisfaction with products and services.

**MRprfstat** We collect information about visitors by means of questionnaires.

**MRprfclr** We collect information about visitors by means of their surfing behaviour.

**MRmulti2** We combine information we collect about visitors with our other (customer) information systems.

**MRloyalt** Visitors can actively share information with other visitors within our e-formula.

**MOeform** The e-formula is being operated by

**OCsuppli** I would describe the changes in our co-operation with our suppliers as a result of Internet as: (NB: with suppliers we mean suppliers of parts or information you need to operate your primary processes)

**OCchan1** I would describe the changes in our co-operation with our indirect channel/dealer channel as:

**OCallia1** We started alliances with third parties to offer a broader service provision to the target groups than we would be able to do alone.

**OCallia2** We started alliances with third parties to increase shared knowledge of the target groups.

**OCallia4** We started alliances with third parties to increase the available capital.

**OBrand** The brand of the e-formula is

**OScope** Our e-formula is aimed at
E-FORMULAS - STRATEGY DESIGN SUCCESS

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rmktshr</td>
<td>We managed to achieve a higher market share than would have been possible without an e-formula.</td>
</tr>
<tr>
<td>Rprofit</td>
<td>We managed to achieve a higher profit than would have been possible without an e-formula.</td>
</tr>
<tr>
<td>Rcustsat</td>
<td>We managed to achieve a higher level of customer satisfaction than would have been possible without an e-formula.</td>
</tr>
<tr>
<td>Rsharval</td>
<td>We managed to achieve a higher (shareholder) value of the company than would have been possible without an e-formula.</td>
</tr>
<tr>
<td>Rprodcy</td>
<td>We managed to achieve a higher productivity (turnover per employee) than would have been possible without an e-formula.</td>
</tr>
<tr>
<td>Rturnovr</td>
<td>We managed to achieve a higher turnover than would have been possible without an e-formula.</td>
</tr>
</tbody>
</table>

OPorgdsc Please describe briefly what your e-formula offers your visitors:

Cb2bb2c Most visitors of our e-formula are:

Calize The number of employees (converted to full-time employment equivalents) working to manage, operate and maintain the e-formula is:

Csector The sector our e-formula operates in is best described as:

Cmturity Our e-formula started in:

Cturnovr The average turnover of our e-formula (in US$/year):

Cemail I would like to be informed about the progress and results of this research via the email address:

Cfunresp My position is:

Remarks Please add any remarks below:

The answer categories for questions with a five point likert scale:

- from “All existing” to “All new” for innovation questions;
- from “Completely disagree” to “Completely agree” for statement questions;
- from “Did not achieve at all” to “Achieved much more than expected” for questions on achieving objectives and achieving results.

The complete questionnaire as it appeared online for the respondents is available via www.renejansen.com.
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