

## Building a home of one's own: Exploring the customer perceived value during the process of establishing and inhabiting a new prefabricated detached house in Finland

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#### Abstract:

With its annual production turnover exceeding €700 million, the production of single-family detached houses is a significant industry in Finland. Annually, over 10,000 single-family prefabricated detached houses (PDH) are built, 60 percent of them by individual families.

Nevertheless, scientific research in the marketing of detached houses is scarce. Considering the industrial significance of the field and the importance building a PDH has for an individual family, it is essential to understand the commercial process which results in individual families realizing their dreams of building a single-family PDH.

In this thesis, the acquisition and building of a house and inhabiting it are considered a continuum which creates value for the customer. The theoretical framework is based on the view that customers themselves are the creators of this value.

To examine the multidimensional nature of value, this thesis combines environmental psychology's conception of the physical environment as a social construction with value creation theory in which building one's own house is considered a service experience. The aim is to understand value dimensions from the customers' perspective. Therefore, the empirical research is based on interviews with nine families.

This thesis presents an overview of the production-orientated history of the detached housing industry and the process of building a house. This information is helpful in understanding the context of the study and the conclusions and managerial implications presented.

The study presents a model of how the customer experience of value constructs emerges. The customer's previous housing experience forms a housing dream, i.e., value expectation, which is used as the basis for evaluating companies' value proposals. The customer's value expectations can be divided into two categories: functional and emotional. The most important being the pursuit of independence.

The customer's previous housing experiences and the resulting value expectations are an important part of the final value experience and should be considered in value creation models better than at present.

The study suggests that house manufacturers should develop methods for discovering the customers' value expectations during initial contact. The customers' pursuit of independence should be supported by offering them the opportunity to influence the planning of the house.

House manufacturers learn from their customers sporadically, and it should be considered whether transferring from production-orientated logic to true customer-orientated operations would be a competitive advantage.

#### Keywords:

Prefabricated detached house, - industry, production orientated view, customer centered view, Goods-Dominant logic, Service-Dominant logic, co-creation of value, customer focus, customer perceived value, value dimensions and - constructs, emotional and functional value

## CONTENTS

1	INTRODUCTION1		
	1.1.	Author's background 1	
	1.2.	Research problem2	
	1.3. The aims of the study		
	1.4. S	tructure of this thesis and theoretical approach4	
	1.5.	Concepts and definitions5	
2	CUS	TOMER PERCEIVED VALUE7	
	2.1.	Production orientated view in marketing	
	2.2.	Production orientated view versus Goods-Dominant logic9	
	2.3.	Service-Dominant logic 11	
	2.4.	Co-creation of value in Service-Dominant logic14	
	2.5.	From Service-Dominant logic towards customer orientated view16	
	2.6.	Production orientated view versus customer orientated view in value creation18	
	2.7.	The nature of customer perceived value 20	
	2.8.	Customer perceived value as a service experience in inhabiting 21	
3	THE	26 PREFABRICATED HOUSE INDUSTRY IN FINLAND	
	3.1.	Pre-war and war years26	
	3.2.	Period of reconstruction27	
	3.3.	The period of 'Great Migration'29	
	3.4.	Towards the new Millennium	
4	THE	2 PROCESS OF CONSTRUCTING	
	4.1.	Construction of a detached house – The builder's process	
	4.2.	Organisation	
	4.3.	Benefits and drawbacks of a single-family PDH package for the builder35	
	4.4.	The decision process leading to building a detached house	
5	SUN	IMARY OF CHAPTERS THREE AND FOUR40	
6	ME	THODOLOGY43	
	6.1.	The method chosen43	
	6.2.	Conducting the interview	
	6.3.	The sample45	
	6.4.	Background data45	

	6.5.	Inquiry and interview process		
	6.6.	Analysis and interpretation of the data47		
	6.7.	7. Reliability and validity of the study		
		6.7.1.	Reliability	52
		6.7.2.	Validity	53
7	FIN	DINGS	S	
	7.1.	Interp	retation of the data	55
	7.2.	The co	onstructs	56
	7.3.	Summ	ary of the findings	59
8	DIS	CUSSI	ON OF THE FINDINGS	61
	8.1. Value dimensions		61	
		8.1.1.	Emotional Values	61
		8.1.2.	Functional values	63
9	MAI	NAGEI	RIAL IMPLICATIONS	68
10	SUG	GEST	IONS FOR FUTURE RESEARCH	72
11	REF	EREN	ICES	73

## TABLES

Table 1	Detached and semi-detached houses by building year (Statistics Finland) . 28
Table 2	Benefits and drawbacks of a house package and of independent site building
Table 3	Basic data of the projects from the families interviewed 46
Table 4	Constructs
Table 5	Negative cases51
Table 6	Omakotitalorakentajan haastattelulomake82
Table 7	Omakotitalorakentan taustatietolomake83

### FIGURES

Figure 1	Model of a new single-family PDH process7
Figure 2	Value creation of firm-customer interaction and consumption (adapted from Grönroos, 2008b:22)17
Figure 3	A framework for how service experience is linked to value in use (adapted from Sandström, Edvardsson, Kristensson and Magnusson, 2008:121)24
Figure 4	Stages in detached house building project34
Figure 5	These are the buyer's affiliations when building independently (without a house manufacturer)35
Figure 6	The buyer's contractual affiliations in a building mode where the major part of the project is supplied by the house manufacturer
Figure 7	Modified framework how customer experience of value construct emerges 66

### **1** INTRODUCTION

From 2000 to 2008 the number of detached houses built in Finland was between 10,700 and 16,500 units annually. At its peak in 2006, a total of 16,500 houses were built of which 11,000 were prefabricated, making prefabricated detached house production a significant business in Finland, a 735 million euro turnover in 2008 (Pientalotalobarometri 1/2009). By far the majority of the prefabricated houses are built by single families for their own use, continuing the long tradition in Finland of establishing a house of one's own (Saarikangas, 1993).

Families in Finland are building thousands of prefabricated detached houses annually, however there are only a few academic publications concentrating on the financial side of this industry even though the research on housing itself has a long tradition in this country. Furthermore, no academic research could be found that has examined the marketing side of the prefabricated detached housing industry.

We can consider a prefabricated house as a product whose value is amassed at the moment of purchase that is then built into the house during the manufacturing phase. When the inhabitants begin living in the house and make use of its features, its amassed value emerges. We can therefore identify two perspectives to value creation, seen as opposites: the marketer's view; and, the customer's i.e. inhabitant's view. The marketer has to understand the customer's values and perspective in the value creation process in order to create better service and increase customer satisfaction. Thus, understanding customer values is imperative in order to create sales proposals which will then lead to competitive advantage in the market (Lapierre, 2000:122).

There was very little available academic literature or any other objective material for that matter, about the markets in Finland and therefore it became necessary to create new knowledge to better understand the basics of the detached prefabricated housing industry. At the very beginning of this study, a knowledge gap was identified, and accordingly this study also contributes to knowledge creation.

#### 1.1. Author's background

The author is familiar with the subject matter from his education and professional experience. He completed a master's degree in Architecture at the Tampere University of Technology in 1990 and an MBA at the Helsinki University of Technology in 2000. Also in 1995 the author completed the Senior Certified Building Developer degree at the Helsinki University of Technology. The author has been employed for seven years in contract building both in Finland and abroad. During the last six years the author has held the position of the Managing Director of the Finnish Housing Fair Co-operative Organisation. Further, he has been active for three years in the Committee of Housing Design of the Finnish Association of Architects (SAFA), and appeared as a speaker at several professional seminars on housing at the Helsinki University of Technology.

While in the position of Managing Director of the Finnish Housing Fair Co-operative Organisation, the author has overseen the construction of approximately 600 houses in the differing Housing Fair developments, over 200 of which were new single-family detached homes. Through his professional commitments, the author has had the opportunity to become closely acquainted with not only sales and marketing in the detached housing industry, but also the efforts of the numerous families in the process of building their own homes. In this way, the author's professional education and work experience have deepened his understanding of detached house construction, the object of this study. Take note that the author in his professional work is independent from both the detached housing industry and the individual detached house builders. The perspective of this study is new to the author, thereby offering a learning opportunity through the formulation of this scientific frame of reference and the execution of empirical research. This will allow him to safeguard a fresh, neutral and objective standpoint as regards the object of the study.

#### 1.2. Research problem

Producing and constructing detached houses is a significant business in Finland. However, in industry and commercial science there is very little research in this area, even though there is a long tradition of research in Finland in the area of housing itself. The most recent bibliography on housing related research is from 2007 and is published as a part of the Hyvä asuminen 2010 (Good Housing 2010) program. Researcher Anne Holoppa, Helsinki University of Technology, Center for Urban and Regional Studies (YTK), published a summary of all monographs, report type publications, guides and dissertations plus periodical and statistical catalogues released after 2000. The material was gathered using the Linda union catalogue of Finnish University Libraries which contains a fairly comprehensive collection of Finnish publications including bibliographical data from the libraries of Finnish Universities, the Parliament of Finland and Statistics Finland. Additionally, it contains bibliographical data of the Fennica database which is the National Bibliography of Finland.

The research conducted has been divided into seven main groups:

- 1) Residential areas and environments
- 2) Inhabitant groups
- 3) Development of housing, house building and renovation
- 4) Steering of house planning and building
- 5) Habits and styles related to dwellings
- 6) Housing market and financing
- 7) Statistical and periodical publications

After 2000, the bibliography shows that altogether 1,156 studies were conducted. Of these only the economic studies can be regarded as being related to the science of marketing as they cover the necessary subject areas such as the buying of stocks in a housing cooperative and policies related to state-subsidised loans, recession and wellbeing changes, and risk and profit aspects in the housing market.

However, despite the wide research on housing, no academic research on adapting the marketing discipline could be found. Marketing research is important because it could be utilised to improve value proposals to increase customer perceived value. From the customer's perspective, the purchasing and constructing requires a significant investment and extraordinary effort.

It is commonly known that buying or constructing a house of one's own is the most significant investment a family can make. Usually one family constructs only one detached house, making it to them a unique process, whereas the logic of prefabricated house production is similar to any industry based on standardisation, serial production and gaining economies of scale. Thus, two very different perspectives to the realisation process of a detached house can be identified: the production orientated view and the customers'. This study emphasizes the customers' orientated view.

For a family, establishing a new house is a linear continuum of purchasing, constructing and finally, habitation, i.e. living in their own new single-family detached house. The purchasing and construction phases could be seen as an unavoidable necessity in order to fulfil the dream of living in one's own home, and this pragmatic description is not only in line with everyday experience, but also with Grönroos statement that customers are the creators of value for themselves (2008a:1). Since the customers themselves create value, organisations have to understand what these value elements are in order to create proposals that maximize them.

Even though the customer perceived value has become a popular concept in marketing research, the definition of concept of 'perceived value' still remains unresolved (Sanchez-Fernandez and Inestia-Bollo, 2007:429). There are many definitions for the customer perceived value (Heinonen, 2004:205), and even more literature that appears to be 'confusing and in some cases appears conceptually self-contradictory' (Lin, Sher and Shih, 2005: 319). The object of this study, one's own home, constitutes a psychological environment with multifaceted meanings (Horelli-Kukkonen, 1993), and the experience with the environment is formed as a combination of many ways of experiencing it (Ittelson, 1973; Walmsley and Lewis, 1984; Horelli-Kukkonen, 1993). From the vantage point of value creation for marketing, builders of single-family houses are a rarely studied and challenging target group.

Accordingly, the research problem is to understand customer perceived value creation in a complex process containing three phases; purchasing, constructing and inhabiting a new prefabricated single-family detached house.

#### 1.3. The aims of the study

The first aim of the study is to explore the elements that form the customer perceived value in the complex process, where a customer purchases a prefabricated house package, builds it, and finally inhabits it. The framework of value constructs is discussed and the author's own, modified model is presented based on empirical research.

This study contends that the customer is the only value creator (Grönroos, 2008a); therefore, the second aim is to discuss Grönroos' statement and refine his value creation model.

Finally, managerial implications aim to improve existing value propositions particularly with regard to the prefabricated detached housing marketers.

The scope of the study is the Finnish market of prefabricated single-family detached houses.

#### 1.4. Structure of this thesis and theoretical approach

The first part of this study is deductive theory developing, aiming to create a new theoretical framework in which perceived customer value could be analyzed as a practical phenomenon in order to improve value proposals within a given offering and manage value propositions which will give rise to competitive advantage (Lapierre, 2000:122).

Deduction refers to theory developing, literature review and research design realised without any inductive empirical research being executed.

The framework created is a loose and flexible 'straight forward' model adapting a theoretical construction based on the idea that the customers are the creator of value themselves (Grönroos, 2008a). This loose and flexible framework was chosen because previous studies or academic literature on the customer perceived value in purchasing, constructing and inhabiting a new prefabricated single-family detached house could not be found. Also, the definition of the customer perceived value concept is unresolved (Sanchez-Fernandez and Inestia-Bollo, 2007:429). For that reason, it was assumed that exploring reality through empiric research, new ideas and deeper understanding could emerge according to which theory seemed to create them, and previous definitions could be discussed and improved.

In the second part of the study, qualitative empiric data based on interviews was gathered and analyzed. The data was gathered from nine families who had recently established a new prefabricated single-family detached house for themselves and had already inhabited them for a specified period. The sampling of the families was based on theory-based sampling (Patton, 2002:238), where samples are found based on their potential manifestation of theoretical construct at the centre of this thesis. The trustworthiness of data was increased by triangulation (Ibid.:247), inquiry and field notes.

The third part of this study is interpreting the data gathered through abductive reasoning, which according to Dupois and Gadde (2002) is in constant movement between the empirical and model world, by combining the deductive and inductive approaches in a creative matter. In this phase the study moves in between the data gathered and existing definitions of perceived value. Finally, based on the outcome of the abductive phase of the study, everything is evaluated to further improve the created theoretical framework and perceived customer value constructs. Thus, this study proposes new, modified model of the perceived value construct. Based on the findings of the empiric data, this study also refines Grönroos (2008b) value creation model.

Finally, managerial implications contribute to value proposals particularly those in the prefabricated detached house marketing.

#### 1.5. Concepts and definitions

A prefabricated unit is precast and made up of individual structural elements.

It may be a part of a larger building aggregate or a finished product as such.

**A small prefabricated unit** is precast and industrially manufactured for use at a building site. It measures a maximum 1,800 millimetres in width and is of room height.

In most cases it can be manually moved.

**Platform system** is named after the English word platform which refers to a foundation or a base. The intermediate floor of a one storey serves as the structural foundation for the following storey. This system is an advanced timber framed pre-cut system.

**In a pre-cut system** the timber frame of the building is made of prefabricated timber, each frame section fully fitted, sawn and notched.

A large prefabricated unit is precast and industrially manufactured for use at a building site. The width and height of these typically match those of the wall. These are generally moved by cranes.

**A house package** refers to a standardised prefabricated detached house that may be customised for individual needs.

**Building service technology** refers to the heating, ventilation and air conditioning (HVAC), plus water and electricity, built into a house.

A partially prefabricated house refers to a house package supplied by the house manufacturer erected on a finished foundation. The house is thereafter completed independently by the buyer.

A **prefabricated house** refers to a house package erected on an existing foundation and finished by the house manufacturer. This is the so called turnkey house package.

A prefabricated house is a very good solution for many one-family house builders and developers. The preliminary design enables considerably faster building design and construction than other solutions, and today a large number of manufacturers and suppliers offer many alternative ways to complete a one-family house project.

#### What is a prefabricated house?

Technically, there are two principal ways of building a one-family house. One alternative is to build the house on the building plot of planks, logs, brick, lightweight concrete blocks or other type of stone material. This is called building in situ, and will be referred to as site built. This is the traditional way of building and the majority of Finnish residential buildings (including blocks of flats), built up to the beginning of the 1960s which marked the beginning of the era of precast building (Hankonen, 1991).

Another alternative is to build the one-family house using a house package manufactured by a prefabricated housing factory. Today by far the prefabricated housing is the most popular means to build a new single-family detached house; they are a ready-to-assemble product with service entities supplied by house manufacturers. At its simplest, a product and service entity may simply consist of the delivery of a primary house structure frame to the building site. At its most comprehensive, a product and service entity may contain 'full service' which means that the customer will receive a completely finished house ready to move in.

The most typical prefabricated house delivery consists of the drawings required for the application of the building permits and for the actual building, the foundation, the frame — and the assembly and erection of the frame — the windows and the doors, as well as all building materials for the partition walls. The trend is increasingly that the prefabricated house delivery also includes other materials, products and equipment such as home appliances and surface materials.

Generally, the buyer is responsible for obtaining the building permit, the site access, excavation and for making the contracts for the engineering and construction of heating, air conditioning, ventilation, and sanitary and electrical engineering for the detached house. The majority of the house buyers also want to purchase the so called fixed furniture and fittings including the kitchen and other cabinets, the tiles and parquet floors and other surface materials, as well as the domestic appliances.

The house package may be extensively prefabricated and finished at the factory or it may be built and completed on site.

#### 2 CUSTOMER PERCEIVED VALUE

This study seeks to explore what are the elements that create the customer perceived value in the process of purchasing, constructing and inhabiting a new single-family prefabricated detached house (PDH). In the focus of the study thus is the value created from the customer's perspective.

The following figure presents the three phases which are in the focus of this study:



Figure 1 Model of a new single-family PDH process

I have chosen to study the value creation from the customer's perspective as it has been stated that the consumer plays a central role in value creation. Gummesson states 'value creation is only possible when product or service is consumed' (1998:247).

Grönroos has further defined Gummesson's initiative, stating that the customers create value for themselves (2008b:1). This statement supports Gummesson and emphasises the customer's central role in value creation. Furthermore Grönroos' theory logically follows that the customer can be the 'solo' value creator without assistance from the product or service provider (company).

Both Gummesson's (1998) and Grönroos' (2008b) statements offer a solid and rational framework to study value creation from the customer's perspective as they both underline the fact that value creation is possible because of the customer, and in the future more value can also be created 'solo' by the customer.

Adapting Gummesson's and Grönroos' ideas in the context of this study we can formulate that:

When the customer inhabits the house, he or she is consuming the product and creating solo value. Accordingly, the customer's perspective is imperative when trying to study the elements of value.

From the customer's perspective, these three phases — purchasing, constructing, and inhabiting —can be seen as one undivided continuum. When establishing a new PHD, the customer neither purchases nor constructs a house unaided, but rather establishes a house together with the assistance of the service provider. Inhabiting is the aim and the fulfilment of the complex process for the customer and therefore makes it the last phase. Accordingly these three phases create the total perception of value.

As a result, in order to maximise a customer's perceived value, it is essential for the service provider to understand what elements the customer perceived value consists of during the whole process of purchasing, constructing and inhabiting.

In has been stated that in the construction industry, of which the single-family PDH service providers are a part, the concept of value has a central role. 'In the construction industry, the concept of value occupies a central role in construction project delivery' (Barima, 2009:2).

As stated earlier, the customer does not establish a new single-family PDH unaided, but rather establishes a new single-family PDH together with the assistance of the service provider who then delivers the project (Ibid.). Consequently, we can identify two actors in the process of establishing a new single-family PDH: the service provider and the customer. During this process they have to cooperate as the one needs the other. Without doubt value is created in the process. Barima (2009) states that value occupies a central role in project delivery and Grönroos (2008b) states that customers create value for themselves. We can recognise disharmony between these two statements, and one could even say that they are opposites, as the former emphasises the role of the company in value creation and could be seen as a production centred view, the latter emphasizes the customer's role and could be seen as the customer centred view.

It was stated earlier that the customer's perspective is imperative in value creation in the inhabiting phase. However, applying the same perspective also to the purchasing and construction phases needs to be justified in order to create a comprehensive framework that could be utilised in future framework discussions about the fact that purchasing, constructing and inhabiting is one process in value creation.

#### **2.1.** Production orientated view in marketing

The production oriented view has been the central approach in economic theories, having its roots in Smith's (1776) normative work on creating national wealth through production and export (Lush, Vargo, Mathew and Brian, 2007:6). 'Before 1960 marketing was viewed as transfer of ownership of goods and their physical distribution' (Vargo and Lush, 2004:5). Thus, historically marketing has focused mainly on goods as the unit of exchange (Ibid.).

Savitt (1990) examined the development of marketing research from the early 1920s to 1950s in the literature published during those decades, and his findings clearly point out how marketing theory developed alongside the growth of trade and industrial output in the US. New theories related to trade and industrial output were based on analogies drawn from the preceding era, especially from the patterns valid for exchange in the areas of craftsmanship and agriculture. The marketing functions of agriculture were applied to the marketing of manufactured goods.

In the 1930s the interaction between producing, marketing and consuming units was proposed to be 'part of a larger system of distribution, buyers and sellers interaction in some larger framework' (Ibid.:294). The complex mechanism of buying, selling (functions of exchange), transportation and storage (functions of physical supply), financing and risk-taking, and standardisation and grading (facilitating functions) became a commonly accepted approach for the marketing system for more than 30 years (Ibid.).

Traditionally the construction industry is perceived to be involved in the process of selling as well as construction, where the value is created by delivering the project (Barima, 2009:2), or in the production process (Gummesson, 1998:247). From this logically follows that the customer's role is to consume value, not create it. This is also called the industrial view (Ramirez, 1999:59). Porter's (1985) well established value chain model successfully catches and summarises the production oriented view, with the main concept being that a company can analyse and optimise its own primary and secondary activities in order to maximise value production. Value is something which can emerge from the efficiency of individual functions and from the optimisation of the division of tasks between the functions. The diagram used to depict Porter's theory nicely simplifies the main idea: an enterprise is a one-way process that outputs value. The more efficiently the functions of the enterprise have been optimised, the more value will be output, and by doing this a competitive advantage may be gained. Gummesson summarises this standpoint 'Production is viewed as a value creation or value added by the supplier, whereas consumption is value depletion caused by the consumer' (1998:247). This shall be called the production oriented view, because it underlines project delivery and production in value creation whereas the customer's role is to deplete (consume) the value created. The notion of 'production orientation' has been already utilised in academic context (see e.eg. Grönroos 1989:52). Furthermore, as stated earlier, this paradigm has its roots in the history of national economy.

#### **2.2.** Production orientated view versus Goods-Dominant logic

Vargo and Lush (2004) proposed that service provision rather than goods is a fundamental in the economic exchange. In the article 'Evolving to a New Dominant Logic for Marketing', they label their theory 'Service-Dominant logic '(S-D logic). When they introduce their theory (to which we shall return later) they shortly go over how marketing theory has evolved from a production and goods oriented footing towards reasoning where the customer assumes a central role in value creation. When they introduce their theory as 'Service-Dominant logic', they at the same time give a new name to the preceding marketing paradigm 'Goods-Dominant logic' (G-D logic. After publication, a vast and lively academic debate has been generated where the theory is discussed from many different perspectives. However, less attention has been paid to the fact that also the G-D logic can be regarded as an arguable concept.

The existence (or non-existence) of the concept and its exact definition is tied into the question of whether S-D logic can be regarded as a widely approved and unproblematic paradigm. Vargo and Lush have indeed in their argumentation put forward S-D logic as an alternative or even an opposite to production orientated view. For example, according to the central concept, determination and meaning of value in 'Goods-Centred Dominant logic' is made by the producer, whereas in 'Service-Centred logic', value is perceived and determined by the consumer (Ibid.:7). Thus, by reducing, or nearly oversimplifying reality, Vargo and Lush have obviously aimed at making their theoretical proposal more understandable: However, by doing so they have created a problematic, bipolar explanation of reality. In other words, it leads us into a situation where arguing the theory itself is possible only by accepting as a starting point Vargo

and Lush's depiction of reality. In my view, it should first be discussed whether a bipolar reduction of reality is a satisfactory starting point in general.

The development of marketing theories during the past century in the US was described only briefly above. However, '[m]arketing has existed since [the] dawn of commerce', as Ambler (2006:287) puts it. Throughout the history of the world, all cultures have practiced exchange and commerce. If service providers had not understood the needs of their customers, commerce would not have survived. Ambler shows with examples how three central components of buyer benefits – functional, economical and psychological – 'have been rediscovered by each generation of marketing scientists' (2006:287, emphasis added). Ambler gives several examples of how scientists over the centuries have understood well that commerce is not simply an exchange of goods, but instead a multidimensional event which, when examined in depth, is a matter of fulfilling the buyer's individual needs diversely. In other words, Vargo and Lush's proposal of the interpretation of history and the following 'potential to replace the traditional goodscentered paradigm' (2004:15) is not incontestable.

It is understandable that when a new paradigm is submitted, it will challenge the old paradigm to justify its existence (Kuhn, 1996:43). This is one of the cornerstones of science, but in this particular case the most interesting — and in my view the most overlooked — circumstance is that when Vargo and Lush build up their new paradigm, they rename the old-established paradigm and simplify it so that it best fits their purpose. At the beginning of this chapter it was briefly described how marketing theories have developed over time, and even in this short overview of the theories shows how multi-faceted the development of the marketing theory has been. As theories evolve through time in a heuristic manner, the real world escapes the right definitions as through the course of time our assumptions change. As Thomson (2005: 17) put it 'Explanation in history is not an end in itself; it serves to mediate historical understanding'.

To summarize, we can conclude that the Goods-Dominant logic paradigm is not a problem free approach to interpret the history of marketing. This is a fairly recent proposal and the scientific debate is still continuing. Additionally, the notion of Goods-Dominant logic 'forces' the debate into the position where the central theoretical framework on the historical evolution of marketing is laid down by Vargo and Lush themselves. In other words, the notion of Goods-Dominant logic would constrain this research and therefore would rather use the concept 'production oriented view of marketing' which is a wider, more versatile and less problematic concept.

This study aims at finding the customer viewpoint in a single-family PDH project. Unlike the production centred view, the total project will be assessed via the customer's experiences. In the production centred view, value is created in the company's processes, whereas from the customer viewpoint it is not only the actual construction of the house that plays a central role, but also it is equally important how the house meets the objectives set for inhabiting it. Value creation is of the essence. It has been stated that in the construction industry, of which the single-family PDH service providers are a part, the concept of value has a central role. 'In the construction industry, the concept of value occupies a central role in construction project delivery' (Barima, 2009:2).

In order to proceed forward in discussing customer's value creation in the process of establishing a new single-family PDH it is valuable to gain understanding of the latest proposals for a new marketing paradigm.

#### 2.3. Service-Dominant logic

Vargo and Lush (2004) initiated active dialogue by proposing a S-D logic to become the new focus in marketing, 'shifting from the exchange of goods to the exchange of intangible resources' (Lindberg and Nordin, 2008:192). Traditionally in the marketing literature, services have been defined to be those things that are not products (Grönroos, 1998). Lovelock (1983) defined services as being different to products, because they are defined to be intangible, heterogeneous, inseparable and perishable (IHIP). The initiative of Vargo and Lush was not to redefine 'service' per se, but to instead suggest that services are an essential part of the exchange and can also ground new logic for all marketing. Thus services are not a separate activity only (Grönroos, 2008b:2).

Vargo and Lush present a service-centred alternative for the 'traditional' goods-centred paradigm. They call it the 'Service-Dominant logic'. Vargo and Lush's central statement is that their view is customer-centred and that value creation takes place in cooperation with the customer. They have developed their original concepts further in the article 'Service-Dominant logic: continuing the evolution' published in 2008. In the following I will introduce in brief the ten central concepts (foundational premises) presented in this latest article. Then I will evaluate the S-D logic concepts critically in the light of published literature. Finally, I will bring forth some views of my own, focusing on the subject matter of this study.

The list below is a direct quotation from Vargo and Lush (2008). The original foundational premises, published in 2004, are given in brackets: This is because most of the criticism presented is based on the original text as published in 2004. (However, as will become apparent later on, the criticism against Vargo and Lush is directed at the foundations of their construct rather than the formulations of individual premises as such.)

FP1 Service is the fundamental basis of exchange, implying that units of output are the focus of exchange in Goods-Dominant logic, whereas in S-D logic service provision is essential in exchange. (The application of specialised skill(s) and knowledge is the fundamental unit of exchange.)

FP2 Indirect exchange masks the fundamental basis of exchange. Service is provided through a complex combination of goods, money and institutions, the fundamental units of exchange.

*FP3* Goods are the distributing mechanisms for service provision. The goods (both durable and non-durable) derive their value through use — the service they provide.

FP4 Operant resources are the fundamental source of competitive advantage. The comparative ability to cause desired change drives competition. (Knowledge is the fundamental source of competitive advantage.)

*FP5* All economies are service economies. Service is only now becoming more apparent with increased specialisation and outsourcing.

FP6 The customer is always a co-creator of value. Implies value creation is interactional. (The customer is always a co-producer.)

*FP7* The enterprise cannot deliver value, but only offer value propositions. Enterprises can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but cannot create and/or deliver value independently. (The enterprise can only make value propositions.)

FP8 A service-centred view is customer oriented and relational. Because service is defined in terms of customer-determined benefit and co-created it is inherently customer orientated and relational. (A service-centred view is customer orientated and relational.)

FP9 All social and economic actors are resources integrators, implying that the context of value creation is network of networks. (Organizations exist to integrate and transform micro-specialised competences into complex services that are demanded in the marketplace.)

FP10 Value is always uniquely and phenomenologically determined by the beneficiary. Value is idiosyncratic, experiential, contextual, and meaning laden (Nota bene: this did not appear in the first publication.)

Venkatesh, Penaloza and Firat (2006) agree with Vargo and Lush 'that the dominant logic of marketing should shift away from product orientation' (2006:257). However, Venkatesh et. al. point out that too little attention has been paid to values and meanings, which in their opinion are more important than knowledge or services and goods. Venkatesh et al. suggest that the market would become a mechanism for values and meanings, i.e. 'sign economy' for money instead of knowledge and skills underlined in S-D logic. According to Venkatesh et al. markets are about 'transactions between two parties in terms of shared or even contested meanings' (2006:259), thus markets are moving towards to an 'image production industry'. (2006:259). They also criticise not only Vargo and Lush's, but also in general existing marketing theories which place too much emphasis on firm-level activities, limiting the scope. The perspective should be wider, starting from marketing towards market view. Venkates et. al. also criticise the study of marketing as being too USA focused, while research should be directed at the global marketplace.

Wilkie and More, for their part, question if the Vargo and Lush have succeed in discussing a deeper understanding of 'what is essential to marketing' (2006:267). Wilkie and More are also sceptical of the customer's interest in participating in a cocreation process altogether, especially if the case does not concern a business-tobusiness relationship (2006: 269, 270, 272). An individual consumer may even experience approaches by a firm as intrusive and prefer 'privacy' or even 'anonymity' (2006:272). Wilkie and More also judge that there is a significant asymmetry, i.e. 'gab' between firms and customers as regards mastering information. Firms have accumulated information through continued operation, they have expertise about the market and they can avail themselves of any necessary experts. Firms are motivated by the attainment of sales targets and financial results, whereas it can be difficult for individual consumers to formulate their own objectives: besides, the relationship between a firm and a consumer can be a one-off job.

Laczniak does not actually criticize the S-D logic presented by Vargo and Lush, but instead presents social and ethical dimensions that should be examined. That is, according to Laczniak, the service producer is 'more informed' and often has greater expertise — therefore, the producer also has a 'higher social responsibility'. Laczniak names the financial services sector as an example. Additionally, Laczniak focuses on the way companies evaluate how successful they have been. Financial performance is a necessary, but not a sufficient parameter in evaluating success. As Laczniak says, 'true learning about better value propositions in the long run involves discernment about outcomes that goes beyond financial accounting' (2006:282).

According to Lehman (2006), the primary task of a firm is 'financial result in general and growth in particular orientated' (2006:301). Whereas, in his opinion, S-D logic suggests that the reason for the existence of firms is the production of services (for the 'common good'). Furthermore, Lehman considers S-D logic to mean that the economic performance of a firm would be a learning mechanism. For this reason, meeting customer wishes and increasing their satisfaction are certainly necessary, however not a 'sufficient condition' (2006:297). In addition, instead of cringing in front of customer relationships, a firm's task is in practice to prioritize demand creation. In accordance with business logic, resources are used in the most efficient way possible, which results in strong economic performance. Lehman's view is that S-D logic is better suited for non-profit firms (2006:300).

Archol and Kotler (2006) criticise Vargo and Lush's (2004) 'proposal for a new paradigm' because the 'distinction between service-centered and product-centered views is not based on a fundamental logic system' (2006:323). Archol and Kotler highlight Vargo and Lush's definition of services as the 'application of specialized competencies (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself' (Vargo and Lush 2004:2). According to Archol and Kotler, first of all the definition is not written in a way that would express 'pure services as well as services provided via goods'. Secondly, the definition does not include the customer's viewpoint at all, and therefore, the definition can be considered provider orientated rather than consumer orientated. In addition, Archol and Kotler consider Vargo and Lush's paradigm ontologically and epistemologically. From the ontological point of view, if service-centred logic represents the 'real world' of marketing, then what is the customer's reality? Can the customer's reality and the provider's reality ultimately ever meet? Secondly, service if considered epistemologically, how can we fathom the truth about service-centred logic? Can the meaningfulness of its constructions be assessed with scientific logic? Further, can service-centred logic be scientifically examined and proven with empirical methods? Thirdly, Archol and Kotler ask very pragmatically 'How does it contribute to improving the practice of marketing?' (2006:323). Due to its ineffectiveness in overcoming these existing problems in marketing, Archol and Kotler conclude that S-D logic cannot be a dominant logic.

We can conclude, that the need for a new perspective and new approach for marketing has been identified, however a comprehensive, generally approved scientific approach to customer focused value creation theory remains incomplete. Many scholars have made serious contributions to the subject and new contributions are constantly being generated (see Vargo and Lush, 2004; Grönroos, 2006; Sandström, Edvardsson, Kristensson and Magnusson 2007; Ramaswamy, 2009; Strandvik, Holmlund and Edvardsson, 2009).

#### 2.4. Co-creation of value in Service-Dominant logic

In the above I have described the Value Co-Creation theory and brought up criticism against it. In the following I will discuss the theory of co-creation of value specifically from the viewpoint of this study. I suggest that the Vargo and Lush theory is in itself not capable of providing a suitable framework for my study because the notion of value co-creation as Vargo and Lush put it poses a problem when considering the process related to the building a home of one's own.

In S-D logic, value creation originates in the fact that the supplier understands the customer value-creating process and learns how to support it. The customer is a coproducer of value (Vargo and Lush, 2004), who later on redefines the notion of coproducer to co-creator stating that 'the customer is always a co-creator of value' (Vargo and Lush, 2008) This kind of co-creation is proposed to be in a very close relationship, locating the customer deeply into company's processes, much like co-producing price and service offerings in order to gain competitive advantage (Lush, Vargo and O'Brian, 2007:9). This aim is accompanied with some challenges, the foremost of which is to find a mutual interest in cooperation. For co-creation to be possible, it is natural to think that at least at some point in the process the service provider's and the customer's processes related to value creation have to meet. What actually are the interests of the service provider and the customer? To start with, at least in the short term, the consequences that the service provider and the customer seek are not the same. Enterprises engaged in business seek the well-being of their owners, whereas customers seek their own well-being.

This issue is illuminated by the following example from theoretical philosophy.

'How is intention and acting related to the foreseeing of consequenses? In order to answer the question, we shall have to observe that intention is primarly connected with results of action – and not with consequenses. An intention is an intention to do something. That which is intented, the object of intention, is the result of an act.' (Wright G.H., 1968:123)

If the intention of a company were 'to gain competitive advantage', as for example Vargo, Lush and Porter have suggested, then in order to attain it the company should distinguish itself from others in the market. This would result for example in producing (= the 'act') different houses. The consequence can in the best case be regarded as the company's profit, in other words the value created in the process. If gaining competitive advantage were the company's intention, then in accordance with the law of the logic by Wright cited above, the consequence would be profit. The only possibility of co-creation of value with the customer would be in the 'act' phase of the process.

#### The Company:

Gain competitive Advantage  $\rightarrow$  value co-creation with customer's  $\rightarrow$ Profit for the company

intention  $\rightarrow$  act  $\rightarrow$  consequence

The assemblage presented above is difficult to combine with the customer's value creation process, for the customer's intention is obvious – to improve the quality of life.

For that reason the customer builds a house and this will result in the enhanced quality of life.

The Customer:

Improve quality of life  $\rightarrow$  build up a house  $\rightarrow$  better life

intention  $\rightarrow$  act  $\rightarrow$  consequence

In other words, the consequence the customer is seeking, i.e. value, can be created only after the house is completed and in use. Building the house is 'an act' in order for value to emerge.

Thus, if gaining competitive advantage is set as the company's intention, it is difficult to see the customer as a co-creator of value, since from the customer's viewpoint value is not created until inhabiting the house.

Nevertheless, the notion of *competitive advantage* reminds one of Porter's value chain, which is focused on the corporate perspective. Namely, even though S-D logic argues that customer understanding and conjoint value creation are essential, the customer's perspective may be different, as discussed above. Furthermore; the customer may or may not share his or her knowledge and resources with the company, and if he or she does, under which conditions and to what extent does this co-production emerge?

The company's (and also the customer's) interest may be focused only making 'shortterm' gains, not seeking a true co-creation of value. There is evidence of this kind of behaviour in the construction industry to which this study is closely linked. According to Dupois and Gadde (2000:210) 'customer-supplier relations are generally armslength type rather than being partnerships'. Cox and Thomson (1977:129) have found that construction projects are 'produced to the lowest-price supplier with little or no guarantee to future work'. Constructive and creative discussion may be difficult to arise if the all the explanations are grounded on the statement that the 'customer is always a co-creator of value'.

It is naturally and inevitably based on the previously prevailing theory, which had its foundations in the production of goods and in maximizing the benefit for companies. Vargo and Lush have unquestionably succeeded in taking the theoretical discussion to new paths, however as perspectives develop, S-D logic cannot necessarily provide satisfactory answers to the new questions emerging. The theory is, as it were, stranded in its own premises. This issue has received attention from, among others, Rust, who thinks that Vargo and Lush have in the end not succeeded in proceeding from the Goods-Dominant logic to genuine S-D logic customer orientation. Rust states 'Whether we are talking about a product, an offering or an experience, the focus is still on the one thing being provided to the customer - and hence on the thing, rather than the customer' (Rust, 2006:289-290). The relationship between the customer and the company is becoming the central question, and within a genuinely customer-centred operation, the customer has the power. As Pine, Peppers and Rogers (2000:53) put it *Customers*, whether consumers or businesses, do not want more choices. They want exactly what they want'. Thus, customers have the power, not the companies that provide the offerings.

#### **2.5.** From Service-Dominant logic towards customer orientated view

According to Grönroos, the next notable step forward is in Edwardsson, Gustafson and Roos' finding that 'Service is a perspective on value creation rather than a category of marketing offerings'. The idea of service as an essential part of marketing of any business, compelling companies to step into the 'shoes of the customer', meaning from a customer's perspective, the product or service itself has no value 'per se', rather the customer creates it, or as Grönroos (2008b:2) puts it 'value is rendered for them (customer) and goods are distribution mechanism for services.'

A distinction must be made here between the production orientated concepts, as the notion of 'exchange' remains a key idea in both theories. In the production orientation concept, the producer — the service provider, actually — creates value, and the value created in the service or product is delivered at the moment of exchange. In the S-D logic of the exchange, the customer's value creation process takes on a more active, integrative role in the relationship. Namely, as Vargo and Lush (Wilson, Zeithaml, Bitner and Gremler, 2008) discuss the products are valued based on the service they provide, and as a result products are a vehicle that carries and delivers service that create value.

At this point in the theoretical thinking, Grönroos elaborates on definitions that float in between *S-D logic* and a notion of *service logic*, which Grönroos (2008b:3) proposes instead. Grönroos raises for examination the idea of the dominating nature of service included in the definition. Service logic can be implemented also in cases where the customer purchases a simple product as a resource and manages value creation alone by utilising that very same resource. According to Grönroos, this case cannot be called *service dominant*, as the service is not necessarily dominating the marketing logic. For it to be called *S-D logic* 'the service has to be based on the notion of service as interactive process where the customers are participating as co-producers', meaning that it must have an active role. In other words, according to Grönroos, the dominating role of service is questionable and therefore a more justified definition is service logic (Ibid.:2-3).

In S-D logic, the origin of value creation is in that the supplier understands the customer value-creating process and learns how to support it. The customer is a co-producer of value (Vargo and Lush 2004). Later on Vargo and Lush redefined the notion co-producer to co-creator stating that 'the customer is always a co-creator of value' (Vargo and Lush 2007). This kind of co-creation is proposed be established in very close relationships engaging the customer deeply into company's processes; like co-production of the service offering and price co-production in order to gain competitive advantage (Lush, Vargo and O'Brian, 2007:9).

Interestingly the notion *competitive advantage* reminds one of Porter's (1985) value chain, which is focused on the corporate perspective. Namely, even though S-D logic argues in favour of customer understanding and conjoint value creation, the customer's perspective may be different as a customer may or may not share their recourses with the company. Under which conditions and to what extended does this co-production emerge? Constructive and creative discussion may be difficult to arise if all the explanations are grounded on the statement that the 'customer is always a co-creator of value'. According to Grönroos it is not self-evident that customers 'always buy goods, or even services, as services i.e., as value-supporting processes. Hence, service is not

necessarily dominating the market logic' (Grönroos, 2008b:3). Emphasis on the perspective that expects the customer to participate automatically in the value creating process can also be regarded as focusing on the company itself. Grönroos writes 'The focus is not on products, but on the customers' value creating processes where value emerges for the customer and is perceived by them'(Ibid.:4).

Grönroos (Ibid.) has proposed a framework that could clarify the confusion caused by the notion the 'customer is always a co-creator of value.' I shall present and utilise Grönroos' ideas in order to proceed further from value creation towards to customer perceived value conceptualisation.

Grönroos' proposal underlines the customer's central view in the value creation process:

According to the value-in-use concept, value for customers is created or emerges in the customers' process during usage of goods and services. Consequently, there cannot be other value creator than the user, i.e., the customer. (Ibid.)

As such, customer value is produced as a result of a consumptive process and only the customer can determine value (Lusch et al., 2006: 11). If we adapt these value definitions into the context of this study we can state that value is created when the customer inhabits the house. This framework alone is not sufficient enough to discover value creation during all three phases — purchasing, constructing and inhabiting — however Grönroos introduces the design of a framework that could be utilised to connect purchasing in all the three phases in the value creation process.

'What customers co-produce is the service that they get. In other words they are co-producing the distribution mechanism out of which value is created. They are not co-producing the value that can be created from these distribution mechanisms'. (Grönroos, 2008b:3)

Grönroos visualises the process nature of offering production and value creation in customer-firm interaction by following framework;



Figure 2 Value creation of firm-customer interaction and consumption (adapted from Grönroos, 2008b:22).

In this model, the firm is the value facilitator and creates a value proposition, and in the interaction with the customer can become co-creator of value. As Grönroos defines it,

'During interactions the firm's and customer's processes merge into one integrated process of joint value co-creation. Hence, the firm is inside the customer's value-generation process and can directly and actively influence the process and value fulfillment for the customer.' (Grönroos 2008b:20)

#### Summary

According to S-D logic, the customer is always a value co-creator, in other words, value is created in a joint process between the company and customer: Thus the customer automatically 'drifts' into a value creation process with the company. Nevertheless, according to Grönroos 'service providers are in charge of the service production process, in which customers may engage themselves as co-producers. Value is not produced; services and goods are produced'. According to this view, the customer is the value creator. We can justifiably regard Grönroos' view of the service logic to be more customer centred than S-D logic.

# 2.6. Production orientated view versus customer orientated view in value creation

As discussed earlier, the production orientated view is quite opposite the customer centred view from the perspective of value creation. Thus the customer's inhabiting experience cannot be excluded as it is the final phase in consumption.

Traditionally, the construction industry is thought to be involved in the process of selling and construction, where value is created by delivering the project (Barima, 2009:2) or in the production of it (the actual construction) (Gummesson, 1999:59). Thus, it logically follows that the customer's role is to consume value, not create it. This is also the called the industrial view (Ramirez, 1999:59). Porter (1985) has introduced his widely established concept of this theory, which he called 'a value chain.' The main idea of Porter's concept is that a company can analyse and optimise its own primary and secondary activities in order to maximise value production. By doing this competitive advantage may be gained. Gummesson summarises this by saying 'Production is viewed as a value creation or value added by the supplier, whereas consumption is value depletion caused by the consumer' (1998:247). We call this the *production orientated view* as it underlines project delivery and production in value creation whereas the customer's role is to deplete (consume) the value created.

The production orientated view could explain value creation during the construction phase, however it neglects the consumer's perceptions as regards project delivery and production; another shortcoming is that the production centred view does not cover the consumption experience, i.e. actually inhabiting the house. The process of value creation is limited to project delivery or production phases. As stated earlier, the customer does not establish a new single-family PDH alone, but rather establishes it together with the assistance of the service provider who then delivers the project (Barima, 2009). In other words, we can identify two actors in the process of establishing a new home, the service provider and the customer. During this process the two have to cooperate, as the one needs the other. Without question value is created in the process as Barima states that value occupies a central role in project delivery (2009:2), and Grönroos states that the customers create value for themselves (2008b:1). Between these two statements we can recognise disharmony, even contradiction, as the former emphasises the customer's role, and can be designated the customer centred view, and the latter emphasises the role of project delivery in value creation, and can be designated the production centred view.

The aim is to study the perceived value e.g. the customer's value processes; thus I did not analyze the company's value processes. Furthermore, over time marketing theories have developed from a production and provider focused orientation to customer focused approaches. According to Grönroos (2006b:399), the current research shows a clear trend towards the 'notion of value being produced not by the supplier, but by the customer'. According to Lush et al. (2007:6), the discipline has 'purportedly shifted from 'production orientation' to consumer orientation.

Moreover, when studying the building of a new single-family PDH, it would be difficult to think that value is attained through mere construction. It is natural that the value from house construction will emerge only after the house has been used for its purpose.

As Grönroos (2006b) puts it, 'value is created in customers' value-generating process, when individual consumer or industrial users make use of the solution or package they have purchased'. Prhalad and Ramaswamy note, 'Value is not centred in the experience of goods and services' (2004:147), from which Sandströn et. al continue 'rather [it's] embedded in [them]' (2008:112; emphasis added).

In other words, the value created in the process of living in a new single-family PDH does not lend itself to study if adhering to the production-centered view, in which the customer's role would be only to deploy value, not to create it.

Therefore, we can conclude that the production orientated view does not provide a sufficient framework for this study.

Grönroos' represents the customer centred view and when trying to adopt his ideas (2008a,b), we could connect not only the phases of purchasing and construction, but also inhabiting, into one process that states that project delivery and production are mechanisms out of which value can be created by the customer. The company's role is to be a value facilitator, whereas the customer is the value creator by consuming (inhabiting) the product (house).

The conclusion that Grönroos presents is applicable, that construction could be utilised to form a theoretical framework for this study.

However, the theoretical value creation model created above offers a framework to understand value creation as a process, but it does not help us understand what those values are. Thus it is a theoretical construction from which we can discuss the research methodology and proceed forward by conducting the empirical portion of this study.

#### 2.7. The nature of customer perceived value

The importance of understanding the customer is discussed widely in the literature. In order to proceed towards the empirical part of the study, we need to discuss alternative perspectives to customer values. This question will be dealt with in this chapter.

The idea of value creation has become a central concept in marketing theories and it is of great interest in both academia and industry 'Organizations are increasingly recognising that perceived value is a key factor in strategic management' (Sanchez-Fernanze and Iniesta-Bonillo, 2007:427). Customer perceived value is one of the key success factors behind a company's success 'since it increases customer willingness to buy and decrease their search intentions for alternative offering' (Pura and Gummerus 2007). The Marketing Science institute included the definition of 'perceived value' in its list of research priorities for 2006-2008. Furthermore, organisations have to learn what customer values are within a given offering (Woodruff, 1997: 149), in order to improve and manage value propositions (Lictenthal, Wilson and Long, 1997), and thereof build competitive advantage (Lapierre, 2000:122).

Logically, the elements that the customer values are something which can be defined only based on the customer's perceptions not based on the suppliers' perceptions. This view emphasizes the concept of the customer's 'perceived value' which underlines the customer as an active party in the value creation process. Consequently, in line with the current understanding of the value creating processes (Grönroos, 2008a:307), there can exist no supplier-incorporated value in the offering, simply because all value will be dependant of the customer's perception thereof and attainable through use. As such customer value is produced as a result of a consumptive process and only the customer can determine value (Lusch et al. 2006: 11).

Still, even though customer 'perceived value' has become a popular concept in marketing research, the definition of it still remains unsettled (Sanchez-Fernandez and Inestia-Bollo, 2007:429), as there are many definitions (Heinonen, 2004:205). Authors have given various definitions such as Holbrook (1999) and Zeithaml (1988:14). According to Sanchez-Fernande and Iniesta-Bonillo (2007:428) one of the most cited definitions is by Zeithammel (1988:14) 'the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given.' Some authors argue that Zeithammel's definition is too narrow to describe 'perceived value'. Instead these authors suggest that 'perceived value' is a multidimensional construct including notions such as quality, benefits and sacrifices and price (Holbrook, 1994, Holbrook, 1999, Sweeney and Soutar, 2001).

We could conclude the literature appears to be 'confusing and in some cases appears conceptually self-contradictory' (Lin et al., 2005:319) and therefore a closer literature review has to be conducted. The literature review and discussion aims to identify the most accurate definition to serve as the objective of this study, to discover the customer perceived value in a new detached house.

#### **2.8.** Customer perceived value as a service experience in inhabiting

In this chapter, based on the literature, I will form a value concept that will be utilised as a framework later on in this study.

The association between the different value constructs is poorly differentiated (Sanchec-Fernansez and Iniesta-Bollo, 2007:429). The concept of value has been misused in social sciences in general and particularly in management literature (Khalifa, 2004:646). In addition, value concepts are used in many fields such as justice, economics and ethics.

Historically from the industrial view, value was something that was created by the producers (of goods) and consumers were seen as destroyers of this value (Ramirez, 1999:51). The approach towards value has changed during the last decades and in modern business processes the idea of value creation is an imperative. The latest approaches are 'based on an individual-centred co-creation of the value between consumers and companies' (Prahalad and Ramaswamy, 2004:5). In the marketing literature, the concept of value has thus become an important discussion about the consumer behaviour, relationship marketing and pricing (Khalifa, 2004:646).

According to the Concise Oxford English Dictionary (2002) value is something that 'is held to reserve; importance or worth; material or monetary worth; the worth compared to its price'. This linguistic definition fits with the ideas that value is defined by the customer. Accordingly, value is the outcome of an evaluate judgment (Sanches-Fernandez and Inesta-Bonillo, 2007:429).

Value has been traditionally evaluated with the notion of *utility*, as it represents attributes provided by the product, and disutility represents the effort made or price paid (Ibid.).

In this view, the customer then evaluates the benefits in the transaction between utility and disutility. Utility is a complex construct and its appraisal depends on the product or service at hand. The combination of light weight (utility) and high price (disutility) for example creates an unattractive combination in commodities (e.g. salt), whereas the same combination can create an attractive offering in exclusive sports equipment. The price is a measurable, monetary value of a product and yet may be too simplified to describe the whole scale of disutility because 'a full appreciation of the concept also includes considerations of the time, effort and search involved in the overall cost or sacrifice made by the customer in consumption experience' (Ibid.).

The *quality* which is the other related construct to perceived value has been described as a distinct construct and one of the value dimensions (Lapierre, 1999:236; Lapierre, 2000:125). Confusion may arise because features are overlapping in both constructs. Quality and value are based on the evaluation process and may be subjective and both are context dependent.

Also Heinonen (2004) has found that value is a multidimensional construct, as time and location as value dimensions play a significant role. We can conclude that a tradeoff between the combinations of utility and price is not a broad enough model to define perceived value as a concept. A home of one's own, the object of this study, is a good example of how many meanings the concept 'perceived value' may have. However, it is possible to examine the issue by reducing the value construct into two dimensions, as I will suggest in the following paragraph.

#### Single-family house as a service experience

In the following paragraph I will briefly describe the multidimensional meaning of one's own home through the residents' own everyday experiences. I will combine a model of reality presented in environmental psychology with the framework created by for how service experience is linked to value in use. The model will form the basis for Sandström, Edvardsson, Kristensson and Magnusson (2008) the later analysis of the empirical material of the study. One's own home and place of residence constitute an important factor related to one's everyday life and lifestyle. A home of one's own is easily associated with an idea of the good life. Within the context of this study, the experiences of the good life represent the value emerging from the new single-family PDH. A person seeks their dwelling place, their dwelling as a concrete, physical and psychologically significant, symbolic place. For example, Liisa Horelli-Kukkonen (1993) has demonstrated what a multidimensional psychological environment a dwelling can be and how many meanings it can carry. The meanings assigned to it can be universal, archetypical. The living environment can be experienced as primary, for example as a physical territory, field of action, social system, emotional territory or an extension of self. A rich experience of the environment consists of the combination of as many ways of experiencing it as possible (Ittelson, 1973:12-14; Walmsley and Lewis, 1984 and 1986; Horelli, 1982; Horelli-Kukkonen, 1993).

Seeing and experiencing one's physical environment, such as one's home and neighbourhood, is part of being human. In this study the new single-family PDH is approached through the everyday experiences of the inhabitants. The conceptual preconditions of knowledge gained through experience are thus accepted as the starting point for the study. This means that the descriptions of reality are inevitably pluralistic and additionally, the knowledge is culture-dependent, in other words, varying with time. A person has a conscious or unconscious idea of themselves and their relationship with existence. However, a person cannot form an objective idea of themselves, as they are always dependent of the object being observed, that is, they cannot exist without the world in which they are living. 'No living being can exist without its environment' (Gibson, 1979: 8).

According to Rauhala, a person's ontological basic form can be presented as divided into three basic forms: consciousness (mental-spiritual existence), corporeality (existence as an organic event) and situationality (existence in relation to reality) (Rauhala, 1983:25). Owing to situationality, a person is in essence a communal and social being (Siirala, 1966:60). According to Allardt, an individual wants to be a member of a community and network in which liking and caring for others is expressed (Allardt, 1976:439). This is the situationality of the person. If we accept the idea of people presented above, it follows that even a single-family house must be examined as part of an individual's situation.

'The physical environment as the situation of individuals is equally much a social as a physical phenomenon. Therefore it is not justifiable to analyse the environmental image merely as a physical phenomenon; instead, it must be seen through an individual. The environmental image combines the physical world and the world of cultural meanings.' (Tuovinen, 1991:144)

It can be stated that the personal perspective of the inhabitant is essential when assessing the quality of the living environment, and the home as an important part of it. Even though I have above described the basic concepts of research of environmental psychology, the idea is coherent with recent marketing theories, as stated by Prahalag and Ramaswamy 'Value is now centred in the experience of consumers' (2004:137). In other words, the value perceived by the residents of new single-family PDH emerges through their own experiences of habitation.

It seems, however, that even though the understanding of the importance of the customer's perspective has increased as mentioned above, firms are not necessarily aware of what brings value to the customer and how it is created (Sandström et al., 2008:113). Vargo and Lush (2004), for example, emphasise the importance of the customer in value creation, and that firms should learn and modify their operation in accordance with customer needs. Yet even they don't provide an answer as to how value is created: They say that a firm can only make value propositions, on the basis of which the customer shall assess the value and participate in value creation and utilise service.

When considering how many meanings a home of one's own may have, it is natural that it can be difficult for the service provider to optimise the value proposal in such a way as to best support the expectations of the customer — in the case of this study the builder of a single-family house.

Therefore we need a useful framework which simplifies reality and within which we can approach the multidimensional expectations of the customer.

At this point Sandström et al. (2008) make a valuable contribution facilitating the observation of one's own home specifically through the experiences of the inhabitants. They suggest that value propositions are based on physical and technical enablers. They have studied technology-based services and mention as an example the mobile telephony network or the mobile phone, which is necessary when offering services or other value proposals. In other words, services can be immaterial but often they are tied to physical products.



Figure 3 A framework for how service experience is linked to value in use (adapted from Sandström, Edvardsson, Kristensson and Magnusson, 2008:121).

Sandström et al. emphasize that the dimensions of co-creation are highly individual, and additionally they always depend on the situation and circumstance: Such factors that affect the service experience they call 'individual and situational filters.' They include demographic factors, the customer's own ability and skills, and the customer's environment. According to Berry, Carbone and Haeckel (2002:89) the nature of the customer experience is holistic but can be combined into two dimensions, namely the functional and emotional. I have earlier described experiencing the living environment as a multidimensional phenomenon; it is self-evident that this kind of personal experience of living (the emotional dimension) is not possible without a dwelling (the functional dimension).

Thus, the companies should 'pay attention to both functional and emotional experience outcomes, as well as how to co-create with their users in order that the value propositions is experienced in a way which brings highly perceived value to the user' (Sandström et. al., 2008:120).

#### Summary

The framework created by Sandstöm et al., in which the service experience is assessed by the consumer through an individual and situational filter, combines the view presented in environmental psychology about the formation of reality through the experiences of individuals. Furthermore, Sandström et al. suggest that a service experience comprises two groups, those with functional and emotional outcomes. Also in this respect the research presented above have arrived at a highly similar model of thought: When evaluating our living environment, it is as much a social as a physical phenomenon.

I will use the framework presented in Figure 3 as the basis for the evaluation of the interviews in the empirical part of the study. I will assess a service product, in this case a single-family house, through the inhabitants' experiences on the one hand as a physical, and on the other as an emotional outcome. I will attempt to describe, using the model, which factors form the value in use for the builder of a new single-family PDH, and which of them are particularly significant for the service experience. Identifying those factors in accordance with the model is important so that it is possible to optimize the value proposition by a detached house manufacturer.

#### **3** THE PREFABRICATED HOUSE INDUSTRY IN FINLAND

It is necessary to understand the starting points of the Finnish prefabricated house industry in order to be able to grasp the needs and pressures for change that it faces as the operating environment itself changes at an accelerating pace. In this chapter I will depict the birth and development of the house industry and its inevitable connection as part of a wider pursuit of efficiency in the interest of society.

The development of the house industry was affected to an equal extent by the scarcity of financing possibilities and the meagre consumer market which were characteristic of post-war Finland, the direction of research into construction by the society, the standardisation that occurred at all levels, and the active measures taken by the legislature. As I will attempt to demonstrate, the prefabricated house industry has not been able to develop in market-based terms, rather it has succeeded to survive in the midst of the many mass-production objectives in society. Owing to its starting points, the prefabricated house industry is facing great challenges requiring it to adapt its operation to the ever-changing operating environment, something which I will discuss at the end of the chapter.

#### 3.1. Pre-war and war years

Housing activity in Finland is considered to have begun in 1886, when Emperor Nikolai II of Russia gave his declaration to begin the procurement of farmland to be used for the housing of the landless population. This was the first time public funds were allocated to housing (Laukkonen, 1987:3). Until the 1930s, townspeople lived predominantly in low-rise buildings made of logs, and small-scale farming and animal husbandry was common. Most of the residential areas of detached or semi-detached housing were the result of independent do-it-yourself building, which had its roots in the 1800s. In the Helsinki area, and around other larger urban centres, it was common practice to buy a building lot within reach of good services, and start building a small, one-room cabin which would later be extended little by little. This was how the existing residential areas and suburbs of many Finnish towns evolved (Lampi, 2007: 24-26). In comparison with other European countries, urbanisation started relatively late in Finland. The process, however, was faster than in many other countries (Heikkilä, 2003:50).

The 1920s was the golden age of single-family housing, and most of the old residential areas in Finnish towns actually date back to this time. The amount of construction was boosted by the economic boom that continued throughout the whole decade and as well the favourable attitudes of the authorities towards single-family housing (Lampi, 2007:33). The National Board of Social Welfare supported and subsidised the nation-wide distribution of standardised design and construction drawings for single-family houses in order to ensure their high aesthetic standards. A booklet with eleven designs entitled "Standard construction drawings for detached homes" was published in 1922, with four more designs added on later (Saarikangas, 2004:16). The growing demand for single-family housing led to the introduction of related legislation in 1927, and for the first time the regulations officially defined a single-family house to be a house occupied

by one or two families, including a small garden. At the latter part of the decade, the construction of single-family houses slowed down as a result of the Great Depression (Lampi, 2007:33-35). However, at the end of the decade, several entrepreneurs started manufacturing wooden houses in Finland. The Karjalan Metsätuote Oy sawmill in Jaakkima and some firms in Helsinki manufactured mostly small houses, weekend cottages and villas (Laitinen, 1995:15).

In the 1930s, functionalist ideas invaded the Finnish house building industry, and people began talking about minimal housing standards which could be guaranteed by various measures of standardisation, type houses and industrial serial manufacturing. During this decade, many different organisations published their own standard-project designs, and towards the end of this decade semi-industrial manufacturing of detached houses became common. The first system of standardised wooden houses was introduced when Alvar Aalto designed the AA-system for A. Ahlström Oy in 1937-38 (Lampi, 2007:39-42). The purpose of the system was to introduce into the market an inexpensive house which could be erected with minimal building skills. The first standardised houses were still site built and only partly factory-made with prefabricated windows and pre-measured timber, for example. In 1940, A. Ahlström Oy founded their Varkaus production plant and thereby started full-scale industrial housing production. The A-house organisation was set up to manufacture prefabricated houses, but had to close down in 1945 due to financial difficulties during the post-war period (Kummala, 2004).

#### 3.2. Period of reconstruction

The Winter War gave a boost to the Finnish housing industry as barracks were needed by the defence forces for temporary accommodation (Laitinen, 1995:15). The end of the Winter War in 1940 marked the beginning of the Finnish reconstruction period, which continued through the Continuation War and on up through to the early part of the 1950s when the last war indemnities were paid to the Soviet Union. As a result of the Truce Agreement of 1940, Finland was forced to cede considerable areas of land to the Soviet Union, and the whole population of those areas was resettled into other parts of the country. To that end, the Parliament passed the Prompt Settlement Act for Displaced Persons on June 24, 1940. On the basis of the standardised construction drawings and the instructions given by the housing committee of the Central Organization of Agricultural Societies, twenty-four different floor plans had been designed for homes that could be built as such or as mirror images according to land formation and direction. These houses were based on the previously published standardised designs Structural drawings for detached houses and Standard-project drawings for rural housing. This set of standard drawings met the needs of most builders, and work began on about 3,000 farms. Approximately one thousand of those projects were completed (Laukkonen, 1987:4).

The Finnish construction industry was up and running during the Continuation War. After the Winter War, Finland received from Sweden a donation of about 2,000 wooden houses, which were erected in seventy-five different localities. Although the exterior of the houses were designed by Finnish architects, structurally the houses complied with Swedish standards. Hence, people started to talk about 'Swedish houses' or 'Swedish blocks'. The houses were manufactured in Finland, which gave an added boost to the Finnish wooden house industry, and subsequently lead to the establishment of Puutalo Oy (Timber Houses Ltd), a central industry organisation (Lampi, 2007:49).

Puutalo Oy was founded in the spring of 1940 by twenty-one wood processing companies, which, by joining forces, aimed at more effective manufacturing and marketing of pre-fabricated wooden houses and elements.

There was also cooperation with Swedish manufacturers. In the 1940s, a total of over one thousand standardised designs were produced, including schools, factory buildings and barracks, in addition to homes (Kummala, 2004).

After the Second World War, the pace of urbanisation accelerated. Mass migration to the large cities was at its peak in 1941-1951, whereas the medium-sized and smaller towns began attracting migrants only in the 1960s. However, at the beginning of the1950s, two thirds of the country's population lived in rural areas, which is why reconstruction efforts were mainly directed in these areas. This also explains partly why one- and two-family detached homes have became the most common type of housing during the period of reconstruction. Over 70% of the buildings damaged or destroyed during the Winter War were in urban areas, so reconstruction was certainly needed there as well (Kummala, 2004., Heikkilä, 2003; 52, Rakennustieto Oy 4/2005).

Prefabricated detached houses were exported to the Soviet Union as war indemnity and in bilateral barter transactions, which further strengthened the Finnish building industry (Lampi, 2007:88). The popularity of detached housing in this era is additionally evidenced by the fact that, according to the Statistics Finland, there were 209, 959 one- or two-family houses dating back to 1940-1959 still in use at the end of 2007, i.e. one fifth of the total number of detached or semi-detached houses in Finland (Table 1). At this particular time, detached houses were also favoured because it was seen that water and sewage pipelines could be added to them even years after the house was initially built (Rakennustaito, 5/2005).

	Total number of new detached
	and
Building	
years	semidetached houses in Finland
-1920	55565
1921-1939	58191
1940-1959	209957
1960-1969	106756
1970-1979	149784
1980-1989	189591
1990-1999	117599
2000-2007	97894

 Table 1
 Detached and semi-detached houses by building year (Statistics Finland)

The detached housing of the reconstruction period was mostly built of wood because all available concrete and steel was being used by other industries due to the general shortage of materials. The Finnish brick industry was plagued by energy shortages, which made bricks hard to get. Therefore, houses were designed to have only one chimney with the rooms placed around it to make a square-shaped building. This resulted in standardised houses appearing identical and their designers remaining rather anonymous. The most typical house of the period was the so called 'front-veteran house', which was considered suitable for both rural and urban settings. This standardised house of one and a half storeys, gabled roof and cut timber siding became the most common form of detached housing in the 1940-50s both in the rural areas and urban centres because it was relatively easy to build even without special tools or carpentry skills. The minimum number of rooms was two plus a kitchen, though in some designs there were fewer rooms. As families grew, it was possible to convert the attic space into two bedrooms, and later, as children left home, these rooms could be rented out. Do-it-yourself construction played an important role in the Finnish restoration period, being very popular among the men who had returned from the war front. After acquiring the building lot, the necessary permits and the financing, families had to do the actual building themselves, and it was the physical labour that people had to put into getting a home that the Finnish expression 'hartiapankki' (sweat equity) actually referred to (Kummala, 2004; Saarikangas, 2004:20-21; Laukkonen, 1987:93).

In the late 1940s and early1950s, the use of prefabricated wooden elements became more common in Finland as large-scale manufacturing of houses was launched. In most cases, the houses were assembled in the factory by nailing or gluing the elements into building panels. Another alternative was the so-called 'cellular' or 'modular' house assembled at the factory into its final shape or into modules transportable on trailers (Laitinen, 1995:17).

As late as the end of the 1940s there was great shortage of housing in Finland, particularly in the population centres, and to tackle the problem, the government developed a system of inexpensive loans and subsidies for housing construction in the form of state-subsidised housing loans (ARAVA loans). The system played an important role in alleviating the shortage of housing, especially in urban areas, and in giving a boost to the construction of blocks of flats. In the early years of the ARAVA system, the loans were also used extensively for detached housing construction. After the war and up till 1958, most of the subsidised houses were built on farms (Ijäs, 2006:62-63), as the government wanted to support Finland's agricultural activity.

#### 3.3. The period of 'Great Migration'

Industrial manufacture of detached housing had begun in the 1940s, and in the 1950s, more and more Finnish families decided to purchase prefabricated detached houses. In the 1960s, do-it-yourself construction was not nearly as popular as before. More versatile materials were used: brick houses became more popular, and people also started to use concrete for building single-family houses (Lampi, 2007:109). With the rising of living standards, a growing part of the family income was spent on housing beside transportation and leisure. In the 1960s, consumer research started to cover a

wider spectrum of the society as in addition to the basic nuclear family, also widows and single parents were taken into account (Huokuna, 2005:63-64).

Despite the fact that rural living and construction were strongly subsidised after the war, the introduction of farming and forestry machines, weakening exports of farm produce and the shortage of work opportunities in rural areas began increasing pressure on more and more people to move to larger population centres and cities. In 1961-1972, the years known as the period of Great Migration, approximately 200,000 people moved every year from one municipality to another (Lampi, 2007: 102-104).

Following the energy crisis in the 1970s, product development within the housing industry focused on energy issues. In the late 1970s, Puutalo Oy no longer operated as the common marketing channel for companies, leaving the task of product development and marketing to individual companies. The product typical in the late 1970s was an advanced standardised house (Laitinen, 1995:50).

In 1950-1998, the number of towns in Finland grew by 57% and there was a steady flow of people from the Northern and Eastern parts of the country to southern and south-western Finland (Heikkilä, 2003: 54). From the 1950s onwards, urbanisation led to the active building of mainly high-rise suburbs distant from the city centres. Some new low-rise suburbs were built alongside them and some old ones expanded, but the popularity of detached housing suffered considerably in the years following the great migration. In the 1960s, for example, detached housing only constituted a share of less than 30% of the total Finnish housing production (see Lampi, 2007:106; Ijäs, 2006:96-97).

# Control by society directing towards standardised mass production at the cost of individuality

The methods of operation of the detached home and of the building industry have in the post-war period taken their present form under the control of the designers, the building industry and society's housing politics. In a historical assessment, Finnish building legislation and operational modes seem to have evolved mainly in line with the industry's potential and goals of the housing politics, where the wishes of the individual consumer seem to have been neglected. In fact, households were looked at as objects of consuming politics (Hankonen, 1991:134). As a good example of this aim to get rid of individuality and strive towards standardized mass production and design for the 'masses', Hankonen mentions the first preliminary report of the research committee for the building sector of the Ministry of Trade in 1967. The report states that 'nowadays too many design for too few,' and the unnecessary excess diversity of housing production is one of the outcomes (Hankonen, 1991:181-182). The objective should now be that a smaller number of designers design for a larger number of consumers. The committee expressed, as consumer opinion, that consumers did not want the indefinite measurement discrepancies of the traditional housing production, one reason why the architects and the engineers should start mainly designing standard housing solutions. According to Hankonen, matching the industrial large-scale housing production and the demand for housing was a 'Fordistic' arrangement based on macro-economic programming (Hankonen, 2001:222). The examples serve to describe how mass production was seen to be the key macro level challenge for the entire nation, and how this guided the goals of the entire Finnish housing industry in the post-war period. Housing was seen to be an issue which would only be solved through standardised mass production.

#### 3.4. Towards the new Millennium

In the mid 1970s, interest was revived in detached and semi-detached housing and in 1975 their share reached 41.1%. Since then, the proportion of detached houses within the housing stock has remained at about 40%, with the proportion of semi-detached houses at 12% and above (Lampi, 2007: 128). In the 1980s, building of smaller units was encouraged with the focus on quality rather than quantity. A single-family house with its own private yard once again became the ideal housing alternative for Finns, despite the fact that the level of services in the detached housing areas was often poorer than in the high-rise suburbs (Ijäs, 2006:108).

The 1980s saw the emergence of information technology, introduced both to the design and the production management processes (Laitinen, 1995:50), enabling the industrial manufacture of individually customised housing. The 1980s also marks a break away from the ideology of standard housing and a shift towards homes that are systemsbased yet customised to meet the needs of the buyer (Kuoppamäki, 1986:26).

The popularity of prefabricated detached houses continued to grow in the 1990s, as during this period the share of prefabricated detached houses rose to approximately 60% of the total low-price house markets. The building of detached housing also urbanised, as at the beginning of the 1990s most of the detached houses were still built in the sparsely populated areas of rural municipalities, however in the latter half of the decade urban areas became prime locations for detached and semi-detached houses (Riihimäki and Lehtinen, 2000: 21-23). The detached housing stock grew rapidly after the mid 1990s and its production nearly doubled from 1996 to 2006 from its rather modest 8,000 units at the start of 1996. At present the proportion of prefabricated houses of the total detached housing market is about 68%, or approximately 11,000 houses per year. The most popular are single-family houses with a wooden frame — the proportion of which was approximately 87% in the late 2000s (Hänninen, Toppinen, Verkasalo, Ollonquist, Enroth and Toivonen, 2007:32-34).
# 4 THE PROCESS OF CONSTRUCTING

The Finnish construction industry widely applies a system of standardisation developed and approved of by all construction industry actors. The so-called RT-system (RT Building Information File) is maintained by the Building Information Foundation RTS. In the RT-system, the construction process is divided into five phases which again are divided into sub-phases. The five main phases in a construction process are *Needs Survey, Project Plan, Building Design, Construction and Commissioning* (RT: 10-10387).

A brief summary of the Finnish RT Building Information System follows as an introduction to the building process — after the introduction follows my own process model which is based on my professional experience and the literature.

The Needs Survey helps to specify the functional requirements. It contains a preliminary space plan, a description of the requirements and a preliminary building schedule.

- 1) The Project Plan specifies the objectives established by the Needs Survey in more detail. Generally, the objectives relate to architectural and technical properties, and the size and dimensions of the house. At this stage, a budget is agreed on for the project. The building site and the town plan define to a large extent the size, dimensions as well as the exterior features of the building. The Project Plan is completed by the buyer jointly with the representative of the house manufacturer, in most cases the supplier. Additionally, the buyer may involve his or her own expert, generally an architect or a principal designer.
- 2) Building Design aims at attaining the best possible quality within the given resources (Kankainen and Junnonen, 2000:33). The building is designed by an architect commissioned either by the buyer or by the house manufacturer. The Land Use and Buildings Act stipulate that the principal designer in a house building project must have appropriate qualifications. In case of prefabricated houses, the house is generally designed on the basis of the type-design of the selected prefabricated house model. The type-designs are based on the concept of optimal cost-efficiency with approved technical structures. The changes potentially required by the buyer can only be taken into consideration within certain limits, and usually they increase the cost as changes to the standard production invariably complicate the production process. All designs and drawings needed for the building permit and the actual building stage documentation for the site are completed based on the Building Design phase. They include architectural drawings as well as construction, electricity and HVAC plans, all contract definitions and specifications. This documentation is available for eventual calls for tenders for the parts of the project that the buyer has excluded from the prefabricated housing manufacturer's delivery such as earth-moving, electrical installations and HVAC contracts as well as fixed furniture and fittings which the buyer purchases either independently or together with his principal designer or with the project supervisor. The last phase of the building project before the actual construction phase is the calling for tenders, their review and signing of the contracts. In actual practice, the design of details usually continues during the construction phase.
- 3) Following the Land Use and Building Act, the detached house builder must commission for the actual construction phase a responsible site supervisor

approved of by the building inspection authority. The responsible site supervisor has prime responsibility over the entire building site (Pelkonen, 2008:10), and is also responsible for ensuring that the contractors' work performance meet the requirements and specifications set out for the final outcome, and for ensuring that good building practice, directions of the authorities and laws and regulations are observed and followed (Kankainen and Junnonen, 2000;61). Thus, any family deciding to build their own home will need a principal designer and a responsible site supervisor on their team. They are not only required by law but also very necessary even in the case of a prefabricated housing project, as a building project always entails more than the mere house package. (Pelkonen, 2008:19-21). During the building stage, the principal designer, the responsible site supervisor, the house manufacturer and the various specialist contractors have to cooperate and carefully align their schedules and their spheres of duties. The construction phase ends when the building project is completed with a final inspection conducted with the house manufacturer and the various contractors. This inspection entails verification of project completion, as well as any defects, non-conformances and deviations. In this context, the building authority conducts a commissioning inspection whereupon the building may be taken into residential use. This moment also marks the start of the guarantee period for the construction work. Moreover, a final financial settlement is done with the various contractors whereupon the last payments are made.

The contractor is responsible for the contractual conformity of his or her work performance for the duration of the guarantee period which, according to the general terms and conditions of the construction industry, is generally two years if the contract does not stipulate otherwise. The contractor's liability for serious negligence is ten years in those cases where it was not possible to ascertain anything acutely neglected in the acceptance inspection or during the guarantee period. According to the generally applied contract terms, the guarantee period collateral is two percent of the total contractual price excluding value added tax, unless the contract otherwise stipulates.

4) Operating and maintenance instructions must be available for the residents when the house is commissioned. The responsible site supervisor and the building developer must agree on their mutual division of responsibility for compiling these instructions. The future residents of the new house must be properly informed of how they can prevent damages and ensure a long life for the house through their own measures while residing in it.

The RT Building Information system is the outcome of development work and reconstruction done after the 1939-1944 war period by the Finnish construction industry for its needs. The RT system strongly reflects the production-oriented thinking of the traditional Finnish construction industry. The system primarily revolves around the construction processes, not the processes of the end user. Lately however, the literature has brought forward the end user, and the use of the house has been added to the end of the building process (for instance Koskenvesa and Mäki, 2003; Association PTT ry, 2009). This new development is important for this study as it aims at concentrating on value formation from the point of view of the end user or the resident.

# 4.1. Construction of a detached house – The builder's process

According to the author's experience, the builder of a detached house seldom perceives the building process as analytically as was initially intended by the construction sector in their process description. In practice, the detached house builder's construction process consists of the following stages:

- 1) Project Planning: acquisition of the building plot; review of the various alternatives marketed by the house manufacturers; cost analysis.
- 2) Building Design: together with the house manufacturer.
- 3) Preparations for construction: obtaining the building permit; acquisition of the prefabricated house and other acquisitions.
- 4) Construction phase.
- 5) End use, residing in the new house.



#### Figure 4 Stages in detached house building project

### 4.2. Organisation

The builder of a detached house is generally also the commissioner and the developer, or in other words the executor of the project. He or she has much at stake: He or she must initiate the project, and be responsible for the operational decision-making, the project and its costs. The Land Use and Buildings Act specifies duty of care to imply that if the builder's own professionalism is not sufficient for the project, he or she must commission qualified personnel to ensure that it is (Koskenvesa and Mäki, 2004:9). The builder of a detached house almost always does some of the building work him or herself. In nearly all cases, however, the builder's desires and skills, as well as the time available to him or her limit his or her contribution, and professional help is required at various stages of the building project (Ibid.:9). In practice, the law reform of 2000 has led to a situation where it is no longer possible to build one's own home without a qualified principal designer and a responsible site supervisor (Pelkonen, 2008:8).

The attached simplified scheme represents the differences in the buyer's contractual relations in the two different types of process. These simplified schemes display the essential differences between the contractual relations of the two methods of building.

In independent building, the project requires contractual relations with all parties involved in the project. Additionally, it requires that the schedules, responsibilities and divisional lines between tasks are carefully specified.

# **4.3.** Benefits and drawbacks of a single-family PDH package for the builder

Even though the majority of new single-family PDH builders choose a prefabricated house package supplied by a house manufacturer, the builder always has the alternative of independent construction. These two modes of house building differ from each other distinctly and so it is easy to understand why prefabricated houses are so popular. The simplified schemes below show the essential differences between the two modes of construction.

### **Project management**



# Figure 5 These are the buyer's affiliations when building independently (without a house manufacturer).

Below is a description of the buyer's contractual affiliations in the building mode where a house manufacturer is responsible for the major part of work and liabilities. It is obvious that the buyer has a much smaller number of contractual affiliations.



# Figure 6 The buyer's contractual affiliations in a building mode where the major part of the project is supplied by the house manufacturer

It can be concluded that by ordering a new single-family PDH, builders choose a prefabricated house package supplied by a house package the buyer gains benefits through: less own work, as acquisitions largely remain the responsibility of the house manufacturer; reduced cost risk, as building costs are largely known ahead of building and based on the contract concluded with the house manufacturer; and, project management risks related to time schedules are reduced, as the alignment of timetables of the various acquisitions is largely the responsibility of the house manufacturer.

Independent site building, on the other hand, has its own benefits when compared with the acquisition of single-family PDHs. Flexibility with regard to the building architecture and functionality is probably the key benefits. The buyer family may have such unique wishes and expectations as regards their single family home that the prefabricated house manufacturers are not able to fulfil. Moreover, the building site may present exceptional challenges due to its differences in elevation or the directions or views it faces. In these cases, the only practical alternative may be a unique house designed by an architect for that particular site. Some builders also want to maximise the share of their own labour and independently manage even the frame of the building thus minimising building costs. Both modes of building — building with a prefabricated house package and site building independently — enable outsourcing the management of the entire building project and the actual construction work to professional outsiders. In this case, the share of the buyer's own work and his or her discomfort is minimised but the total cost of the project may increase.

House package benefits	Independent site building benefits
Less own labour	Enables individual design
Availability of labour and materials	Savings through good purchases
Costs are known in detail	Possible to maximise one's own labour
Smaller risks with timetables	
More extensive guarantees	
<u>House package drawbacks</u>	<u>Independent site building</u> <u>drawbacks</u>
Limited number of alternatives	Project management more laborious
Changes made to basic models increase costs	Larger cost risks
	Larger timetable risks

Table 2 Benefits and drawbacks of a house package and of independent site building

The single-family PDH package offers many tempting benefits, however the builder always has the alternative of site building independently without involving a house manufacturer.

### Summary

Building a detached house is a diverse, multi-phased process involving more than mere construction work. The process starts much earlier than the actual construction work with a project planning stage during which the various alternative ways of building a detached house are reviewed and analysed. During this stage, the supplier of the single-family PDH is selected. The process does not end with a finished house, but the actual residence forms an inherent part of the project. The technical and functional qualities of the house can only be verified when the house is used for the purpose it is intended. The resident, the end user of the house, is an inherent part of the process, which has no utility value without the end user.

It is important to note that even though the majority of new single-family PDH builders do choose a prefabricated house package supplied by a house manufacturer, the builder always has the alternative of independent site building without involving a house manufacturer. Should the produce of the prefabricated housing industry not meet the end users' true expectations, the end users may choose not to use the services of the industry.

End user satisfaction is of key significance for the housing industry, simply because the competition comes not only from another house manufacturer, but also from the choice of the consumers to move to alternative modes of building.

# 4.4. The decision process leading to building a detached house

The following chapter discusses the reasoning and the process that lead to building one's own home. The chapter is based on research and the literature.

Larjonen (1991) has conducted research into Finns and their dreams of single family housing. Her studies are related to the sociology of housing and ethnographic research on housing consumption. Her empirical data is gathered from 26 people who live in single family houses which they have built in the metropolitan area, 12 of them being married spouses. 'Residence career', a hyponym for the concept of a particular socio-economic life cycle, serves as Larjonen's theoretical frame of reference, describing how a person or families consciously climb up the 'residence ladder' by moving from one home to another. According to Larjonen, the housing goal generally is a downtown apartment or a single family house (Ibid.:53), and the single family house is usually a mode of housing achieved through various changes of residence. When one has moved and had several unsatisfactory housing experiences, the need arises to find a better and more permanent residence solution.

The decision to finally build one's own home is at least partly an outcome of unsatisfactory housing experiences (Ibid.:62). A study by Pulkkinen, Pärttö, Lyyra and Kamppila (2009:14) supports this argument, that the housing experiences preceding the move to a single family house are generally described as negative. Before people move to a new house, they have various types of empirical wishes and preferences arising from their personal inclinations and mental impressions. Their experiences and advance notions of their future home may be a remarkable factor affecting their decision to build a home and the actual completion of the building project. According to Larjonen (2001:66), the motivation and the reasoning that lead to the move to a single family house have implications on how the housing and life styles develop. Without a strong enough motivation and sufficient financial resources, building one's own home becomes such a heavy process that it tests the limits of one's endurance. It is of interest to this study that Pulkkinen et al. argue that these notions and mental impressions can be tapped in house marketing (2009:14).

Before the move to a single family house, the practical unsatisfactory housing experience does not necessarily have to be very bad, and the family's housing conditions may have been quite tolerable even before the decision to build one's own single family house. One decisive factor has, however, activated the family to proceed to their home building project. A new family member or an extension to the family is one obvious reason to build a single family house, as the practical and simple need of more space arises. This type of reasoning departs directly from the existing housing conditions and may as such be quite superficial. Uusikallio (2001:250) agrees that social and symbolic values are accentuated as the residence career advances. Those planning to find a new home to move into may begin to assess their new home's social and symbolic values in addition to its utility and trade-in value. According to Uusikallio (Ibid.:251), individuals may build their image, stylise their life or realise their dreams through their choices of housing. Professor Kirsi Saarikangas (1993:43) has said "The dwelling, the home, accommodates a portion of daily life of the individual. The home strengthens and bolsters the identity, offering security and 'domestic peace'". In other words, the valuations attached to single family housing may be quite ambiguous. According to Kukkonen (2007:227), only a single family house allows an individual to make his or her dwelling into his or her self-portrait and to mirror in it his or her own

ambitions, wealth and tastes. While designing their house, people attempt to adjust the building's outward appearance, floor design and details to reflect their self. More is at stake than just simply building a house or the mere physical qualities of a house: They are vehicles for the expression of people's equivocal values. From the point of view of this study, the argument of Pulkkinen et al. is of great interest. That argument points out that these notions and mental impressions may be tapped in house marketing (2009:14). The value proposals of recent years do not appear to meet the buyers' evolving expectations. Society is moving from an efficiency approach towards one that is more experiential and pleasure-seeking (Lammi and Timonen, 2008:9-12), and naturally alternative lifestyles are sought also through choices of housing (Ilmonen, 2001:54-67). These academic findings are evident, for instance, in the changes that have taken place in the annual Finnish Housing Fairs that display the latest trends in single family home design and construction. Rautiola, professor of house design, has pointed out that at the 2005 Finnish Housing Fair in Oulu and at the 2006 Espoo Housing Fair nearly all houses were designed by architects. This, in his view, reflects the changes in the clientele and its changing housing needs which can be met only through unique and individual design (Rautiola, 2007:212).

To put it simply, it seems that the traditional type house as such no longer satisfies the increasingly individualised wishes and expectations of the clientele.

Research shows, in conclusion, that the experiences of single-family PDH builders and their presumptions of single family housing have a significant bearing on whether they decide to start to build their own single family house. Increased wealth is changing consumer behaviours in the house package markets at least in the sense that buyers seem increasingly to want to reflect their individualised and unique values in their homes. In order to fulfil the individuality demands, the traditional and production centred process must evolve to better accommodate the buyers' individualised needs. However, these equivocal factors can be exploited in marketing. Figure 3 illustrates the single family home building process in which values are reflected in the wishes and expectations and assessed prior to the Project Plan. Just simply sticking to the process description generally followed in the construction industry does not provide a sufficient framework for research in the area of marketing since the buyer's process has actually commenced before his or her very first contact with the house manufacturer. At that point, prior to Project Planning, the buyer already has established his or her values and - on the basis of those - also his or her personal and unique expectations of his or her future single family home.

# **5** SUMMARY OF CHAPTERS THREE AND FOUR

Chapter 3 describes the history of Finnish detached house manufacturing. In it, the author aims to illustrate how this industry was created primarily to meet, with meagre resources, the growing post-war needs for housing in markets where the shortage of housing prevailed. The decisive factor of the single family housing market was the family's economic capacity as it determined whether a family was able to afford to live in a single-family detached house. Thus, the market has mainly been concerned with accessibility, and has tried to enable as many as possible to live in single family houses. Standardisation enabled the transfer of the benefits of mass production to consumer price, whereby the threshold of accessibility was lowered. Standardised model houses were the goal in production since meeting individual wishes would increase the prices of housing. The prototype for an industrially manufactured dwelling was a prefabricated detached house (Hankonen, 2004:165). Respecting individual wishes in industrial manufacture would complicate the manufacturing process and push up the price. According to Hankonen (Ibid.:128), customised building can be justified only in very few exceptional situations. The threshold of accessibility was again lowered by offering products that enabled the builder families to maximise their own labour contribution in the building project in order to achieve cost savings. As late as the 1970s, cost savings through the builder's own labour were a key factor to enable families to acquire their own single family detached home. Increasing numbers of both blue and white collar workers built their entire home or contributed a significant share of the labour needed through do-it-yourself building. For many low-income workers, DIY continued to be the only way to reach their dream of a single family home (Kolbe, 1988:17–23; Sumu, 1991: 30–31; Juntto, 1990: 124). Production of prefabricated housing has generally been possible only in a price range below a certain market determined maximum price level. This has meant that until very recent decades, the demand has been mainly driven by price, while individual wishes have been only a very secondary driver.

Chapter 4 provided a short introduction to the standard project model which is widely in use in the Finnish construction sector. This standard project model was also mainly derived from the needs of the production process, since house construction and its project descriptions have from the start of the 1960s focused on productivity increases. The productivity goals were adopted by the house construction sector on the basis of engineering science's traditions of Tayloristic work study (Hankonen, 1991:134). Understanding this comprehensive, historical context is important if we wish to understand the construction projects of today 'An individual building is part of a larger system and acquires its meaning in relation to both this system and to the historical context' (Saarikangas, 1993:90). The goals of the Finnish building industry have thus been derived from the production centred system. Commensurate sets of standards, measuring methods and process charts were necessary to construct individual buildings in an efficient manner with industrial methods. The process description introduced in Figure 3 is one outcome of this determined strive for increased efficiency. It is a useful model description of a construction process and helps people understand the building process. The model can also be used to determine the distribution of tasks between the project parties and to explain the various stages in the building project. This simplified model can even be applied to the process of building a single detached house. In this study, the model is used to help describe the benefits and drawbacks for the builder of a house package and of independent construction. Additionally, the model helps illustrate how deep seated in the methods and culture of Finnish house building the production centred approach actually is. In this descriptive model, the

builder of the single-family PDH is involved in the project only indirectly as he or she is represented by the developer. From the point of view of a single family house builder, the entire project may appear considerably different. Before the Project Plan, the builder may have already assessed a large number of alternatives during an extended period. This standard model also totally excludes residence. Therefore, one of the main interests of this study is to collect empirical information from the residents of how well the product — in this case the house — serves them. It is interesting to note that a feedback model of this type is not an inherent part of the Finnish building process, as user feedback is elsewhere generally regarded as a key way to collect information for the purpose of developing one's service offering and of attaining growing customer satisfaction.

Consumer valuations have been diversified along with the diversification of the social developments and the economic opportunities. The detached housing industry must increase its understanding of the consumers' deepest motives if the industry wishes to develop its service offering. Customer value formation is now in focus since it is key to understanding how the customer forms his or her evaluations.

Following the significant increase in consumer environmental consciousness in the early 2000s, the building industry has been faced with growing pressure to build ecoefficiently. Consequently, eco-efficiency has become one of the criteria for quality building along with wellbeing, security and ambience. In 1998, the Finnish government adopted the programme of ecologically sustainable building, the first of its kind in Europe. In the programme, the government set the goals and measures by which the principle of sustainable development was to be applied to the construction, renovation and maintenance of buildings (Rakentamalla hyvinvointia 2003, 13; Ekologisesti kestävän rakentamisen ohjelma 1998 [Well-being through construction in Finland, 2003:13; Government Programme for Ecologically Sustainable Construction 1998]). At the beginning of 2008, a new law and decree on energy certification came into effect. The certification system makes it easier to evaluate the energy efficiency of buildings and make comparisons with other buildings. An energy certificate by the principal design office is required on all new buildings, and from the beginning of 2009, a certificate is required on all existing buildings when the building or parts of it are being sold or rented (www.ymparisto.fi).

Recently, there has been much debate on the quality of price information and delivery specifications used while marketing prefabricated housing. Exact prices need not be given when e.g. advertising in periodicals, but when a specific house model or prefabricate is being presented in a catalogue or on a website, the price must, according to the marketing regulations of the Consumer Protection Act, be published. In the summer of 2007, the Consumer Agency carried out a monitoring campaign which revealed deficiencies particularly in the information given on prices. Moreover, adequate delivery specifications were often missing, making it difficult to compare the content of the prefabricated house 'packages' deliveries of different manufacturers and to assess their total cost. The Consumer Agency works in collaboration with the Rakennusteollisuus RT (Confederation of Finnish Construction Industries RT) and Pientaloteollisuus PTT ry, and it allowed companies one year to correct the deficiencies in their marketing. The monitoring campaign of summer 2008, however, showed that over half of the 40 manufacturers still failed to disclose prices of the house models they publicised and simply urged the customers to contact their retailers. Furthermore, over 50% of the companies failed to specify the content of the prefabricated house 'package' delivery adequately. Following the summer of 2007 Consumer Agency request, only one manufacturer, Jukka-talot of Pyhännän Rakennustuote, had amended their marketing methods by August 2008 to comply with the legislation. The Consumer Agency is considering taking one company to Market Court to set a precedent (http://www.kuluttajavirasto.fi/fi-FI/; Consumer Agency's weekly newsletter, 7/2007).

# **6 METHODOLOGY**

This chapter provides a report based on analyzing and evaluating the raw data generated in nine interviews, which took place on June 14 and 18, and July 20, 2009 in Valkeakoski. This chapter is also discusses the methods and scientific framework while conducting an analysis of qualitative data in research.

The aim of this chapter is to conduct an analysis and an evaluation based on the raw data generated for this case.

### 6.1. The method chosen

My aim is to study and understand the reality from the viewpoint of builders of detached houses. From this perspective, an interview study is a natural basis for gathering empirical data because interviews allow us to enter into another person's perspective and seek to understand the topic simply because the 'interview participant has relevant experiences to shed light on it' (Charmaz, 2006:25).

Patton (2002:342) proposes four alternative approaches to conduct a interview: First, the informal conversational interview, which relies on free and spontaneous flow of discussion; second, the general interview guide approach, where a special checklist is used during the interview to make sure that all the relevant issues are covered; third, the standardised open-ended interview, based on a beforehand prepared questionnaire and it minimises the variations in between the responses in between the respondents; and fourth, the closed, fixed-response interview, where respondents chooses from among fixed variables. Silverman (2006:110) introduces his version of the typology of an interview strategy (which is he mentions to be originally created by Noaks and Wincup (2004), which focuses especially on the skills required in each type. In Silverman's typology there are four types of interviews: First, the structured interview, which requires neutrality and training to ensure consistency; second, the semistructured interview, which requires understanding the aims of the project; third, the open-ended interview, which requires flexibility and active listening; and fourth, the focus group, where the researcher has to have ability to stand back so that group dynamics can emerge. (Yin, 2003:90-91) proposes three interview types: First, the open-ended interview, where the respondents are asked to give, not only 'answers as such, but their opinions and even suggestions for future evidences' (according to Yin this is the most common in case studies); second, the focused interview, where questions may still be open ended, but the researcher is more likely to follow certain manner or protocol; and three, the formal survey, where both the sampling strategies and the instruments used follow regular surveys manner and are also analyzed in a similar manner.

To summarize the propositions of the three scholars discussed above, we can conclude, that in principle there exists a) the individual interview, which by nature allows more sensitivity, and b) the group interview, where the social context and group dynamics plays a remarkable role.

When it to comes to the openness of the interviews, we can combine all three propositions and build a three stage model where:

- the first approach is the most flexible as the method is an informal discussion,
- the second approach is where the interviewer takes care that all the issues are specified and covered not only in advance, but also during the interview, and
- the third approach is the most inflexible, where questions are fixed and formal, and the respondent makes choices between fixed responses.

I aim at understanding the reality from the respondents' point of view and have, therefore, tried to avoid questions that might lead the answers to expected directions. For example, I did not tell the respondents the very exact focus of the study. On the other hand, interviews ought to be comparable with each other and maintain the scope of the study. Therefore, it was necessary to prepare a questionnaire with short, semi-open-ended questions that were repeated in all interviews. As Patton (2002) describes it, the interview guide is a tool for ensuring that the same basic idea and line will be followed with each respondent as it makes the data gathering more systematic, and obviously helps in data analysis and comparisons. In the interviews, I was prepared to encourage the respondents with probes in case their answers were very short or superficial. Probes are 'tip' words or ideas that try to encourage the respondent to focus or supply more data, and they can be utilized to help increase the richness and depth of responses (Patton, 2002:372).

# 6.2. Conducting the interview

To examine which things customers value in detached houses, personal face-to-face interviews were chosen as a method. However, because building a detached house is obviously a family project, I wanted to investigate the experiences of the families. Therefore, couples, men and women, were not interviewed as individuals. The chosen study method connects this study to studies presented earlier in the literature review in chapter 2.8. As will be shown later, the chosen method proved suitable also because the discussion between the couples deepened and enriched the data.

The interviews were conducted by the author. The interviewees were asked to complete an inquiry to gather accurate case facts (Uusitalo, 1999:92). After the basic data gathering using the inquiry form, personal interviews were conducted because using merely an inquiry form based method may not enable the researcher to penetrate the façade of the respondent and the responses may reflect the role behavior of the respondent rather than their personal experiences (Ibid.:93). As the main objective of this study is to explore the inhabitants' experiences related to purchase or building of a new single-family PDH and living therein, it is important to expand and enrich the qualities of the research material. The aim is to reach the everyday experiences of the respondents and capture the perceived value from their perspective. Interviews are essential to 'enter into other person's perspective' (Patton, 2002: 341) The families were interviewed (and recorded) separately. As my aim was to explore, I nevertheless still made sure that the interview was focused and data comparable afterward by preparing an interview guide. I had prepared also three probes to be utilized in case the interview didn't 'flow'. The same questionnaire was asked of all respondents.

Each interview was digitally recorded and transcribed.

# 6.3. The sample

The families studied in this paper were chosen from those who responded to the advertisement on the Internet page of the Finnish Housing Fair Cooperative Organisation. Those families who had built their new single-family PDH more than two years ago or were currently building were chosen for this research. The goal was to get those families involved in the study who have sufficient experience of the technical properties and year round functioning and habitability of the house. However, the time the respondents have inhabited their house needed to be short enough so that they could still recall pertinent issues related to acquiring and construction. This kind of sampling of the respondents is theory-based (Patton, 2002:338) where the idea is find respondents based on assumption of their importance for the theoretical construct created.

# 6.4. Background data

In total 9 families, 18 people altogether, were interviewed. The age of the respondents varied between 29 years up to 51 years, with the average being 40 years. The average size of the houses was 160 square meters. The average price for the prefabricated houses was 108 000 euro and the total price for the projects was 259 000 euro, excluding the price of the site. The families had lived in their new house 10 months on average. Three families had already previously been living in a detached house, the rest of the families moved in from a row house.

	House					Prof.	
	Fabric	m2	€	€ tot	kk	Consultant	Aftersales
Family A	Х	140	48 000	170 000	6	no	no
Family B	х	143	52 000	240 000	16	Yes	no
Family C	Y	230	280 000	360 000	7	no	yes
Family D	Y	110	180 000	210 000	3	no	yes
Family E	Y	155	70 000	220 000	6	Yes	no
Family F	Z	193	80 000	220 000	17	no	50 %
Family G	W	113	127 000	160 000	12	no	yes
Family H	Q	212	80 000	400 000	1	Yes	50 %
Family I	Y	150	55 000	350 000	20	Yes	no
Average		161	108 000	258 889	10		

#### Table 3 Basic data of the projects from the families interviewed

As can be seen in Table 3, the nine families used five different house manufacturers, and only four of them had used an external consultant for the design and eventual purchase.

# 6.5. Inquiry and interview process

The interviews of these families were conducted over three days at the housing fair in Valkeakoski from July 14 to 20. The interviews took place in a peaceful, furnished row house apartment. To begin with, the families were asked privately to complete the inquiry form to survey basic information about their family and house project. The multiple choice questions on the form were aimed at getting structured data on the functioning of their house from technical perspective as well as its inhabitability. Additionally, one multiple choice section concentrated on the families' activities in the residential zone itself and their motoring habits. On the form there were also open ended questions on issues which the families regard as particularly important aspects in a house and how they see it as a good investment.

After the respondents had completed the form, the actual interviews were carried out. The use of two research techniques, namely inquiry and interview, aimed at getting the most reliable data making use of triangulation (Patton2002:247). Reliability is enhanced by the interviewer's good pre-understanding of the subject, which both helps focus on relevant issues and diminishes the risk of misunderstandings in communication.

In all interviews the same questions were asked. The interviews were recorded and transcribed for further data analysis. During the interview field notes were also made.

The field notes are handwritten by the researcher under the observation of the interviewees. Additional data is gathered by survey conducted. In the first phase, the field notes are processed by coding being the core method in processing raw data. 'The conceptualization of the data is the foundation of the grounded theory development.

The essential relationship between data and theory is a conceptual code' (Holton, 2007:265).

The interviews began with an easy open ended question which gave the interviewees the possibility to relate freely and build trust with the interviewer. Thereafter the questions got more detailed. However, throughout the interview the questions were such that it was easy to answer them without any special knowledge or vocabulary of any field.

The probing technique was also employed in the interviews to deepen and increase the richness of the data and depth of the responses (Patton, 2002:372). A laddering technique was used during the final question 'Why did you choose the house supplier in question? Why was it important?' and so on. The idea of laddering interviews is to get to the 'higher abstraction level' from a range of attributes to consequences and finally up to values (Reynolds and Gutman, 1988:12). The aim was to reveal the very basic values involved in house acquisition.

# 6.6. Analysis and interpretation of the data

I will analyse the data utilising the model presented by Spiggle where applicable. As Spiggle presents 'a classification and description of qualitative data manipulation operations, these operations include categorization, abstraction, comparison, dimensionalization, integration, iteration, and refutation' (1994:493).

According to Spiggle, these operations are not necessarily separate in the process or follow each other in a categorical order. Rather, they are operations by which the researcher organizes data, specifies their meaning, arrives at conclusions and creates or confirms conceptual schemes.

The first stage towards interpretation is data manipulation, which Spiggle calls data analysing. Spiggle (Ibid.:493-496) provides a framework for data manipulation, where she gathers the works of some leading scholars, like Miles and Hubermann (1984), Glaser and Strauss (1967), Strauss (1987), Strauss and Corbin (1990). According to the method proposed by Spiggle the data gathered in the interviews has to be analysed to make findings.

Interview analysis offers 'one idiom for examining how speakers in face to face interaction constitute the realities of concerning them' (Gubrium & Holstein, 1997:123). One major challenge in analysis is 'making sense out of massive amounts of data' (Patton, 2002:432) not only the problem of 'massive volume' of the data and downsizing it, but also the challenge of how to do it. Reducing the volume of the raw data bears some risk that something essential may be lost in the process as there is no reliability or validity test that could be applied. (Ibid.:433).

Spiggle has studied central scientific writings dealing with qualitative research and proposes a model which, as he describes 'encourages us to thinking about the connections between the empiric and theoretical domains, and how they are linked to broader theoretical concerns of the field' (Spiggle, 1994:501).

In this study I combine theoretical starting points with empirical material, and thus Spiggle seems suited to serve as the basis for the analysis of the empirical part of my study. Even though there exists no universal rule, there are some guidelines that can be applied in the process. Spiggle (1994) proposes a framework where the analysis and the interpretation can be seen as two different activities, analysis and the interpretation.

### **Categorisation and Abstraction**

When examining the data, it soon became quite apparent that the answers included highly concrete views about the house in of itself as both a technical and functional entity, as well as those views which were clearly emotional. Categorisation is intended for detecting single parts or pieces of data that belong to a certain group or represent a wider, general phenomenon (Spiggle, 1994:493). Abstraction, for its part, is aimed at grouping observations in a manner that enables the detection of higher concept levels.

When studying the transcribed interviews, it was readily noticeable that all of the interviewees depicted extremely similar reasons for building a new single-family PDH, both the construction phase and occupancy. As the interviews were with couples, it was gratifying to notice how they supported and helped each other formulate their feelings: If one of the spouses did not find the right expression to describe his or her thoughts, the other one would help him or her find the right word or continue the sentence for him or her.

It was a positive surprise to detect the confidence between the spouses. Not once during the interviews was there a situation in which tension was detected when they were discussing, for example, design, selection of the house, or uneven distribution of the workload. This being the case, it was easier for me as the interviewer as I could stay in the background and leave the space open for them. Another advantage was that the answers became more accurate and 'richer' than would have been the case had there been only one interviewee at a time.

The following is a good example of an answer in which the discussion between two spouses helped enrich the data. Interviewer: 'No, kertokaa omin sanoin miksi rakensitte omakotitalon?'Mr C: 'No kyllä siinä se tilan tarve, et me vanhaa taloo laajennettiin pariin otteeseen, eikä siitä saatu toimivaa. Ja sitten toi paikka ratkaisi, kun löydettiin toi tontti. Se oli se suurin varmasti'. Mrs C: 'Elämäntilanne oli lasten harrastusten osalta se, että paikka ratkaisi ja juuri tää tilan tarve siltä osin, että'. Mr C:' Me asuttiin maalla missä etäisyydet parikytä kilsaa Porvoseen ja Loviisaan ja nyt asutaan sit ihan keskellä kaupunkia merenrannassa. Onhan se iso muutos'. This example shows how the answer becomes deeper in a discussion-type situation. Mr C's answer emphasizes the need for space, the 'difficulty' of living in the previous house, and the finding of the plot. Mrs C brings up, as a new element, the influence of the children and their hobbies on the decision. Finally Mr C becomes inspired to continue from what has been said earlier and mentions that their place of residence has changed from the countryside to town, and that this has had a great impact on their life. The following example, for its part, illuminates a valuable clarification. Interviewer: 'Kuvailkaa omin sanoin, millaista on asua omakotitalossa?'. Mr E: 'On se ainakin verrattuna entiseen, niin aika mahtavaa'. Mrs E:'On, ei vaihdettas enää kerrostaloon eikä rivitaloon, koska ollaan asuttu niissä aikaisemmin. Siinä on oma vapaus'. Mr E:' Ja sitten on yks, mikä on semmoonen suuri asia, niin sitä säilytystilaa on oikeesti tarpeeks kerrankin, että tulee niin kuin esille siinä kans aika hyvin'. What appears first from the

response is that the couple sought improvement to their housing conditions, in this case to get away from apartment houses and row houses. Mr E's addition describes in more detail which individual factor, in this case the sufficiency of storage space, is particularly worthy of appreciation compared with the previous type of housing.

It can be stated that along with categorisation, abstraction also occurred. Abstraction is intended to group observations into more general, conceptual classes (Ibid.). For example, 'more space', 'additional storage space' and 'space for hobbies' represent the technical- functional concept, whereas 'master of one's own house' and 'privacy' are related to emotions. Other concepts arising from categorisation include 'costs,' 'own housing history,' 'constructing the house,' and 'the process of planning and purchasing the house.' Especially the relationship with the house seller seemed to form a separate entity, and I will return to this issue later on.

# Comparison

Comparison studies the similarities and differences between the compiled data within the categories they occupy (Ibid.:493-494). It was interesting to see how similar all the respondents presented views that were structured in a comparable manner. All couples offered items related to both technology and functionality, and yet with remarkable differences in emphasis. Five of the couples brought up descriptions related to technology and functionality, whereas four emphasised descriptions of emotion. Eight of the couples also incorporated into their story their housing history from before construction. Costs were mentioned by six couples, and the construction of the house, planning and the purchasing process were of course mentioned by all couples.

The goal is still to process the data further in order to arrive at sufficiently clear and accurate observations. I have derived the upper-level concepts, 'constructs,' and sifted through the data for the 'properties' that describe the constructs.

The following is a presentation of the constructs resulting from the dimensionalization.

<b>Construct</b> Additional	Properties
space	play space, hobby space, storage space, garage
Cost	the most advantageous, reasonably priced, saving
	quick, easy, guarantee, flexible, suitable, extensive delivery contents
Delivery mode	
5	self-designed, own place, own solution, get what you want, can maintain
Independence	your own yard,
Isolation	no neighbours, neighbours are not disturbed, not necessary to rub elbows, not necessary to know neighbours
Appearance	traditional house, ordinary-looking, traditional, suited to its surrounding salesperson definitely an expert, sold well, took care of things, flexible
Purchase	planning, assertive
	salesperson, honest salesperson, changes quickly, salesperson took care of
	many things

It was interesting to see that only one family mentions the currently topical energy efficiency as an evaluation criterion. For example, appearance is mentioned as a selection criterion by more families (six in all).

#### Iteration

At this point it is possible to transfer between the data and different phases of analysis so 'that precending operations shape subsequent ones' (Spiggle1994:495). In this study I follow the alternative proposed by Spiggle in which individual interviews are compared with the aggregate formed of the entire material. Iteration is intended to develop concepts and constructs from the data and to promote verification. If we compare the constructs generated in the previous phase with individual interviews, our attention will be drawn to some observations which have remained unrecorded perhaps owing to too much simplification. For example, on the basis of the data we can observe that four families each have had an outside professional involved in the planning and purchasing of their house. Furthermore, critical circumstances affecting the house purchase begin to transpire only upon comparing the different interviews with each other. The actual significance of individual circumstances affecting the house purchase, such as 'the house salesperson's assertiveness,' can be seen only after the examination of the aggregate whole reveals that no clear decisive factor can be discerned. In other words, the critical factor leading to a positive purchase decision must be sought 'through' the aggregate whole by re-examining each case as if through a denser sieve and knowing exactly what one is looking for. As a result of the iteration phase, the following critical circumstances affecting the purchase decision were disclosed (the letters refer to the families concerned): A) the contents of the prefabricated house delivery were flexible. B) the promptness of the house manufacturer's salesperson to proceed as agreed, C) the house supplier's willingness to make changes, D) the house salesperson was helpful and helped as early as with the building permission, E) it was possible to design the prefabricated house according to our likes, F) the best-quality contents of the prefabricated house delivery, containing most material, G) advantageous price, H) businesslike salesperson, who 'on ollut ratkaisevassa paikassa siinä,' I) 'niin kai se sit oli se myyjä.'

These observations can be grouped further into four categories:

- 1) Contents of the prefabricated house delivery from the house manufacturer flexible (A), willingness to make changes (C, E), of good quality (F)
- 2) Advantageous price (G)
- 3) Salesperson's professional skill (B, D, H, I)

Six out of the nine families mention either having invited tenders from or otherwise contacted various house suppliers in order to compare them with each other. However, none of these families made their final decision based merely on price; instead they used overall consideration. The other factors that affected the decision are described above in table 4.

At this stage I also noticed that all of the interviewees described living in their new houses by bringing up circumstances that were missing from their previous residences. For example A says: 'ne harrastetilat, rivitalossa on vähän vaikee ruveta laittamaan korjaamoa sinne'. B says: 'tilaa, varsinkin niiku rivitaloon verrattuna'. 'kohtuhinnalla saa enemmän kuin rivarissa'. C says: 'mehän asuttiin aikaisemminkin omakotitalossa, mut se oli oieni, rintamamiestyyppinen. Meillä on kuitenkin iso perhe, niin sen takii tää on tää ratkaisu'. All of the interviewees describe their living along the same lines.

# Refutation

'Refutation involves deliberately subjecting one's emerging inferences-categories, constructs, propositions, or conceptual framework to empirical scrutiny' (Ibid.:496). I will apply the negative case analysis described by Spiggle to my own data with the intention to question the emerging analysis. The method reveals from the data clearly several details which belong to the properties listed in table 5 but which are negative in nature.

<b>Construct</b> Additional space	<b>Properties - negative cases</b> Not enough space for hobbies, little space for storing clothes, too much space, too small utility room
Cost	-
Delivery mode	Installation date changed, dispute over the installation of the roof, incomplete, contents of the package difficult to assess
Independence	-
Isolation	-
Appearance	-
Purchase Share of own	-
work	More of one's own work than expected
Faulty design	
and	Too narrow space between windows, stair opening in wrong place, floor gradient of
construction	the shower space, doors bang against each other, clothes room and washing
defect	facilities wrongly placed

Table 5Negative cases

As can be seen from the summary above, the families have got more space in accordance with their expectations, but the distribution of space between the various rooms has not succeeded in the best possible way in all cases. The practical implementation of the delivery mode involves also negative details, such as difficulties with the determination of the contents of the prefabricated house delivery, and the several remarks by family G about negligence and incomplete work. Six out of the nine

families mention examples of faulty design, which often becomes apparent only after some time of inhabiting the house.

# 6.7. Reliability and validity of the study

This chapter will discuss the limitations of this study. My research is based on a worldview of reality as a social construction (Denzin and Lincoln, 2003:13). It is constructed of meanings and rules of interpretation that people use to orientate themselves in their daily lives. 'The world does not present itself to us "as is" but always through the relationship we have to this world' (Alasuutari, 1994:50). I have described in more detail how this view is connected to the framework of my study in section 2.9. Understanding reality as a social construction and analysing qualitative data in light of these concepts connect this study to the mainstream of qualitative research (Alasuutari, 1993; Silverman, 2003; Patton, 2002:545-546). The next two sections will discuss the reliability and validity of the study in the context of qualitative research as they are central notions in analysing the results and in evaluating the quality of the research (Patton, 2006:59).

# 6.7.1. Reliability

According to Silverman (2006:188), 'Reliability refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasion'. Thus, reliability refers to the repeatability of the findings (Yin, 2003:37). According to Yin, reliability aims to 'minimize errors and biases in a study' (Ibid.). Other researches should reach the same findings as I have if they were to repeat the study with the same material (Ibid.). I have met these criteria by gathering and documenting the data carefully. I have also described and justified each stage of the research process systematically and have used various sources in both forming the theory and in gathering and analysing the data. Discussing the sources, I have presented my findings for the readers to evaluate.

Gummesson (2000:57-58) mentions also the importance of pre-understanding in comprehending the field of research. According to Gummesson, having a preunderstanding is especially important in order to avoid errors and misunderstandings. In this study, the risk is avoided because the researcher already has an academic degree and a long, extensive work experience in the field.

# 6.7.2. Validity

Validity refers to the correctness of research. As Silverman (2004:91) says, 'the issue of validity is usually posed in terms of what constitutes a credible claim of truth'. Patton (2006:47), on the other hand, reduces the issue into a simple statement: 'Validity' is another word for truth'. Therefore the question is whether the researcher has been able to provide correct, or valid, answers. Yin (2003:34) suggests that validity can be judged by testing three aspects: construct validity, internal validity and external validity.

*Construct validity* means how well the findings of a study reflect the data collected. In this study, the requirement has been met by purposive sampling, careful documentation of the process and the data, and utilisation of multiple sources of data. Utilising multiple sources of data refers to the concept of triangulation (Yin, 2003., Stake 2005:454) which, according to Patton (2002:247), 'strengthens a study by combining methods'. The idea in triangulation is to gather data using several methods (Silverman, 2006:291) so that an as reliable picture of the reality as possible can be formed. That is, triangulation strengthens the central observations, but also tests the reliability of each source (Patton, 2002:248). In qualitative research and in the analysis of one research material it is also possible to apply quantitative methods, which is often done as well (Alasuutari, 1994:23 and 44). In my study, the quantitative method applied is a questionnaire survey conducted with the interviewees. However, the aim of the survey was not to use the data for drawing conclusions, as the information gathered was used instead for acquiring background information and for verifying and ascertaining the interview findings. This way, the reliability of the study was increased. Each family completed a questionnaire, each interview was recorded and field notes were taken during each interview. Later, the interviews were transcribed, and the data gathered through all three methods were compared in order to notice possible errors or inconsistencies. Because I used a standardised questionnaire and the same set of interview questions for all respondents it was possible to draw conclusions from the entire body of data and also to compare the respondents' data with those of other respondents. No actual inconsistencies or deviations were noticed, but the questionnaire data revealed many details and specifications that did not come up sufficiently in all of the interviews. For instance, the question regarding the use of professionals during the project was described incompletely by many interviewees, and the questionnaires provided additional information as well as specified details that were relevant to the study. The field notes also included data that proved less useful for the study during the analysis, such as notions about how the interviewees sat and what they drank during the interview. The field notes revealed no inconsistencies with the rest of the data: in fact, they supported the findings of the interview study.

In the analysis of the data, I followed Spiggle's (1994) well-known phased model: I have described and justified each phase of the study in detail.

In addition to data triangulation described above, Yin (2003) refers also to theory triangulation. In the literature review in section 2.9, I have described environmental psychologists' and sociologists' theory constructions in the research of dwellings and living environments and discussed their connection to the theory of service experience which has been developed in the scientific context of marketing.

*Internal validity* is a concern for causal (or explanatory) case studies where the intention is to 'determine whether event x led to event y' (Yin, 2003:36). This research

is not concerned with causal mechanisms, but is rather explorative in nature and based on the idea of socially constructed reality. Thus, the test of internal validity is not relevant in this research.

*External validity* refers to the generalization of the findings (Ibid.:37). A survey relies on statistical generalisations, while case studies rely on analytical generalisations. The findings of the study have to be based on a critical investigation of all data and not just, for example, on a selection aimed at a certain conclusion (Silverman, 2000:176). Yin suggests that external validity can be tested by replicating the findings. In my research, the data of each interview were collected and analyzed separately. Therefore, each case formed its own report that could be evaluated afterwards. My study follows the form of Yin's (2003) Multi-Case design. This has enabled comparisons between individual cases and the theoretical frameworks presented in sections 2.6, 2.9 and 4.1.

*Research ethics* needed to be considered as well (Sateke 2005:459). The interview situation is a very personal experience for the respondents (Patton 2002). This is expected to be the case especially when the topic is the long and financially challenging process of building one's own house and the personal inhabiting experience. The home is an emotionally sensitive topic. In the beginning of the interviews, all respondents were asked for a permission to use the data for research purposes. The permissions are recorded on the interview tapes and were transcribed along with the rest of the interviews. The data has been administered very carefully and confidentially by the researcher. For reporting the research, the interview documentations were coded to maintain confidentiality, and outsiders are unable to find out the identities of the respondents.

In conclusion, I have followed systematically and justifiably the known methods of qualitative research. I have also communicated the research as openly as possible so that an outsider can evaluate the scientific depth, rigor and reliability of my research as easily as possible.

# 7 FINDINGS

In this chapter I will present the findings of the empirical data. First I will attempt to interpret the observations of the previous chapter and group them into meaningful and understandable aggregates specifically from the viewpoint of this study. The aim is to understand the reasons for building a new single-family PDH, the factors related to choosing the house, the construction process, and the values in the phase of inhabiting the new single-family PDH.

Finally I will discuss the central observations in relation to the value theories presented in the theoretical section of this thesis. At this stage the study moves in between the data gathered and presented theories of the value concepts. Finally, based on the outcome of the abductive phase, the study evaluates and further adjusts the theoretical value concepts to the customer value constructs.

# 7.1. Interpretation of the data

The idea of the analysis is to reduce the amount of the raw data and make sense out of it. The idea of interpretation in turn is to 'make sense of data [already analysed] through more abstract conceptualisation (Spiggle 1994:497). Interpretation is not only an imperative stage, but a crucial one as 'observational data does not provide direct access to the perceptions, values and beliefs of informants and reveal little about informants internal states'(Arnould and Walendorf, 1994:488) According to Spiggle, interpretation can been seen as 'reading text' or as 'translation' that aims to expand, concretize and emphasize meaning. This is, however, a daunting task. As controversially to the operations of the analysis, Spiggle proposes no guideline for the use of creative interpretation 'insights spring from mental activities, some of which are not accessible to the interpreter' (Spiggle, 1994:500). In this stage the researcher acts as an interpreter based on the intimate level of knowledge and 'translates date into more generalised concepts; an example of this would include Newton's law of gravity; what goes up must come down' (Healey, Beverland, Oppewal and Sands, 2007:771).

During the interpretation phase I will utilise the method proposed by Spiggle

Many investigators represent the meanings and experiences of informants as forming coherent patterns. They do so by aggregating them into larger wholes, identifying themes by which individual informants construct their world and more generalized patterns that characterize their sample of informants (Spiggle, 1994:499).

#### 7.2. The constructs

#### More space

The majority of the families describe the acquisition of additional space as the motive for building a new single-family PDH. It seems that additional space is wanted for children but the appreciation for increased storage space and hobbies is also mentioned. In other words, building a single-family house is a concrete way of increasing living space and especially with spaces regarded as producing functional benefit. It is interesting to note that nobody mentions the increasing of the volume of, for example, the living room or fireplace room as an important motivational factor in even one sentence. In fact, one couple say that they have even too much space now.

#### <u>Independence</u>

The pursuit of independence is also emphasised in many ways in the interviews. All interviewees describe the attainment of independence as one of the benefits of a new single-family PDH and readily mention if they have themselves contributed to the design of the house. They may even emphasize their own share to the extent that they 'forget' to mention the participation and contribution of the principal designer required by the Building Act. They describe with pride the house as being of their own design, including the electricity plan. Only after more detailed questions are they ready to state the necessity of the participation of professional designers in carrying out the project.

Independence is also described as owning and possessing one's own space. It seems that particularly those interviewees who have previously lived in an apartment house or row house want to emphasise the existence of a 'territory' of their own. They find that in a row house or an apartment house it is not possible to fulfil themselves and decide about their own affairs. The meaning of one's own yard is emphasised in a positive sense, however two couples mention that it is rather laborious to take care of it.

The freedom to choose how the house looks can probably be counted as belonging to independence. In the descriptions concerning appearance, it is clearly emphasised as a positive factor if the house is 'ordinary looking, mansion-like or traditional.' It is in a way interesting to see the dichotomy in the attitude to striving for independence. On the one hand, people want to have their own territory and emphasise the significance of their own design, but on the other, with respect to appearance, they consider it valuable if the house is ordinary looking. Thus, instead of wanting to stand out from the crowd, they want to blend into it.

The pursuit of independence can go as far as nearing isolation. It is regarded as valuable that neighbours do not disturb and that one does not disturb neighbours. Even the fact that one does not need to rub elbows with them adds to the benefits of living in a single-family detached house. The extreme is the mention that one does not even need to know the neighbours.

#### Costs

As regards costs, it is mentioned in the responses that building a new single-family PDH would be the most advantageous way of achieving the aims described above. Points of comparison mentioned for costs include the extension of an old house or the acquisition of an old single-family house instead of building a new one. None of the families said they were disappointed with the costs of the house or exceeding cost estimates upon completion. Still, none of the families mentioned the costs remaining below the estimate either. Nevertheless, it was clearly important that the cost estimate drafted before starting the construction could be trusted.

### Delivery mode of the prefabricated house

The delivery mode of a house is in itself not a reason for purchasing a new single-family PDH, but it affects the selection of the house supplier greatly. The ease for the family receives special emphasis. Furthermore, people value house deliveries where the contents of the delivery are specified clearly and that it is also possible to influence the contents. The delivery should be flexible according to the customer's individual wishes, even though it is not actually wished to emphasise individuality through appearance, for example. The flexibility wish is mainly about changes to the floor design and the flexibility of contract and purchase limits in accordance with each customer's wishes. It can be observed from the data that flexibility is an important circumstance affecting the selection of a house delivery. Several interviewees told that they had felt that some suppliers could not make the changes wished to their type of designs or standard deliveries.

### Decision to purchase a prefabricated house

The final decision concerning the house supplier seems to culminate in the cooperation between the seller and the customer, with customer service received playing a pivotal role during the selection process. Even though the costs and contents of deliveries presented by house suppliers are compared, the decision is not based merely on mathematical and physical facts. Only one family says that they had selected the house supplier solely on the basis of costs. The families had been particularly satisfied if the seller was able to act quickly with respect to, for example, design changes, and to serve and help the families in technical questions and also to convince them about the accuracy of cost estimates. Dissatisfaction was created if the house manufacturer was not able to take into consideration the customers' small wishes for changes to plans, delayed in drawing them, or asked for additional price for either 'extra' planning work or the resulting needs for changes in the actual construction.

### Construction process

Judging from the data, supplier activities during the construction phase and the actual prefabricated house delivery did not play a significant role, or presumably the house suppliers were able to deliver the houses within the agreed schedule and the contract limits. The majority of the families were even positively surprised at the punctuality of the house delivery. Two families reported problems in connection with their house deliveries. One family was not satisfied with the supplier of the roof coating, however it remained unclear whether the coating was the responsibility of the house manufacturer or whether the family itself had assigned the coating to a contractor. Another family reported their great disappointment with the contractors used by the house supplier: A large part of the construction work related to the cladding and work inside the house was either poorly done or left incomplete.

On the whole, the families did not describe the construction period thoroughly, and they hardly mentioned the purchase limits and the parties involved in the project in their accounts.

# Organisation of the building project

In paragraph 4.3 I have described the basic principles and alternatives for the organisation of a detached house building project. All of the nine families had each selected a prefabricated house supplied by a house manufacturer, meaning that none of them had chosen the model in which the house is realised as an individual unique building designed by an architect in accordance with the conditions set out by the site and the family. Seven families each carried out their prefabricated house project using the model in which the family itself acted as the principal builder and hired separate contractors for the site preparation and foundation work, electrical and heating, plumbing and ventilation work. Two families had decided in favour of the most extensive delivery contents possible, that is, the 'turnkey' model where the house manufacturer takes care of building the entire house until it is finished.

### Adaptation of the house manufacturer to customer needs

In chapter 3 I have described the birth and development of the housing industry from starting points characterised by economic scarcity and aspirations of society to direct the construction industry towards higher efficiency and rationalisation. Given these circumstances, it can be assumed that the housing industry actors adopted productionoriented operational models. Of the families interviewed, one selected the prefabricated house supplier merely on the basis of price, and another selected the supplier on the basis of the appearance of a specific house. One family reported having made their decision based on the fact how flexibly they could influence the delivery contents of the prefabricated house. Another family made their choice by laying stress on how easy the process seemed to be. The remaining five families reported that an important factor for them was the willingness of the house manufacturer to make the changes they wished to the plans promptly. Altogether six families told that they had requested offers from or contacted several house suppliers but the suppliers were not able modify their houses in the way the families wanted, or they even ignored the offer requests. Family H: 'Joo, siinä ei ollut valinnanvaraa, että loppujen lopuksi, oliko siis kaks vai kolme, että ne pysty toteuttaa ja yleensä se, että muut ei ees ottanut, vastannut siihen kyselyyn'. Family I:'Joku neljäs oli, mutta sieltä ei tullut tarjousta ollenkaan'. Family B; 'Niin, ja WW talot oli ensimmäinen, missä käytiin.Mut siellä ei myyjä ottanut meitä todesta, se vaan vitsaili ja jotain muuta, että ihanko te tosisanne olette ja vähän tämmöstä. Eläkkeelle jäävä papparainen ei uskonut, että me aiotaan rakentaa talo'.

#### **Promptness**

On the basis of the data it seems that the customers' decisions are significantly affected by prompt action of the house manufacturer. Family B: 'kun se aikataulutoive oli aika tiukka' ja että sille pysty soittamaan ja muutokset kävi nopeasti. Just tää QQ taloilla se oli niin hidasta ja sit tosiaan luvataan, että kahdessa päivässä tehdään ja sitten ninku miestä ei saa kahteen viikkoon kiinni, niin siinä on hyvin vaikee tehdä nopealla aikataululla mitään. Ja sitten mitä ihmeellisimpiä selityksiä, että on kipee selkä ja muuta ja miestä ei taas viikkoon näe. Family C;'Niin joa ikinen pieni muutos mikä tehtiin, niin sieltä tuli parissa päivässä aina tieto, että tämä maksaa tän verran, et siinä ei ollut mitään ongelmaa siinä kustannusarviossa. Se niinku sitten se, mikä ratkaisi tämän talohomman'.

#### Energy efficiency and the cost for the house over its life cycle

Only one family said that energy efficiency was a significant factor influencing the choice of the house supplier. None of the families mentioned that the costs related to the long-term maintenance of the house would have affected their choice.

### After sales by the house manufacturer

Out of the nine families, only three had been contacted by the house manufacturer or salesperson after the completion of the building project. Two families had been asked about their housing experiences after they had settled down into their houses.

#### Negative experiences

The negative experiences that were brought up were related mainly to minor defects in planning, reflected in problems in the usability of the finished house. These typically include details related to the division of space, such as the size of wardrobes, or to functionality, for example the problem of opposite or adjacent doors banging against each other. Furthermore, two respondents said that they were disappointed with the larger-than-expected amount of work required for carrying out the building project.

### 7.3. Summary of the findings

On the whole, all of the families asserted their satisfaction with their decision to establish a new single-family PDH for themselves. Building a house of one's own seemed to be 'a dream fulfilled' for all of them. In other words, the respondents have had a long-term goal of enhancing their quality of life by building a one-family house. Such dreams consist of seeking to meet physical needs, for example playing space for children, and highly abstract concepts associated with independence and selffulfilment. The achieved goals can most easily be portrayed by describing the 'defects' of the previous mode of housing. Influencing the landscape and the appearance of the house seem to have an important role as instruments of self-expression.

After sales by house manufacturers seems to be slight and irregular.

# 8 DISCUSSION OF THE FINDINGS

In the previous chapter I presented the results of the empirical part of this study. I have divided this chapter into two parts, and in the first part I will discuss, on the basis of the observations made in the empirical part, how the value for the customers emerges as seen particularly through their own experiences. In this respect the viewpoint is similar to that in the publication by Sandström et al. As they put it 'we focus on the outcome of an experience rather than the service process per se, as do many psychological studies' (2008:121).

Towards the end of this chapter I will discuss the customer value process model proposed by Grönroos (2008b).

# 8.1. Value dimensions

The values appearing in the study could be identified as two different intertwined dimensions — emotional value and physical or functional value — thus it was possible to analyse the empirical data using the model proposed by Sandström et al. 'value in use is the cognitive evaluation of the service experience' (2008:112). I will discuss the value dimensions by uniting the multidimensional environmental-psychological and social perspective presented in Chapter 2 to the framework of value as proposed by Sandström et al. Furthermore, I will discuss how the historically production-oriented operational model of the house industry presented in Chapter 3 and the models for organising the construction described in Chapter 4 are reflected on the interviewees' experiences.

### 8.1.1. Emotional Values

It appears from the study that the families which built a new single-family PDH appreciate and seek independence and autonomy assuming that a one-family house can be regarded as an instrument for achieving that goal. In this respect the research result corroborates earlier results received in environmental psychology. For example Pulkkinen et al. (2009) have stated that the single-family PDH is a vehicle for the expression of peoples' equivocal values. As a complementary observation it can be noted that the pursuit of independence may approach the seeking of isolation.

In earlier studies (Ibid.) it has been observed that the appearance and floor plan of a house reflect the family itself. As Kukkonen (2007:227) notes 'only a one-family house

allows an individual to make his [or her] dwelling into his [or her] self portrait and to mirror in it his [or her] own ambitions, wealth and tastes'. In my study only one family had selected their house clearly on the basis of its particularly recognisable appearance and five other families said that appearance was a significant factor in the choice of the house. The house had to look suitable for its inhabitants, but specifically 'ordinarylooking.' Every family said they had participated in the planning, which strengthens the idea that the house should reflect the values of its inhabitants. The opportunity to plan and affect the prefabricated house model of the house manufacturer was seen as a highly significant factor. The interviews demonstrated undeniably that in the case of five families, a potential house supplier was excluded from the final purchase decision because the house manufacturer was not willing or able to meet the customers' wishes for alterations. Even more surprising was the observation that in the case of four families, the house manufacturer failed to respond to the communications sent by the families.

Families want to realise their independence and autonomy as well as their own values primarily through a new single-family PDH of their own, as living this way makes it possible to decide the boundaries of one's life independently, without needing to consider one's neighbours. As families want their houses to reflect independence, autonomy and values, it is important for them to be able to have an influence on the floor plan and appearance of their future homes.

In this respect the empirical findings are only partially in compliance with the literature research presented in Chapter 4.4., that the 'traditional type house' no longer meets the diversifying customer needs: All of the interviewees said that they had wished and also made alterations to the 'type house'. Some suppliers were both able and willing to take into account the customers' alteration wishes and schedules and others were not. In this regard the research findings do not fully support the claim presented in Chapter 4.4., that customers would be rapidly moving towards 'unique and individual design' (Rautiola, 2007:212). It is evident from the interviews that while the families want to have a say in planning, they, on the other hand, regard 'the ordinary' as a value.

It can be inferred that the families are for the most part satisfied with the basic alternatives offered by house manufacturers, for none of the families said they were disappointed with the models available, and each of them had selected a model of one of the house manufacturers.

• The production process and/or customer service of the house suppliers cannot in all respects produce the kind of service the customer wishes. Thus it can be said that the historical production orientation described in Chapter 3 is reflected on some of the housing industry actors. House manufacturers that have been able to make their processes more flexible and are in a position to meet the customer's alteration wishes, clearly have the edge over others when the customer is making the final purchase decision. • Keeping contact with and reacting rapidly to customer wishes particularly at the planning phase, prior to actually concluding a house deal, was very important. Two weeks seemed to be too long a time for making alterations to the design. Those house manufacturers that were slow at making alterations were as a rule dropped from the supplier list.

The professional skill of the house salesperson operating at the customer service interface plays a decisive role in getting a house deal made.

# 8.1.2. Functional values

# Construction process and its organisation

In Chapter 4, I have described the construction process and the organisation of building. The interviewees talked surprisingly little about the actual construction and their sacrifices or problems related to it.

# <u>Need for additional space</u>

The need for additional space was an essential factor contributing to the construction of a new single-family PDH. Additional space helped solve the concrete problem of lack of playing or storage space prevailing in the previous dwelling, or cater to the need for self-expression by providing space for hobbies, among other things. In other words, all customers did not need additional space for the same reasons. It is important to identify customers' individual motivations for hoping for additional space. These wishes had arisen in connection with previous housing experiences, and thus in this sense the findings of my study are in accordance with what Larjonen (1991) suggests. According to Larjonen, when proceeding along the 'housing career', one seeks improvement to previous unsatisfactory housing experiences.

• It is important to understand the individual housing careers of families if genuinely wishing to assist them in their value creation process.

# Price, energy efficiency, and life cycle and environmental issues

None of the interviewees reported disappointment with their new single-family PDH in relation to the costs. None of the families brought up life cycle or environmental issues, and only one family reported having studied carefully the energy efficiency of the various prefabricated houses.

• Constructing a house of one's own is seen as the most advantageous way of realising wishes related to housing. Environmental and energy issues were not reflected on the decision concerning the choice of a prefabricated house.

# Functionality of the house and experiences of use

- All of the interviewees asserted their satisfaction with their new one-family houses. Yet, housing experiences had also revealed defects which could have been corrected through more careful planning. The reported defects were rather small. Some of the families said that the house and especially the yard required more work than expected, whereas others said that everything was very easy.
- Type houses seem to involve minor functional problems which could obviously easily be eliminated by more careful planning. Customer perceived value as a service experience.

Sandström et al. have suggested that 'the service is unique to every individual customer and his and her service consumption situation. Value is the cognitive evaluation of the service experience' (2008:112). In Chapter 2.8, I have described the idea of man applied in my study, according to which seeing and experiencing one's own home and neighbourhood are part of being human. One cannot have an objective idea of oneself, as one is always dependent on one's object of observation. My study represents the view that there is not a perfect picture of the socially constructed reality, as the explanation of reality — in other words, one's idea of oneself and being human — changes over time. So, it is a question of life itself, as Dilthey puts it: 'Life does not mean anything other than itself. There is nothing in it which points to a meaning beyond it' (1926:VII, 24). Or as Palmer puts it

Every act of understanding is in a given context or horizon; even in the science one explains only 'in terms of a frame of reference' an interpretive approach which ignores the historicality of lived experience and applies atemporal categories to historical objects can only with irony to be 'objective', for it has from the outset distorted the 'phenomenon'. (Palmer R.E., 1969:120-121)

I do not claim that my conclusion is based on the 'objective truth', instead I interpret the truth as it is manifested in the light of the families' experiences. It is worth noting that this view inevitably involves the question of time, past and future. The understanding of the researcher as well as that of the research subject changes and develops, and yet in all cases the explanation is based on prior experience.

In other words;

1) In assessing the value for the customer, the families' own experiences play an essential role. According to my study, the motivation to build a new single-family PDH originates from the need to improve housing conditions, especially in connection with emotional factors. Thus the longing for a one-family house is based on previous housing and life experiences which showed defects of various types. In this respect the result of this study is parallel with the findings of Pulkkinen et al. (2009), for the families evaluate their new houses by describing circumstances with respect to which they have experienced improvements in their housing conditions.

- 2) The construction decision can be triggered by a change in either the external or internal circumstances of the family. Such changes were, for example, getting a plot in the municipal allotment of plots, finding a suitable plot, or an addition to the family.
- 3) It is not the construction of a single-family PDH in itself but what the house represents that is the object of longing. Building the single-family PDH, and the object created thereby, are instruments for achieving a state of affairs that has been longed for and dreamt about.

According to this study, the 'value in use' of the new dwelling can be grouped into two different aggregates: value consisting of concrete factors such as large storage space or garage (which did not exist earlier); and, the new single-family PDH associated with many emotional factors such as 'one's own peace' or 'master in one's own house' (which did not exist earlier).

If we look at the framework created by Sandström et al. (2008) for the linkage of a service experience to value in use, as presented in chapter 2.8., we can state that based on my empirical material the framework was rather satisfactory in describing the 'value in use' experienced by the customers. Sandström et al. have suggested that a service experience involves functional as well as emotional outcome dimensions.

According to the findings from the empirical material of this study concerning the builders of new single-family PDH, value emerges for the builders within the two groups mentioned above, however the assessment of value is affected greatly by previous housing experiences or, as Larjonen (1991) puts it, a 'previous housing career'. In other words, value in use does not exist as an autonomous and independent, objective truth per se — instead the assessment of value is a complex that is possibly affected by an idea of the future but above all, experience of the past.

The previous housing career may include unsatisfactory features to which families wish improvements. The families do describe the new single-family PDH 'a dream come true'- According to the study, it is not the house itself but what it represents that is actually the dream. Thus there has been an idea of a better life, a life perhaps longed for already a long time ago.

The standpoint of Sandström et al. is that 'value in use is the result of a cognitive assessment of the total service experience' (2008:121), and in principle, this is the case also in the light of my study but the framework of Sandström et al. pays less attention to how the 'value in use' should be evaluated. Yet they are aware that the matter may be of importance: they point out in their article that previous service experiences may have an impact on the experiences of individual customers.

On the basis of this study I would like to contribute to the framework by Sandström et al. with the following:

1) Customer's value expectations

Customers' previous experiences create 'value expectations'. On the basis of their individual and situation-specific criteria, customers evaluate companies' 'value proposals'. The dream of a one-family house is in a way a value expectation, at least within the object of this study. The dream involves functional expectations, such as a children's room, and on the other hand, emotional expectations, such as 'independence.' The individual and situational filter is generated by the family's life situation at any given time. The family may find a new plot, move to another place or get an addition to the family, or the family's financial situation may improve. However, I suggest that the situational filter can also be influenced by the house manufacturer. A value proposal which fulfils the customer's dreams optimally can attract the customer's interest.



Figure 7 Modified framework how customer experience of value construct emerges

2) I suggest that, at least for a product as complicated as the building of a one-family house, the service experience consists of two aggregate entities; the service experience is the stage at which the customer at quite an early phase chooses the service provider; and, in collaboration with this selected service provider the customer carries out the house construction project. The cooperation at both the planning phase and the construction phase forms the service experience. During these phases the customer and service provider jointly plan and complete a new single-family PDH, an object from which emerges value in use. The customer's individual and situational filter consists of, for example, earlier experience with planning or construction, in other words, workmanship. The individual filter at this point of the framework is not so significant for how great the 'value in use' is, as not even the toughest construction experiences or poor skill obviously affect the functionality of the dwelling or the achieved feeling of independence endlessly, even though they may make some difference.

3) I suggest that the framework is a two-way structure, not so much in terms of time but logic. As I have mentioned above, the evaluation of the achieved value in use depends on the previous housing career. Thus the value in use is relative to the value expectation.

#### Value creation of firm-customer interaction

Based on my research, the customer directs value expectations at the service provider, expectations that have formed during the customer's previous housing history (i.e. housing career). Before first contact with the service provider, the customer already has an idea of his or her goals regarding the values the new single family detached home should produce. In addition, the customer assesses the value emerging from the dwelling in relation to the value expectation preceding the entire project. When we examine the view of value creation in the customer-firm interaction proposed by Grönroos in Figure 2, it is noted that the model does not completely correspond to the customer's point of view. In light of my research, it can perhaps be stated that the model is too simple to describe the customer's multifaceted value expectation satisfactorily. Grönroos states that 'A value proposition should be a proposition, as suggestion, which has to be followed up by an offering that fulfils the expectations created by this proposition or suggestion' (2007:185). Furthermore, Grönroos proposes that 'the goal for marketing is to support customers' value creation'. The findings of my research mainly support Grönroos' view, but not completely, as the customer's logic is more multidimensional. If a company aims at deep and true cooperation with the customer, Grönroos' proposals require some modification simply because a framework that is useful and logical needs to be looked at from a slightly different angle. By changing the position of observation, new and hidden structures of the model are revealed much like looking at a theatre stage from a different angle reveals the structures and powers that support the scenes on stage. By looking at the scenes as such, we can constitute that they stand and look as they should, however our understanding of how they are built is insufficient without the right viewpoint.

Based on my research findings, I would like to refine Grönroos' statement (2007:185) which proposes that 'A value suggestion should be formed accordingly customers' historically developed value expectations taking in account that [future] emerging value perception (for the customer) is depended on this value expectation also'. My viewpoint is close to the proposal of Customer-Dominant logic by Heinonen, Strandvik, Michelson, Evardsson, Sundström and Andersson (2009). They state that 'it is not the act alone, but customer's intentions as well as the resultant activities and experiences that should be the focus of marketers and service companies'.

To summarise, we may conclude that my research supports the suggestion by Heinonen et al. (2009:5) stating that 'they [marketers and service companies] should find out what the customer is doing or trying to do, and how a specific service fits into this.' Furthermore, my study supports the view that 'value assessment is part of the social reality' and 'earlier experiences are always present as an (to the company) invisible context' (Heinonen, et al. 2009:10).
# 9 MANAGERIAL IMPLICATIONS

In this chapter I will begin by highlighting those elements of cooperation that, according to my research, signify the most for customers and will discuss how these elements should be taken into account in designing marketing activities. At the end of the chapter I will discuss the strategic dimensions.

Based on the conclusions drawn from my research, from the customers' viewpoint a single-family PDH is a tool that enables them to fulfil the hopes and expectations stemming from their housing histories. In other words, the customer and the service provider (the house manufacturer) are co-producing the distribution mechanism (the detached house) from which value is created (Grönroos, 2008b:3). By building a new single-family PDH, the hopes and expectations can be met according to individual needs. The individual character reflects the striving for autonomy and independence which are central factors of motivation in the whole project. In the initial stages of the project, the pursuit for independence and autonomy manifests itself in a will to participate in and contribute to the planning of the detached house. If the service provider (i.e., the house manufacturer) due to its production-orientation or other reasons cannot commit to a true co-creation with the customer in the critical initial stage, it is likely that the customer will choose another service provider.

Customers expect the new single-family PDH to improve their living conditions. Considering the exceptional nature of the acquisition and building of a prefabricated detached house compared to regular services and products, it is obvious that customers have much at stake and have correspondingly high expectations. Therefore, understanding the multidimensional hopes and expectations of the customer is essential for the service provider when creating value proposals. According to Heinonen et al. (2009:16), 'service providers should expand their perspectives in order to know their customers on [a] deeper level than before'. Understanding the customer is the connecting thread in all of the managerial implications presented below.

For most people, acquiring and building a single-family PDH is a dream of many years which is realised step by step. The process can be examined with the commonly known AIDA model (Attention, Interest, Desire and Action), where for the service provider, one step is more critical than others: The transition from the desire stage to the action stage is rapid. The final decision of realising the plan is often made rather quickly, and at least for some customers, an external reason such as finding a suitable property, may trigger the final buying decision.

As the customer approaches the service provider, he or she has previous housing experiences as well as views, preconceived plans, calculations and financial consultations. Even though customers vary in terms of readiness, all of their expectations can be divided into two groups: functional and emotional value expectations. A service provider must be able to convince the customer that these expectations can be met with the service offered. In my modified framework (Figure 7), this stage is described as the 'individual and situational filter' through which a customer evaluates the value proposals. The phase is very short but ever the more significant considering the size and importance of the project.

Nevertheless, my research material showed that all house suppliers did not manage to handle this short 'moment of truth' interaction as the customers had hoped. Based on my study, it can be generalised that those house suppliers that handled the initial contact with the customer professionally, were available to the customer and adhered closely to even the smallest agreed matters were most likely to close the deal.

When asked about the factors that affected their decision, the builders interviewed mentioned especially the service provider's assertiveness, promptness, convincing know-how of the field and versatile knowledge of the products and the building process. In other words, even the best of qualities in a product cannot compensate for the customer's poor first impression or shortcomings in the service provider's actions during the first weeks.

If the service provider (i.e., the house manufacturer), due to its production-orientation or other reasons, is unable to commit to true co-creation with the customer in this critical initial stage, it is likely that it will lose the customer.

## Managerial dimensions

Builders of single-family PDHs dream first and foremost about independence. My research shows that the pursuit of independence can be supported if the house manufacturer's products are adjustable, at least to some extent, to the customer's wishes. For some customers, the 'inflexibility' of the housing product was a reason for rejecting the house manufacturer. However, customers do not expect complete freedom of design, but rather want to leave their imprint on a prefabricated, common standardised house. Typically, the changes wanted involve, for example, changes in room sizes. The customer's input in designing and planning ought to be respected because customers consider the opportunity of 'self-design' very important. 'Self-design' is a concept which is often brought up and of which customers are very proud. Independence can also be seen to include the opportunity to influence the contents of the prefabricated house's delivery.

• The prefabricated house models of a house manufacturer ought to be modifiable, and the customers should be able to leave their imprint on the final product.

After making the decision to build a house, customers act swiftly. As a result of their housing experiences and their interest in the project over several years, customers have functional and emotional value expectations. Compared to the size and importance of the project, the time spent on choosing the service provider is short. Based on the study, it may only take two weeks from the first contact with the service provider for the customer to make his or her buying decision or at least a mental commitment that may or may not be communicated to the service provider.

- A house manufacturer must strive to find out each customer's hopes and expectations that stem from previous experiences. The hopes and expectations are mainly emotional expectations, but physical and feasible solutions for realising them ought to be sought in cooperation with the customer.
- Communicating with the client constantly and quickly and fulfilling even the smallest service promises promptly are especially critical factors.

### **Strategic dimension**

Based on my research, service providers' communication with their customers to gather information about customer experiences is sporadic, indicating that the relationship between the service provider and the customer is not a true partnership. Because feedback and information about customer experiences are gathered sporadically, learning (Argyris and Schön, 1997) to develop operations in a systematic and customerorientated manner is impossible (Woodruff, 1997). However, planning and building a single-family PDH is a long-term co-production process which provides the service producer with an excellent opportunity to gather experience and learn to deepen an understanding of the customer's own context. This is precisely the most important development opportunity in the process that I have studied. The development of operations and organisation based on what has been learned from the customers is growing in importance as a competitive advantage (Woodruff, 1997:149). Furthermore, interaction with customers provides an excellent and natural opportunity for learning (Grönroos, 2008b:9) and for creating 'in-depth knowledge of customers' (Heinonen et al., 2009;16). Therefore, for instance, 'salespersons may have to become more skilled interviewers and observers when working with customers' (Woodruff, 1997:149). However an organisation should not limit its customer knowledge to factors that are decisive in individual deals, as it should widen its perspective and deepen its understanding because, as my research shows, the value dimensions affecting the buying decision are numerous. Woodruff (1997) has reached similar conclusions.

If gathering consumer experiences is not intentionally pursued, as was shown to be the case in my research, matters such as customer experiences about the final product (i.e., inhabiting the single-family detached house) are left unknown to the service provider. Grönroos (2007b:175) calls such a situation the 'black box of consumption'. For its part, this shows that the logic of operation in the housing industry is still dominated by the historical production orientation. The issue is significant because my research has shown that the entire service process aims at value creation and that value emerges in

the inhabiting phase. How can customer value be increased, if it is not being measured at all?

House manufacturers have nevertheless managed to develop their services towards customer orientation and their services meet the customers' multidimensional value expectations satisfactorily. We can perhaps say that they have developed the production-orientated operational model towards customer-orientated operation, to the extent that the production-orientated framework has allowed them to proceed.

In other words, if house manufacturers aim at true customer focus, they need to adopt a new operational model where the customers become real partners in cooperation and the primary force driving the service provider's operations. As Grönroos says, 'The focus is not on products but on customers' value creating processes' (2007:181).

My intention is not to suggest that every house manufacturer should change its operational logic to true customer orientation because the matter is a strategic decision, and in some cases maintaining a production-orientated strategy may be a more efficient way of operating (Grönroos, 2008b:1). However, in severe competition it may be a strategically vital alternative to adopt a customer-orientated operational model and move away from the production-orientated field of competition.

# **10 SUGGESTIONS FOR FUTURE RESEARCH**

In Finland, the prefabricated detached house market is a less studied topic among the academic literature even though it is a significant form of industry. Acquiring, building and inhabiting a detached house form an exceptionally expensive, long and complicated process. Annually, more than 10,000 families build themselves a new single-family PDH. From the perspective of marketing, the detached housing industry and its customers form a very multidimensional and virgin field of research. There is a multitude of interesting research topics, however my suggestions will follow my research and focus on the customers' perspectives in relation to the housing industry's supply.

It would be interesting to conduct a more detailed case study on how the buying decision of a single-family PDH builder is formed. Such a study would in a way deepen and focus on one part of the present study and would likely provide us with a more profound understanding of the importance of the customer's previous inhabiting experience in choosing a house. The research would also be useful to the house manufacturer in developing its value proposal.

On the other hand, it would be interesting to widen the research question and study the factors that prevent people from building a single-family PDH. Such research could help detached house manufacturers in developing service offerings that might attract at least some customers inclined towards choosing some other type of housing.

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# **12 APPENDICES**

Table 6Omakotitalorakentajan haastattelulomake

Kertokaa omin sanoin miksi rakensitte omakotitalon?

Miksi päädyitte juuri valitsemaanne talomalliin?

Kertokaa lyhyesti talonhankinta ja rakennusprojektistanne?

Kertokaa lyhyesti millaisia pettymyksiä tai positiivisia yllätyksiä teille on syntynyt suhteessa mielikuviin ennen päätöstä ryhtyä rakentamaan omakotitaloa?

Mitä tekisitte toisin?

Ladddering;

Miksi valitsitte juuri ko talotoimittajan? Miksi se on tärkeää? Jne.

#### Table 7 Omakotitalorakentajan taustatietolomake

## Omakotitalorakentajan taustatiedot Rakentajakysely

Vastausohjeet: Lukekaa ennen vastaamista koko kysymys ja sen kaikki vastausvaihtoehdot läpi. Vastatkaa sen jälkeen kysymykseen joko ympyröimällä oikean vaihtoehdon numero tai kirjoittamalla vastaus sille varattuun tilaan.

#### A. VASTAAJAN KOTITALOUTTA KOSKEVAT TAUSTATIEDOT

<ol> <li>Kuinka monta henkilöä kotitalouteenne kuuluu? henkilöä</li> <li>Minkä ikäisiä henkilöitä kotitalouteenne kuuluu? Kirjoittakaa kaikkien perheenjäsenten syntymävuodet vanhimmasta nuorimpaan itsenne mukaan lukien.</li> </ol>				
3. Kotitaloutenne aikuisten koulutus?	4	. Kotitaloutenne <u>kaikkien</u> jäsenten p	ääasiallinen	
(kirjoittakaa henkilöiden lukumäärä)		toiminta? (kirjoittakaa henkilöiden lu	kumäärä)	
1. kansakoulu/peruskoulu	henkilöä	1. päivähoidossa / alle kouluikäinen	henkilöä	
2. ylioppilas		2. peruskoululainen		
3. ammattitutkinto		3. opiskelija		
4. opistotason tutkinto		<ol> <li>kokopäivätyössä</li> </ol>		
5. muu keskiasteen tutkinto		5. osapäivätyössä		
6. ammattikorkeakoulututkinto		6. omaa kotia hoitava kotiäiti/-isä		
7. korkeakoulututkinto		7. työttömänä tai lomautettuna		
		8. eläkkeellä		
		9. muu, mikä?		

#### **B. ASUNTOA KOSKEVAT TAUSTATIEDOT**

#### 5. Mikä on asuntonne talotyyppi?

- 1. Puurakenteinen ns. talotehtaan tyyppimalli
- 2. Harkkorakenteinen ns. talotehtaan tyyppimalli
- 3. Puurakenteinen, paikalle suunniteltu, uniikki
- 4. Harkkorakenteinen, paikalle suunniteltu, uniikki
- 5. Muu. Mikä?\_\_\_

### 6. Mikä on asuntonne perustyyppi ja koko?

- 1. 2h+k/kk \_\_\_\_\_
- 2. 3h+k/kk \_\_\_\_\_
- 3. 4h+k \_\_\_\_
- 4. 5h+k
- 5. 6k+k
- 6. Muu, mikä? \_\_\_\_\_

#### 7. Mikä oli talopakettinne (tai talon runkorakenteen) toimittajayhtiö?

8. Mikä on asuntonne asuinpinta-ala?

9. Mikä on asuintontin pinta-ala?

\_\_\_\_\_ h-m<sup>2</sup>

\_\_\_\_\_ m<sup>2</sup>

10. I	Mikä on talotoimituksen	(tai runkotoimituksen)	toteutunut ko	konaisarvo (	euroissa
(noi	n)				

11. Mikä on koko hankkeen toteutunut kokonaisarvo tontteineen, kaikkine kuluineen euroissa (noin) ? \_ \_\_euro

- 12.. Mikä on asuntonne hallintamuoto?
  - 1. omistusasunto
  - 2. vuokra-/työsuhdeasunto
  - 3. muu, mikä? \_\_\_\_\_

13. Mikä on asuntonne tontin hallintamuoto?

- 1. omistus
- 2. vuokra
- 3. muu, mikä? \_\_\_\_\_

14.	Käytättekö te tai joku muu perheestänne asuntoanne työtehtävien hoitamiseen?	15. Kauanko olette asuneet ta	alossanne?
		vuotta ja kuuł	kautta
1 2	l kyllä 2 ei		
<b>16.</b> 1 2	Muutitteko nykyiselle asuinalueelle toiselta paikkakunnalta? kyllä 2 en	<b>17. Muuttuiko talotyyppi muu</b> <b>rivi- tai kerrostalosta oma</b> 1 kyllä, mistä talotyypistä m 2 ei	ttaessanne (esim. Ikotitaloon)? nuutin
<b>18.</b> 1	Oletteko tehneet asunnossanne merkittäviä huonetilojen muutoksia tai laajennuksia? en	<ol> <li>19. Onko olemassa seikkoja, asumisen alueella loppue</li> <li>1 ei</li> </ol>	jotka estävät Iämänne ajan?
2	2 kyllä, millaisia?	2 kyllä, millaisia?	
20.	Onko Teillä asuntonne lisäksi käytössänne muita asumismahdollisuuksia?	21. Oletteko harkinneet muut	toa asunnosta pois?
	1 ei	1. ei	
	2 kyllä, asunto toisella paikkakunnalla	2. kyllä, jonkin verran. Miks	i?
	3 kyllä, loma-asunto	<ol><li>kyllä, vakavasti. Miksi?</li></ol>	
	4 kyllä, muu		
22.	Oliko teillä asiantuntijaa mukana talon valinnass 2 ei	sa?	1 kyllä
Jos valir	vastasitte kyllä, voisitteko kuvailla kuka (koulutus) ja ntaan?	miten hän/he osallistuivat talon	
23.	Oliko teillä asiantuntijaa mukana talon suunnitte	lussa?	1 kyllä
1	2 ei		
JOS	vastasitte kylla, voisitteko kuvalila kuka (koulutus) ja	miten nan/ne osaliistuivat	
Suu	unilleiuun? vastasitte ei, voisitteke kuvailla milloin ia miten itse e	sallistuitto suunnitoluun?	
<b>2</b> 4	Oliko teillä asiantuntijaa mukana talon hankinna		1 kvllä
<u> </u>	2 en		r Ryna
Jos	vastasitte kyllä, voisitteko kuvailla kuka (koulutus) ja	miten hän/he osallistuivat	
tote	utukseen?		
Jos	vastasitte ei, voisitteko kuvailla miten itse osallistuitte	9	
han	kkeeseen?		

# C. ARVIOT ASUNNOSTANNE

25. Sulkekaa silmänne ja ajatelkaa asuntoanne. Mitä näette mielessänne? Kuvailkaa näkemäänne muutamalla lauseella				
26. Oliko asuntonne rakentamishanke mielestänne?	27. Onko asuntonne arvostus mielestänne muuttunut rakentamisen jälkeen suhteessa ennakkokäsityksiinne			
1 Erittäin vaikea	kauppahetkellä?			
2 Vaikea				
3 Ennakkoarvion mukaista	1 noussut selvästi			
4 Helppoa	2 noussut hieman			
5 Erittäin helppoa	3 pysynyt ennallaan			
	4 laskenut hieman			
	5 laskenut selvästi			

	Täysin	Melko	Melko eri	Tävsin
	compo	comoo	mioltä	ori mioltä
	Salliaa	Salliaa	meita	en mena
A Talan alaaladhadha ay walata ta awintata ay	mieita	mieita		
	1	2	3	4
2. Talon sisaankaynti on helppo havaita	1	2	3	4
3. Autopaikalle on helppo ajaa	1	2	3	4
4. Jäteauton vierailu on sujuvaa	1	2	3	4
5. Lumelle on tontilla hyvä varastopaikka	1	2	3	4
6. Naapurit eivät näe asuntoon	1	2	3	
7 Pihan lasten leikkipaikka on turvallinen	1	2	3	1
8. Polkupvörille ja lastenrattaille on hyvin tilaa	1	2	5	т
9. Tuulikaapissa tai eteistilassa on kuravaatteille hvvin tilaa	1	2	3	4
10 Tuulikaappi ja eteistilat ovat valoisat ja tilavat	1	- 2	3	
	ļ	2	5	7
11 Sisään tullessa on avarat näkymä sisätiloihin tai ulos	1	2	3	1
12 Asuppossa eivät ovet kolise vastakkain	4	2	3	4
	1	۷	3	4
13. Keittiossa on riittavasti laskutilaa	1	2	3	4
14. Keittiön käryt eivät kantaudu muihin tiloihin	1	2	3	4
15. Jokaisella lapsella on oma tilava makuuhuone	1	2	3	4
16. Lasten makuuhuoneisiin mahtuu hyvin vaatteet ja työpiste	1	2	3	4
17. Aikuisten makuuhuoneeseen mahtuu hyvin parisänky.	1	2	3	4
vaatteet ja työpiste		-	Ũ	
18. Lapsille löytyy hyvin leikkitilaa talosta	1	2	3	4
19. Televisiolle on luonteva paikka		_		
20. Kotitietokoneelle on luonteva paikka				
21. Asunnossa on riittävästi säilytystilaa vaatteille	1	2	3	4
22. Asunnossa on siivousvälineille hyvät säilytystilat				
23. Asunnon harrastetilat ovat toimivat	1	2	3	4
24. Asunnon huoneiden äänieristys on hyvä	1	2	3	4
25. Asunto on helppo siivota	1	2	3	4
26. Asunnossa on riittävästi wc-pönttöjä	-	_	-	
27. Asunnon kodinhoitohuone on toimiva				
28. Asunnon kodinhoitohuoneesta pääsee ulos helposti				
29. Asunnon pesutilat ovat tilavat				
30. Pesutilojen lattialta vedet valuvat kaivoihin hyvin				
31. Asunnon sauna on toimiva				
32. Asunnon saunassa on valoisa ulkoikkuna				
33. Asunnon portaat ovat turvalliset	1	2	3	4
34. Olohuoneeseen mahtuu hyvin vieraita	1	2	3	4
35. Keittiöstä tai olohuoneesta on helppo siirtyä ulos				
36. Lattiamateriaalit ovat kestavat		_	_	-
37. Taion sankon kulutus ovat laskettua pienempi	1	2	3	4
38. Talon lämmityskulut ovat laskettua edullisemmat	1	2	3	4
39. Talon tekniikkaa on helppo käyttää	1	2	3	4
40. Talo on kylmälläkin ilmalla lämmin	1	2	3	4
	1	2	3	4
41. Talo pysyy kuumalla ilmalla viileänä				
42. Ovet ja ikkunat ovat tiiviit	1	2	3	4
43. Talo on ympäristön taloja kauniimpi		_	-	
44. Talo on energiatehokas				
45. Talo on perheellemme juuri oikea valinta				
46. Talon hinta on ollut edullinen suhteessa sen laatuun	<u> </u>			

### 28. Miten seuraavat väittämät kuvaavat omaa asuntoanne?

Merkitkää omat kannanottonne väittämiin ympyröimällä numero.

				 -
47. Jos myisimme talon, saisimme omamme takaisin varmasti				
48. Talon valinta oli helppoa				
49. Talotoimittaja huomioi toiveemme hyvin				
50. Saimme talotoimittajalta tukea ja neuvoja hankeen aikana				
51. Talotoimitus sujui aikataulussa				
52. Talon hinta oli se mitä oli luvattu				
53. Talotoimittajan mainostama mielikuva pitää paikkansa				
54. Voin vilpittömästi suositella talotoimittajaa toisillekin				
55. Aion itse huolehtia taloni kunnossapidosta				
56. Talotoimittaja on korjannut havaitut puutteet talon				
valmistuttua				
57. Talotoimittaja on kysynyt jälkeenpäin rakennus-				
kokemuksiamme rakennushankkeesta				
58. Talotoimittaja on kysynyt jälkeenpäin kokemuksiamme				l
59. asumisesta talossa				
	1		-	Ĩ

#### 29. Miten luonnehditte omaa toimintaanne asuinalueella? Ympyröikää oikea vaihtoehto.

	Kyllä	Ei
1. Lajittelemme kotitaloudessamme syntyvät jätteet	1	2
2. Osallistumme yhteisen lähiympäristön hoitoon	1	2
3. Tunne hyvin naapurini	1	2
<ol> <li>Osallistun itse lähiympäristöni hoitoon</li> </ol>	1	2
5. Alue on turvallinen	1	2
6. Liikun alueella pääosin kävellen tai pyörällä	1	2
7. Teen työmatkani pääosin omalla autolla	1	2
8. Käytän työmatkoillani joukkoliikennettä	1	2
	1	2

#### 30. Mitä asioita arvostatte erityisen paljon asunnossanne?

31. Mitkä asiat koette asunnossanne erityisen ongelmallisina?

32. Oliko omakotitalo hyvä sijoitus? Miksi?

#### KIITOS VASTAUKSISTANNE!

Mikäli haluatte kyselyjen pohjalta syntyvät tutkim	uksen, niin kirjoittakaa tähän nimenne ja
yhteystietonne (selkeästi tekstaten). Lähetämme	loppuvuodesta 2009 valmistuvan tutkimuksen
kiitokseksi kaikille kyselylomakkeen täyttäneille ja	a palauttaneille.
Nimi	Puhelin päivisin

Lähiosoite

Postinumero ja postitoimipaikka

Voimmeko ottaa Teihin myöhemmin tarvittaessa yhteyttä lisätietojen saamiseksi?

- 1 kyllä
- 2 ei