The Future of IKEA

——Watch your expansion steps

Authors
Xiyu Chen
Jing Zhang
Lu Yang

Scientific Supervisor
Christer Nilsson

Language Supervisor
Carin Hjalmarsdottir

Examiner
Christer Nilsson
Executive summary

This thesis provides an analysis and a discussion about IKEA’s expansion.

Our problem is that IKEA expands too fast in the world and there are some problems with their products. The customers are not satisfied with IKEA as before. Suppliers are the most important problem because of the profit. They cannot guarantee the quality of the products.

The method of analysis is to use survey by questionnaire, sampling statistic, cost and income and other theories. All calculations can be found in the empirics and analysis.

The result of the analyzed data shows the connection between quality and price of products in IKEA. We can say that the price and quality has a connection, the higher the price, the better the quality.

Our suggestions to IKEA is firstly keep expansion steps slowly, and turn back to have a check, what have been done, what have not. Secondly, improve the corporate to suppliers. Test the quality in every single step. Don’t leave this job to customers. Customers’ feeling decide how far you can go forward. Thirdly, the board of directors should not give too much pressure to the company. Otherwise, the managers of the company only caring about the target instead of not care the success of the company.

This thesis can spread into a generalized caution to all the companies which plan to do an expansion. Do not expand too fast and need always to remember: customers are the best tester.
Abstract

**Purpose/ aim:** The aim is to examine if IKEA expand too fast. We try to find answers to this problem. This is a huge problem to IKEA and other large-scale companies which plan to expand in the world.

**Design/methodology/approach:** Data on customers’ feelings has been collected through questionnaires. The analysis includes a description of the sample and statistic test. After the test, the relationship between price and quality will be found.

**Findings:** The analysis showed that the expansion of IKEA is fast enough to affect the quality of the products. There is a positive relationship between the quality and price. The rule is that the higher the price the better the quality. The data collected from the questionnaires shows that people think that the quality of IKEA’s products has decreased. In the analysis, the details are showed. What happened, and why did it happen?

From this we suggest that IKEA should slow down the steps to expansion and pay more attention to the quality of the products.

**Originality/ value:** The topic about IKEA’s expansion is a totally new area, which hasn’t been researched upon before. Most people think IKEA is a miracle and they always hope IKEA will build more stores in the world, but with this we disagree. Based on these findings we would argue that IKEA should slow down the steps to expansion and pay more attention to the quality of the products. This study has value for all the large-scale companies that want to find a way to analyze if a company expands too fast.

**Keywords:** IKEA, Expansion, price and quality, and supplier.
Acknowledgement

We would like to express our gratitude to all those who gave us possibility to complete this thesis.

We are deeply indebted to our supervisor Christer Nilsson from the Kristianstad University, Sweden, whose help stimulating suggestions and encouragement helped us in all the time of research for and writing of this thesis.

Carin Hjalmarsson focused on the final version of the thesis for English style and grammar, she corrected both and offered suggestions for improvement.

We are also grateful to Pierre Carbonnier, who taught us business skills in order to help us to finish a scientific thesis.

Sincerely
# Table of Content

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ch1.</td>
<td>Introduction</td>
<td>06</td>
</tr>
<tr>
<td>1.1</td>
<td>Problem</td>
<td>06</td>
</tr>
<tr>
<td>1.2</td>
<td>Purpose</td>
<td>07</td>
</tr>
<tr>
<td>1.3</td>
<td>Limitations</td>
<td>07</td>
</tr>
<tr>
<td>1.4</td>
<td>Outline of the thesis</td>
<td>07</td>
</tr>
<tr>
<td>Ch2.</td>
<td>Background</td>
<td>09</td>
</tr>
<tr>
<td>2.1</td>
<td>IKEA synopsis</td>
<td>09</td>
</tr>
<tr>
<td>2.2</td>
<td>History</td>
<td>09</td>
</tr>
<tr>
<td>2.3</td>
<td>Problem description</td>
<td>10</td>
</tr>
<tr>
<td>Ch3.</td>
<td>Literature review</td>
<td>11</td>
</tr>
<tr>
<td>3.1</td>
<td>Disadvantage of expanding a business</td>
<td>11</td>
</tr>
<tr>
<td>3.2</td>
<td>The relationship between price and quality</td>
<td>11</td>
</tr>
<tr>
<td>3.3</td>
<td>Opinion to agree with the high speed expansion</td>
<td>12</td>
</tr>
<tr>
<td>3.4</td>
<td>Opinion to disagree with the high speed expansion</td>
<td>12</td>
</tr>
<tr>
<td>Ch4.</td>
<td>Hypothesis</td>
<td>13</td>
</tr>
<tr>
<td>4.1</td>
<td>The relationship between price and customers</td>
<td>13</td>
</tr>
<tr>
<td>4.2</td>
<td>The expansion of IKEA</td>
<td>13</td>
</tr>
<tr>
<td>Ch5.</td>
<td>Theory</td>
<td>15</td>
</tr>
<tr>
<td>5.1</td>
<td>Principal thinking figure</td>
<td>15</td>
</tr>
<tr>
<td>5.2</td>
<td>Short introduction of theories will be used in this thesis</td>
<td>16</td>
</tr>
<tr>
<td>5.2.1</td>
<td>SWOT</td>
<td>16</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Growth speed compare</td>
<td>16</td>
</tr>
<tr>
<td>5.2.3</td>
<td>Cost and income</td>
<td>16</td>
</tr>
<tr>
<td>Ch6.</td>
<td>Method</td>
<td>17</td>
</tr>
<tr>
<td>6.1</td>
<td>Sample goal</td>
<td>17</td>
</tr>
<tr>
<td>6.2</td>
<td>Sample method</td>
<td>17</td>
</tr>
<tr>
<td>6.3</td>
<td>Sample size</td>
<td>17</td>
</tr>
<tr>
<td>6.4</td>
<td>Sample place</td>
<td>18</td>
</tr>
<tr>
<td>6.5</td>
<td>Result</td>
<td>18</td>
</tr>
<tr>
<td>Ch7.</td>
<td>Empirics</td>
<td>19</td>
</tr>
<tr>
<td>7.1</td>
<td>Chi-square test for figure 6.51</td>
<td>19</td>
</tr>
<tr>
<td>7.2</td>
<td>Chi-square test for figure 6.52</td>
<td>21</td>
</tr>
<tr>
<td>Ch8.</td>
<td>Analysis</td>
<td>23</td>
</tr>
<tr>
<td>8.1</td>
<td>What happened on IKEA and the market?</td>
<td>23</td>
</tr>
<tr>
<td>8.2</td>
<td>Why it happened?</td>
<td>25</td>
</tr>
<tr>
<td>8.3</td>
<td>What should IKEA do and IKEA’s expand direction</td>
<td>28</td>
</tr>
<tr>
<td>8.4</td>
<td>Validity</td>
<td>29</td>
</tr>
<tr>
<td>8.5</td>
<td>Reliability</td>
<td>29</td>
</tr>
<tr>
<td>Ch9.</td>
<td>Synthesis</td>
<td>30</td>
</tr>
<tr>
<td>Ch10.</td>
<td>Conclusion</td>
<td>31</td>
</tr>
<tr>
<td>References</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Appendix</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>
List of Tables
Table 6.1 The connection between current quality and price of products……………18
Table 6.2 The connection between previous quality and price of products…………18
Table 7.1 The relationship between current price and quality……………………19
Table 7.2 The relationship between previous price and quality………………….21
Table 8.1.1 The Growth rate/ Growth number………………………………….23

List of Figures
Figure 5.1 The principal thinking figure…………………………………………15
Figure 8.1.2 Line chart of Growth rate/ Growth numbers……………………….24
Figure 8.1.3 Bar chart for Price and Quality………………………………………26
Figure 8.1.4 Bar chart of customers’ desire for IKEA products…………………26
Figure 8.2 Cost of suppliers……………………………………………………….27
Figure 8.3 IKEA expansion speed…………………………………………………29
1. Introduction

This chapter contains the introduction for the whole thesis, purpose, research questions and the limitations.

IKEA is known as the world's biggest household goods retailer. The year of 2013, did not have a good start. Andrew Higgins (2013), reports that the number of brands in the European food scandals are increasing and people find traces of horse meat have been found in the meatballs sold by IKEA. This surprised the public. How could this kind of problem occur to the biggest household goods retailer? Actually, the quality problems of IKEA have decreased in recent years. What happened?

1.1 Problem

It is often argued that IKEA does not expand enough and should increase the speed of expansion. Hansegard and Molin (2012), had an interview with Mikael Ohlsson1, who said that IKEA plans to open 20 to 25 stores a year, compared with 6 to 12 at present. This study argues here that IKEA should expand but also need to pay attention to the quality of products. IKEA has admitted that some of the products have problems. Jiao Ying (2012) said that a report from IKEA’s public department shows that IKEA in 2011 four times recalled many kinds of products. That IKEA recalled so frequently means that they are shouldering the responsibility for the quality of products, but this also means there are problems with the products.

Our research question is as follows: Does IKEA expand too fast?

In this study, reverse psychology will be used. We start from the customers’ feelings, this includes the price and quality, and these both factors are mainly influenced by suppliers and the IKEA strategy. What influences the suppliers and IKEA strategy? After our discussion, we suppose that is the expansion of IKEA.

---

1 Mikael Ohlsson, the chief CEO of IKEA.
1.2 Purpose
The ambition of this paper is firstly to examine the relationship between price and quality for IKEA products. Secondly it is to test if IKEA expand too fast and thirdly, how to solve the problem and make our suggestions.

1.3 Limitations
The limitation of this thesis is that not all the factors were discussed and analyzed. There are three factors influencing the customers’ feelings: price, quality and service, but only price and quality were mainly discussed and analyzed. We focus on the price and quality and give our conclusions.

1.4 Outlines

Chapter 1 Introduction
This chapter contains the introduction for the whole thesis, purpose, research questions, limitations and the outlines. In this chapter, it shows that why we want to write this thesis.

Chapter 2 Background
This chapter contains the IKEA synopsis, history and problem description. In this chapter, it introduces more information about IKEA.

Chapter 3 Literature review
This chapter contains the literature review about the disadvantage of expanding a business, the relationship between price and quality, and options to agree or disagree with the high speed expansion.

Chapter 4 Hypothesis
This chapter describes the two hypothesis of the thesis, one is the relationship between price and quality and the other one is about the expansion of IKEA. These two hypotheses will be explained and analyzed in the following chapters.
Chapter 5 Theory
This chapter contains the principal thinking figure, and introduces the theory that will be used in this thesis: SWOT analyzes growth speed, cost and income.

Chapter 6 Method
This chapter contains the sample goal, sample method, sample size, sample place and result.

Chapter 7 Empirics
This chapter contains the chi-square test which will be introduced in this chapter. The sample data will be calculated in this chapter.

Chapter 8 Analysis
This chapter is the integrated, systematic and scientific analysis of the topic. Different theories will be used to analyze.

Chapter 9 Synthesis
In this chapter, we will illustrate that the combination of different theories can prove that IKEA expand too fast.

Chapter 10 Conclusion
This chapter is a summary chapter for this thesis.
2. Background

This chapter contains the IKEA synopsis, history and problem description.

In chapter Background, all the information about IKEA will be introduced as the support of this thesis, and it describes the development path until now for IKEA. After this, the hypothesis and question can be put forward.

2.1. IKEA synopsis

IKEA is a widely known home furnishing retailer. It has grown rapidly since it was set up in 1943. Nowadays, it is the world's largest furniture retailer, recognized for its Scandinavian style. The furniture are nice designed and functional. The majority of IKEA's furniture is flat-pack, ready to be assembled by the consumer. This will reduce in the costs of packaging. IKEA carries a range almost ten thousand products, including home furniture and accessories. This wide range is available in all IKEA stores and customers can order much of the range online through IKEA's website. Li Zhi (2010).

2.2. History (Picture from: Osama (2011))
2.3. Problem description

The development history of IKEA is a miracle, but someone said, it’s easy to open a shop but hard to keep it open. Recently, negative news pushed IKEA to close and these news were followed by the public. Anderew Higgins (2013) wrote that the furniture giant IKEA joined a growing list of brands that have been touched by Europe’s food scandal and withdrew its signature Swedish meatballs from its markets and cafeterias across most of Europe after one batch was found to contain traces of horse meat. People enjoy the decrease of price, but also cannot accept that IKEA also decreases the quality of products. Another problem is that in China, Huang Rong (2013), wrote that IKEA actually always use the foundry model (firms which cooperate with OEM factory), which is its important initiatives pursuit of profit maximization. In 2012, twelve OEM (Original Equipment Manufacturer) factories decided to stop the cooperation with IKEA, and this caused a lot of attention to the furniture industry. OEM mode of cooperation could be a win-win situation. But since last year, with the CNY (China Yuan) internal devaluation and factors such as rising raw material costs, and contract meager profits quickly eroded away. Not only the price pressure from the aspect of IKEA is unchanged, but also the generation of labor enterprise production cost is rising.

The background supplies information of that the expansion of IKEA has already caused some problems. How should IKEA deal with the relationship to the suppliers and how to deal with the "Low price, Low quality"? This will be the main issue of our report. All the results about these problems are pointing at the expansion. IKEA should think carefully about blind expansion or watch every step. We are going to find the data to analyze the price and the quality of products. Then will use the Chi-square test to test it. This can prove the reason why the problem occurred to suppliers. The suppliers’ problem is a main problem we will introduce in our thesis because it reflects IKEA’s strategy and aim.
3. Literature review

This chapter contains the literature review about the disadvantage of expanding a business, the relationship between price and quality, and options to agree or disagree with the high speed expansion.

In the introduction we argued that IKEA should pay attention to customer’s feelings when the firm is rapidly expanding. Rapid expanding brings some disadvantages.

3.1. Disadvantage of expanding a business

Although the literature covers a wide variety of such theories, this review will focus on four major factors. Ralph Heibutzki (year of publication unknown) claims that there are four main disadvantages of expanding a business: compromised quality, employee turnover, financial challenges and loss of control. In this case study, we will mainly focus on the factor of “compromised quality”. This argument illustrates that rapid growth can lead to declined quality.

3.2. The relationship between price and quality

The arguments in this literature review draws on the consumer and market behavior when consumers use price as a cue to quality. Steven M. Shugan (1984), divided customers into three types: those who only care about the price, those who only care about quality and those who care about them both. Their behaviors decide the price and quality. Another important theory is that the change of price of low price products can bring a bigger influence on the quality than the change of price of high level products. This can also help us to explain the reason why the quality of IKEA products is worse than before.
3.3. Opinion to agree with the high speed expansion

Some would argue that IKEA should keep the steps to expansion, and even go faster. Zhi Li (2010) claims that IKEA already understands the China market more than before. If IKEA accelerates the speed of expansion, they will get more customers. The success of IKEA in China market only depends on the time. If there is enough time, IKEA will succeed in China market.

3.4. Opinion to disagree with the high speed expansion.

Others have argued that IKEA should not continue to expand too fast because of the quality problems. Andrew Ward (2011) interviewed the CEO of IKEA-Mikael Ohlsson. Mr Ohlsson said he was determined that the expansion in China would go more smoothly, with plans to add another eight to the company’s existing stores at a rate of just one or two a year. “The potential in China is enormous but there is no rush,” he said. “We want to make sure we are always doing a good job where we already are before moving on.” Mr Ohlsson’s words are exactly what we want to suggest to all firms.

In this chapter we situated our argument in the literature on the interview from Andrew Ward (2011), because Mr Ohlsson’s words are completely the core idea of this study.
4. Hypothesis

This chapter describes the two hypothesis of the thesis, one is the relationship between price and quality and the other one is about the expansion of IKEA. These two hypotheses will be explained and analyzed in the following chapters.

From the literature review and the research question, we conclude two hypotheses in our thesis. Each one of them can be supported by one or two articles. The hypothesis only discusses two variables.

4.1 The relationship between price and quality

Discussing the relationship between the price and the quality, Shugen (1984), claims that there are mainly three kinds of customers, the first type of customers only care about the price. Whatever the quality of the products, they only buy the cheap goods. These customers are mainly low-income customers. The second type of customers only care about quality. Whatever the price of goods, they only buy the good-quality goods. These customers are mainly high or middle-income customers. Finally, the third type of customers cares both about the price and the quality or we can call that to care about the cost performance. Shugen’s comment that the price and quality have a settled relevance means when the price increases the quality increases.

Hypothesis 1: The products of IKEA also follow this pattern, when the price increases, the quality increases.

4.2 The expansion of IKEA

In order to achieve the target from board of directors: they should increase sale volume with 10%. IKEA has rapidly expanded in the recent years. Is it a good phenomenon? Many people think that IKEA is suitable for expansion, because they see the increase of capital every year. The brilliant and cool people do not agree with the same idea. They know the disadvantage of that. Heibutzki (year of publication unknown) claims that there are four main disadvantages of rapid expansion; the first
one is compromised quality, the second one is employee turnover, the third one is financial challenges and the last one is loss of control.

*Hypothesis 2*: If IKEA expands too fast it will lead to quality problems.


5. Theory

This chapter contains the principal thinking figure, and introduce the theory that will be used in this thesis: SWOT analyzes, growth speed, cost and income.

In this thesis, many theories can be used, and these theories can prove the possibility of the results. They will be introduced in this chapter shortly one by one and then they can be used in analysis and synthesis.

5.1. Principal thinking figure

![Diagram of principal thinking figure]

Figure 5.1 The principal thinking figure

Explanation of the principal thinking figure:

In this study, the customers feelings and the expansion of IKEA is the most important to study. In the figure we can see the customers’ feelings at the start, and the expansion of IKEA at the end. Customers’ feelings are the most important for the
customers and these feelings include the price of the products they bought and the quality of them, also the service which they enjoyed when they were shopping. How does the price and quality influence the products? We think this is mainly because of the cost of suppliers and the strategy of IKEA. They cooperate together to decide the quality and price. They have a very strong connection and they can also influence each other. In this study, we think that the expansion of IKEA decide the influencing factors and the reason for this we will give in the chapter about analysis.

5.2 Short introduction of the theories in this thesis

5.2.1 SWOT
SWOT analysis is a basic marketing theory. It is an acronym in which its four letters: strengths, weaknesses, opportunities and threats. Nikolaus Schall (year of publication unknown) claims that a SWOT session is a means of obtaining information from participants. That information is composed of observations and analysis of those observations by the participants. This theory used in this study can supply the two arguments. Optimistic people can see the growth of IKEA and be satisfied about it. Pessimistic people can see the shortages of IKEA.

5.2.2 Growth speed comparison
In this dissertation we present a way to test the speed of growth, because of the data number of IKEA stores from 2008-2012. The total revenue from 2008-2012 have been collected from the official yearly report of IKEA. We divided the growth rate by the growth number of stores and the number showed us the expanding speed. The most important is that the result number can show if there is a relationship between the number of stores and the increase of total revenue.

5.2.3 Cost and income
The figure of cost and income (see in chapter method) is used to show the situation which suppliers that corporate with IKEA are faced with. It can be used to explain the change of cost that leads to the change of price.
6. Method

This chapter contains the sample goal, sample method, sample size, sample place and result

Sampling is the main method and how to use sampling in this thesis will be introduced in this chapter. When we put sampling into practice we have to be equipped with a clear plan and thought.

6.1 Sample goal
The study’s empirical object is IKEA, and the data were collected by using a questionnaire. The idea was according to the customers’ feelings. We assume to divide the customers’ feelings into three parts and they are price, quality and service. Every single part can affect the customers’ feelings about one company. In this dissertation, price and quality will be deeply discussed in order to conclude the relevance.

6.2 Sample method
In this study, stratified sampling and pilot sampling will be used to collect data. We aim to find the relationship between price and quality of IKEA products. Our plan is to divide both the price and quality into three levels each. For price, the three levels are low, medium and high, and for quality, the three levels are good, common and bad.

6.3 Sample size
The total number of questionnaires is 200. The questionnaires were delivered in IKEA stores. The respondents were disturbed about only one minute, the time it took to answer the questions. When using this way to collect all the data there will be no waste in questionnaires, and it is possible to prompt and explain immediately when the respondents meet some problems. In the end, all the questionnaires had been used and 180 of them were valuable. The wastage rate is 20/200= 0.1.
6.4 Sample place

Malmö IKEA store  Adress: IKEA Malmö Kulthusgatan 1 215 86 Malmö

6.5 Result

<table>
<thead>
<tr>
<th>Price</th>
<th>Good</th>
<th>Common</th>
<th>Bad</th>
<th>∑</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>26</td>
<td>23</td>
<td>11</td>
<td>60</td>
</tr>
<tr>
<td>Medium</td>
<td>24</td>
<td>21</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>Low</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>69</td>
<td>64</td>
<td>47</td>
<td>180</td>
</tr>
</tbody>
</table>

Table 6.1 the current connection between quality and price of products in IKEA.

<table>
<thead>
<tr>
<th>Price</th>
<th>Good</th>
<th>Common</th>
<th>Bad</th>
<th>∑</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>28</td>
<td>24</td>
<td>8</td>
<td>60</td>
</tr>
<tr>
<td>Medium</td>
<td>25</td>
<td>21</td>
<td>14</td>
<td>60</td>
</tr>
<tr>
<td>Low</td>
<td>21</td>
<td>20</td>
<td>19</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>65</td>
<td>41</td>
<td>180</td>
</tr>
</tbody>
</table>

Table 6.2 the previous connection between quality and price of products in IKEA.

The results show the connection between quality and price of products in IKEA. From the figure 6.1, we can see that in the column, with high level price of products, there are 11 people who choose bad quality. The medium level price of products shows that, there are 15 people who choose the bad quality, and in the low level price products there are 21. The numbers are increasing. From the figure 6.2, we can find the same regular pattern. Thus we can say that the price and quality has a connection, the higher the price the better the quality. After comparing the figures 6.1 and 6.2 the numbers show that the quality may decrease and this we will introduce in the empirics in the next chapter.
7. Empirics

This chapter contains the chi-square test which will be introduced in this chapter.

Chi-square test is the main method to test the relationship between the two variables. The data which has been collected is managed into tables, after using the Chi-square test to test. Then we can know that hypothesis 0 is accepted or rejected.

7.1 Chi-square test for table 6.1

Table 7.1 The relationship between current price and quality

<table>
<thead>
<tr>
<th>Price</th>
<th>The current quality problem on production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
</tr>
<tr>
<td>High</td>
<td>26 (23)</td>
</tr>
<tr>
<td>Medium</td>
<td>24 (23)</td>
</tr>
<tr>
<td>Low</td>
<td>19 (23)</td>
</tr>
<tr>
<td>Σ</td>
<td>69</td>
</tr>
</tbody>
</table>

I. Null Hypothesis:

$H_0$: there is an association between the current number of production problem and the price.

$H_1$: there is no association between the current number of production problem and the price.

II. Statistic Test: Since the groups in the study are independent and the number more than two, a statistical test for $k$ independent groups (the problem number of production and price) is appropriate. Since the data are in discrete categories, the chi-square test is appropriate.

III. Significance Level: Let $\alpha = 0.05$ and $N$ is the number of price which participated in the study = 180.

IV. Sampling distribution: Under the null hypothesis, $\chi^2$ as computed from Table (I) is distributed approximately as $\chi^2$ with $df = (r-1)(k-1)$. When $H_0$ is true, the probability associated with the occurrence of values as large as or larger than an observed $\chi^2$ is
tabled in Appendix Table C.

V. Rejection region: The region of rejection consists of all values of \( \chi^2 \) which are so large that the probability associated with their occurrence when \( H_0 \) is true is less than or equal to \( \alpha = 0.05 \).

VI. Decision: Tables summarize the frequency of occurrence of salary levels within each category for each of the problem number of production. The table also shows in italics the numbers of prices which might be expected to show the quantity of prices which is divided by the problem number of production.

The size of \( \chi^2 \) reflects the magnitude of the discrepancy between the observed and the expected values in each of the cells. We may calculate \( \chi^2 \) for the values in Table

\[
\chi^2 = \sum \frac{(O - E)^2}{E}
\]

\[
\chi^2 = \frac{(26-23)^2}{23} + \frac{(24-23)^2}{23} + \frac{(19-23)^2}{23} + \ldots \ldots + \frac{(21-15.666)^2}{15.666} = 6.419
\]

\( df = (r-1)(k-1) = 4 \)

Reference to Appendix Table C reveals that such a value of \( \chi^2 \) equals to 56.419, less than 9.49 which is significant 0.05 level. Therefore, the result is less than significant level. Our decision is to accept \( H_0 \).

---

\(^2\) From the table C in Alan Agresti and Barbara Finlay (2009), statistical method for the social sciences. Appendix table C. P594. When \( df=4, \chi^2=6.419 \). So the right-tail probability is between 0.250 to 0.100.
7.2 Chi-square test for table 6.2

Table 7.2 The relationship between previous price and quality

<table>
<thead>
<tr>
<th>Price</th>
<th>Good</th>
<th>Common</th>
<th>Bad</th>
<th>∑</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>28 (24.666)</td>
<td>24 (21.666)</td>
<td>8 (13.666)</td>
<td>60</td>
</tr>
<tr>
<td>Medium</td>
<td>25 (24.666)</td>
<td>21 (21.666)</td>
<td>14 (13.666)</td>
<td>60</td>
</tr>
<tr>
<td>Low</td>
<td>21 (24.666)</td>
<td>20 (21.666)</td>
<td>19 (13.666)</td>
<td>60</td>
</tr>
<tr>
<td>∑</td>
<td>74</td>
<td>65</td>
<td>41</td>
<td>180</td>
</tr>
</tbody>
</table>

I. Null Hypothesis:

$H_0$: there is no association between the previous number of production problem and the price.

$H_1$: there is an association between the previous number of production problem and the price.

II. Statistic Test: Since the groups in the study are independent and number more than two, a statistical test for $k$ independent groups (the problem number of production and price) is appropriate. Since the data are in discrete categories, the chi-square test is appropriate.

III. Significance Level:

Let $\alpha = 0.05$ and $N$ is the number of price which participated in the study = 180.

IV. Sampling distribution: Under the null hypothesis, $\chi^2$ as computed from Table (I) is distributed approximately as $\chi^2$ with $df = (r-1)(k-1)$. When $H_0$ is true, the probability associated with the occurrence of values as large as or larger than an observed $\chi^2$ is tabed in Appendix Table C.

V. Rejection region: The region of rejection consists of all values of $\chi^2$ which are so large that the probability associated with their occurrence when $H_0$ is true is less than or equal to $\alpha = 0.05$.

---

3 From the table C in Alan Agresti and Barbara Finlay (2009), statistical method for the social sciences. Appendix table C. P594. When $df=4$, $\chi^2=5.107$. So the right-tail probability is between 0.250 to 0.100.
VI. Decision: Tables summarize the frequency of occurrence of salary levels within each category for each of the problem number of production. The table also shows in italics the numbers of prices which might be expected to show the quantity of prices which is divided by the problem number of production.

The size of \( \chi^2 \) reflects the magnitude of the discrepancy between the observed and the expected values in each of the cells. We may calculate \( \chi^2 \) for the values in Table

\[
\chi^2 = \sum \frac{(O - E)^2}{E}
\]

\[
\]

\( df = (r-1) (k-1) = 4 \)

Reference to Appendix Table C reveals that such a value of \( \chi^2 \) quale to 5.107, less than 9.49 which is significant 0.05 level. Therefore, the result is less than significant level. Our decision is to reject \( H_0 \).
8. Analysis

This chapter is the integrated, systematic and scientific analysis of the topic.

In the analysis chapter, we can analyze the thesis and hypothesis carefully, and once we start to analyze, it must be a logic, scientific process analyzing why IKEA has this problem and how to solve this problem. All the theories can be used to explain and prove this.

8.1 What happened on IKEA and market?

Growth speed of IKEA

We got this data from the IKEA official yearly report for 2012. We can find they have introduced the number of stores from 2008 to 2012 and the total revenue for each year. So we focus on the data from 2008 – 2012, five years. We can simplify it into a sheet.

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenue (EUR billion)</td>
<td>21.5</td>
<td>21.8</td>
<td>23.5</td>
<td>25.2</td>
<td>27.6</td>
</tr>
<tr>
<td>Number of stores</td>
<td>285</td>
<td>301</td>
<td>316</td>
<td>325</td>
<td>338</td>
</tr>
<tr>
<td>Growth number n-(n-1)</td>
<td>N/A</td>
<td>16</td>
<td>15</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Total revenue/ number of stores</td>
<td>0.0754</td>
<td>0.0724</td>
<td>0.0743</td>
<td>0.0775</td>
<td>0.08166</td>
</tr>
<tr>
<td>Growth rate n-(n-1)</td>
<td>N/A</td>
<td>-0.003</td>
<td>0.0019</td>
<td>0.0032</td>
<td>0.00416</td>
</tr>
<tr>
<td>Growth rate/ Growth number</td>
<td>N/A</td>
<td>-0.0001875</td>
<td>0.0001266</td>
<td>0.000355</td>
<td>0.00032</td>
</tr>
</tbody>
</table>

Table 8.1.1 The Growth rate/ Growth number

The introduction of growth rate/ growth number can prove the expansion speed from 2008 to 2012; the line chart shows the result of facts. Of course IKEA increased the expansion speed, but from the line chart, it is impossible to see that the increase of stores number can increase the capital.
This theory introduced can be used for test and measures the capital rise from 2008 to 2012, and that is the calculation from the data which we got from the official yearly report of IKEA.

We try to find out if the expansion brings a profit for IKEA, but actually we cannot prove the numbers of stores increased help IKEA to raise capital. There is not a strong connection between the numbers of stores and the capital.

![Line chart of Growth rate/ Growth numbers](Figure 8.1.2)

Hypothesis 2 has been partly tested from the line chart 9.3.2. Combined with other theories in the following chapters, it can be proved. This chart proved that the number of increased stores cannot affect the capital directly. According to CEO of IKEA and in order to achieve the target was decided by board of directors to increase the sale volume with 10%. Increasing the number of stores is the direct way, but they maybe forget that the most important thing is not the rapid expansion of IKEA, it is the customers’ feelings towards IKEA.
8.2 Why it happened?

8.2.1 SWOT analyze in China

The SWOT analyze the situation of IKEA in the China market and the reason for choosing the China market is because China is an immature and not saturated market, still with a room to go further. According to Li Zhi (2010), we divide the SWOT into four charts.

<table>
<thead>
<tr>
<th>Internal Strength</th>
<th>Internal Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IKEA has 100 years of history and deep Nordic culture</td>
<td>1. Raw materials and labor costs are rising.</td>
</tr>
<tr>
<td>2. One of top 500 companies, high brand awareness</td>
<td>2. Quality control is not stable, the customers complaints on product quality and service have.</td>
</tr>
<tr>
<td>3. Intergrade design, produce and sale.</td>
<td>3. New product development cycle is long, and the cost is too high.</td>
</tr>
<tr>
<td>4. Exhibition hall to show the products to customers</td>
<td>4. Cross-regional products and cultures are different.</td>
</tr>
<tr>
<td>5. Environmental: good corporate image.</td>
<td>5. Customers picking up goods by themselves cause the loss of customers’ satisfaction.</td>
</tr>
<tr>
<td>6. Flat packaging transportation; self-help delivery.</td>
<td>6. Supplier quality issues, and its production management overall level is low.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External Opportunity</th>
<th>External Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brand products with the same business model, the concentration is not high</td>
<td>1. Industry competition leads to product prices fall further.</td>
</tr>
<tr>
<td>2. To a certain extent, furniture products are the necessities of people's life, the market capacity is big.</td>
<td>2. Supplier price instability and the decrease of the quality of the product.</td>
</tr>
<tr>
<td>3. With the improvement of income level, the purchasing power of Chinese households also increased</td>
<td>3. Slowdown in market growth.</td>
</tr>
<tr>
<td>4. The strengthening of the global awareness of environmental protection, which coincides with the IKEA concept.</td>
<td>4. China's new labor law implementation, increased labor costs.</td>
</tr>
<tr>
<td>5. Products in the market and more to meet the demand of the main consumers.</td>
<td>5. China's furniture market is not standardized led to the vicious competition.</td>
</tr>
</tbody>
</table>

8.2.2 Cost and income

After the questionnaire and the raw data was collected, it was necessary to deal with them and statistic in a bar chart. Data for different variables is presented in the bar chart. It is the result after analysis.
Figure 8.1.3  Bar chart for Price and Quality

Hypothesis 1 have been tested. From the bar chart, the following regularities can be summarized:

1. There is a connection between price and quality (chi-square also tested it).

2. This proved that the quality of products from IKEA have decreased compared to before.

Customers still can accept when the products have some quality problem, when the price is cheap. The cost performance is still worth it. Many customers mentioned this point. However, other customers hope they can buy good quality products but to a cheap price.

8.2.3 Customers’ desire

Figure 8.1.4  Bar chart of customers’ desire for IKEA products
How did it happen? In this study we think the key point is suppliers. IKEA did well in many areas such as transportation, sell design and advertising, but it cannot control the suppliers’ products well. This problem can be divided into two aspects; one is the supply aspects, the other is the IKEA aspects.

### 8.2.4 Two aspects

Suppliers meet some problems; the first one is the increase of labor wages which lead to an increase of the fix cost. The second one is the exchange rate of CNY which has increased in recent years. The third one is the IKEA strategy; IKEA seems not want to pay for these two changes in the situation. If we show these factors in a figure, it will be easier to understand.

![Figure 8.2 Cost of suppliers](image)

The costs have obviously increased the fix cost of suppliers have increased because of the labor wages. The inflation in China leads to many social contradictions. The government has updated the labor law to increase the minimum wages. This is a hit on the industry especially for the factories which get their profit depending on the labor costs. This part of the money is added into the fix costs. The variable cost is the exchange rate cost and the rising cost of raw material, with the value of CNY increased. Companies selling one product only cannot get enough profit. For example, if earlier one pan was sold for 7.5 CNY, this means at that time, for one sold pan you could get 7.5 CNY. How about now? After the exchange rate increased, to sell the same pan, we could today only get
6.5 CNY. Suppliers lost 1 CNY invisibly. As for the raw material, parts of suppliers which support raw materials will face this problem. The CPI\(^4\) rising step by step because of the inflation and the price for one unit raw material has also increased. Of course, the suppliers should face this problem by themselves. The three changes are perpetual pressing the profit from suppliers, so they cannot guarantee the quality of products.

As for IKEA, not only in the China market, IKEA want to decrease all the prices of products for more market shares from its competitors and for more profit. Therefore the company can hardly promise to give more benefit to the suppliers.

### 8.3 What should IKEA do and IKEA’s expand direction

#### Expansion step description

The expansion can hardly be tested by any single theory; it can be described in other ways, and the figure 9.41 shows how to describe the expansion speed of a company. Although it can be a little bit abstract. We assume that if a company does not expand over the limit, the expansion will not influence the quality and the capital, which is shown in part1. If a company has already a problem with the quality of products and service, it looks like in part2. If the company solves the problem and is suitable for expansion, the company can still expand just like the green line. If the company cannot solve the problem, it can be described just like the red line. Then the company has to stop and stable the situation.

\(^4\) CPI: Consumer Price Index. Measures changes in the price level of a market basket of consumer goods and services purchased by households.
8.4 Validity

This paragraph will describe the validity of this thesis. The analysis of this thesis was based on the data collection. The data was collected by using stratified sampling method in order to decrease the margin of error in collecting data. This can also keep the faith in science.

8.5 Reliability

This paragraph will describe the validity of this thesis. The solution of the thesis can be used in real life. If the chief manager can think deeply about this, we believe that IKEA will have a better prospect.
9. Synthesis

In this chapter, we will illustrate that the combination of different theories can prove that IKEA expand too fast.

IKEA is the biggest household articles company. Each step of development is to attract the public’s eyes. In this study, we query the expansion speed of IKEA. No companies can always be perfect, it must include IKEA!

The expansion speed can hardly be measured and tested, but it can be tested in other ways. A company with a good situation and preparation can expand. A company without a very good situation and preparation must look out. A company that is already in trouble cannot continue to expand. The situation of IKEA is not very good, it still looks brilliant on the surface, but in the deeper level, there is a big problem. That is the quality of the products.

Firstly, the calculation in the official yearly report showed that although the capital of the company increases every year, they cannot prove that the expansion brings a profit. Secondly, and the most important part which support our thesis is the result of sampling. The data was collected by sampling, and after the chi-square test, it proved that there is a strong connection between the price and quality. In ten years, IKEA reduce the average price with 20%, but in these ten years, the costs are increasing. We also proved that the quality of products of IKEA decreased indeed. If IKEA does not expand so fast, it can help suppliers to deal with the problem of quality. Big numbers of stores bring the huge demand. In order to fill this, IKEA has to accept some quality problem from the suppliers. Thirdly, customers are always the best spokesmen and testers. Their needs and comments are the most important things.

This thesis tested the connection between price and quality and proved that when the normal price increased, the quality increased, and vice versa, if the price is lower, the quality should be lower too.
10. Conclusion

This chapter is a summary chapter for this thesis.

The problem of this study is that IKEA expands too fast. More and more quality problems influence the customers’ feelings and the image of the company. The hard situation makes it difficult for them continuing to guarantee the quality of the products. According to the literature review, some theses were found to help us with thoughts and theory. They support this thesis.

The value of this thesis is firstly, it provides empirical knowledge about the relationship between price and quality for IKEA products. Secondly, it shows that the development path of IKEA and give suggestions to the future development and thirdly, it contributes to the field if large-scale companies are suitable to expansion and how fast it should go.

This thesis collected the data from IKEA stores. People were divided into three groups and in each group were 60 people divided after income. Then the chi-square test was used to prove the relevance. The most important part is analysis and discussion. In these two parts, the main thinking and idea were introduced. We used a scientific way to analyze why IKEA expands too fast and we also gave our suggestions to IKEA. Firstly, slow down the expansion steps, and turn back to have a check; what have been done, what have not. Secondly, improve the corporate to suppliers. Test the quality in every single step. Don’t leave this job to customers. Customers’ feelings decided how far you can go forward and thirdly the board of directors should not give too much pressure to the company. Otherwise, the managers of the company only care about the target instead not caring about the success of the company. Adjust the policy from the top manager in order to change the management pattern. Put the key point on not only the profit but also the quality.
This thesis can spread into a generalized caution to all the companies which plan to do an expansion. WE want to advise them not to expand too fast and always remember that the customers are the best tester.

**Future research**

However, there are still some shortage and limits of this thesis; firstly, IKEA has more than one million members and also a lot of customers that are not members of IKEA. Our sample has just 180 people that maybe with a wide error. Secondly, that IKEA expands too fast even influence the quality of products, but this is a new topic and there is a lack of the support in literature review. Many points and information is published by news, not the thesis. Thirdly, data of IKEA is not easy to collect because of the properties of IKEA, so we cannot give any final or explicit suggestions to IKEA with the lack of data support. The suggestions build on the analysis and synthesis and finally, because of the condition, the data collection was operated in Sweden, but the main part of the thesis is discussing IKEA in the China market. Different countries must have different thoughts and ideas. This error can influence the result. In the future research, all these points will be improved in order to get a result without error as accurate as possible.
Reference


Li Zhi (2010), the competitive advantage of IKEA and IKEA in China, master thesis in logistics and innovation management. University of Gävie. P. 30.


Appendix

1. Questionnaire:

Q1. Gender
   ○ Male ○ Female

Q2. Province of birth

Q3. How old are you?

Q4. Years of job experience? (If none, please write No)

Q5. Have you bought anything from IKEA and what was in that case the price level of the product you bought?
   A. Low (less than 1000 SEK)
   B. Medium (1000-4999 SEK)
   C. High (more than 5000 SEK)
   D. None

Q6. If you choose A in Q5, please answer this question. Do you think there is a quality problem of production now?
   A. No problem
   B. Common
   C. Big problems

Q7. If you choose B in Q5, please answer this question. Do you think there is a quality problem of production now?
   D. No problem
   E. Common
   F. Big problems
Q8. If you choose C in Q5, please answer this question. Do you think there is a quality problem of production now?

G. No problem  
H. Common  
I. Big problems

Q9. If you choose A in Q5, please answer this question. Do you think there is a quality problem on the products which you bought BEFORE?

J. No problem  
K. Common  
L. Big problems

Q10. If you choose B in Q5, please answer this question. Do you think there is a quality problem on the products which you bought BEFORE?

A. No problem  
B. Common  
C. Big problems

Q11. If you choose C in Q5, please answer this question. Do you think there is a quality problem on the products which you bought BEFORE?

A. No problem  
B. Common  
C. Big problems

Q12. What do you think about the future of IKEA?

A. Hopelessness  
B. Normal  
C. Very high expectations  
D. No idea

Q13. Do you think that there is a strong connection between the price and the quality?

A. Without a connection  
B. Normal  
C. Strong  
D. No idea
Q14. What do you care most?
A. Quality  
B. Price  
C. Both

Q15. Which way do you think IKEA should use to balance the quality and profit?
A. Price increase, quality increase  
B. Price not change and increase the product ability.  
C. Price lower and increase the product ability.  
D. No idea.

Q16. What is your salary? (Unit: SEK)
A. 1000-4999  
B. 5000-9999  
C. 10000-19999  
D. 20000-40000  
E. more than 40000

Thanks for your cooperation