



1.6 Investigating short term strategies in product sustainability index implementation, a case study at IKEA

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Abstract

Companies are aware of long term benefits of sustainability, and that in the future the competitive landscape will change. However, financial concerns slow down the sustainability development process.

This article aims to explore how companies move toward long term benefits of sustainability without compromise in their financial objectives in short term. This study focuses on investigating how companies use sustainability index tool as a component of short term strategy.

Findings indicate that companies try to simplify the sustainability assessment and combine it with other decision making tools. This simplification is toward finding potential improvements in the product level. Results are summarized in a model which corresponds to the short term strategy development process toward sustainability. This model describes how company identifies critical products based on financial, strategic and sustainability aspects. The investigation has been performed at children's IKEA in Sweden.

Keywords:

Critical products; Product sustainability index; Strategy; Sustainability implementation; model

1 INTRODUCTION

Due to the increase of customers awareness and their demand for more sustainable products, tougher legislation and limits in resources, companies have started to embrace environmental sustainability [1-4]. There is no way to ignore the important role of manufacturing industries in transformation toward sustainability [5] and there are long term financial and non- financial benefits for companies that adopt sustainability initiatives[6-8] Despite the foregoing, most companies have not moved toward sustainability [9] or "Sustainability is still separated from core business development" [10].

The major issue which slows down the process of adopting sustainability initiatives is not the lack of proper technology or materials, the reason is that companies find it difficult to compete with other rivals who have not invested in sustainable products [11]

Sustainability has been an important issue in IKEA in many aspects but recently sustainability is considered as the forth cornerstone in IKEA's business to be integrated in long term strategies [12].

The purpose of this study is to model the company's approach in implementing sustainability tool. This model describes how company narrows down product categories to reach critical products.

Results indicate that company's strategy in short term is focused on finding critical products using the sustainability assessment tool.

1.1 Sustainability Product Scorecard

SPS, Sustainability Product Scorecard, is a tool developed by IOS (IKEA of Sweden) in order to measure sustainability and

classify the products in two groups of more sustainable and less sustainable. SPS consists of eleven weighted criteria, Eight of which are directly related to the product itself and the other three are related to suppliers [12]

2 RESEARCH METHODOLOGY

In order to fulfil the research objective, an initial exploratory research is carried out. This approach helps to have a comprehensive view of the current situation of the company.

This case study is a combination of quantitative and qualitative analysis of the obtained information. Both qualitative and quantitative analyses are interrelated and support each other in different stages of the study. In some stages of the research the results of quantitative analysis have been used as input data for the qualitative analysis.

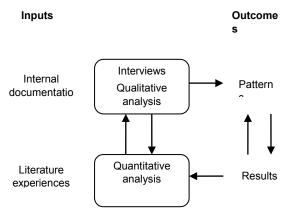


Figure 1: Example of picture scanned into the paper.

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A literature review has been conducted on similar cases where sustainability is being implemented, and the results are used as another input for this research. The sustainability index is a rather young tool in this case. The organization is not completely adapted to it, and there are lots of information sources connected to this tool which are not perfectly organized. Therefore, the nature of this study is exploratory and the undertaken methodology provides a frame for evolving the questions in interviews and systematic use of qualitative and quantitative information. Additionally, this framework is less time consuming and helps to avoid being locked in unnecessary information or detail.

2.1 Interviews and document review

The conducted interviews are structured and unstructured interviews. The advantages of unstructured interviews are supporting the exploratory approach of the thesis, and also providing an open dialogue. Quantitative analysis has taken advantage of grounded theory in categorizing information and finding patterns and relationships.

Figure 1 gives an overview of the method used to complete this research.

3 BACKGROUND

When it comes to implementing sustainability, there are three major dimensions that companies would like to focus upon: measuring sustainability, prioritizing between potential

investment for improvements, and simplification of tactics and strategies toward sustainability [9].

It is stated in literature that if companies really intend to support sustainability development they should align and integrate tools and methods for sustainable product development into the general decision-making process [4, 13-17].

It is suggested that companies should integrate sustainability into their business, and support goals with decision making tools. It is crucial to have a strategic platform toward creating a win-win-win situation in which, customers are satisfied with the prices, environmental impact decreases and company does not compromise on financial objectives [4]. This strategic approach will help companies to decrease the chance of sudden costs [10]. It is stated in literature that setting the goal is the prerequisite to be able to be strategic [9, 18]

Case studies and ongoing sustainability projects in companies show that in first steps of sustainability adoption, companies try to simplify the life cycle of products and focus on the most important stages of life cycle [19-22]. The outcomes of this life cycle simplifications are different tools and indexes developed by companies. These tools are used to assess products in order to categorize them in terms of sustainability.

LCA as a tool for evaluation of the product design alternatives has fallen short, the reason is that sometimes a huge amount of exercises could be locked in deep details which are confusing and time consuming [23] There have been several attempts in order to simplify LCA [24].

For example Ford developed a product sustainability index named PSI. Ford's sustainability tool has eight indicators (criteria) to simplify the life cycle of the products, and by applying it to some products reached significant improvements [22] It is interesting that Ford started with PSI

tool and later on products were assessed based on the external standard of ISO 14040 which confirms the significant improvements [22].

Another example is Walmart, they have developed an index that represents the LCA assessment named "The Sustainability Consortium" (TSC). Their index consists of 15 questions which mainly focus on suppliers. It is interesting that, the same as IKEA[19], they are applying this index to particular product categories and also their aim is to integrate this tool in their core business. They also believe that by using this tool and moving toward sustainability, Walmart gains competitive advantages in terms of transparency and price [21, 25].

IKEA has made the same attempt to simplify the life cycle and assess environmental impacts in different stages of the prodocts' life cycle. There are eleven criteria considered in IKEA's sustainability assessment tool. Each criterion falls in different stages of life cycle to focus upon.

4 RESULTS

The results from 20 interviews and meetings and other observations in this case study are presented below. Additionally, the quantitative results are presented in separated sections to be used in the model development.

4.1 Sustainability assessment tool

Based on interviews, managers believe that, small improvements in environmental impact considering company's huge production scale have a significant positive influence on environment.

4.2 Goals

The company's sustainability goal is based on sales values, 70% of the sale value should be classified as More Sustainable in 2015.

More sustainable is a term used for products that get certain points or more according to the assessment tool.

As a result of such a goal, the other products which are bigger in number but have smaller sales values get ignored to some extent when it comes to sustainability improvements. This approach declares that in short term, by focusing on best selling products, maintaining the sale growth is of a higher priority in comparison with sustainability.

Interviews with marketing managers show that the bestselling products have an important role in shaping the brand image, and making those products sustainable will be a great competitive advantage in terms of sustainability.

It is clear that categorising products based on sales values represents the financial concerns of the company but there is no way to ignore the higher risks. In that regard, managers are looking for a way of finding solutions, in the product level, in order to avoid higher risks and also improve the brand image by having sustainable best-selling products. This approach corresponds to ABC classification of the products.

4.3 Financial analysis

As mentioned, by setting the goal based on the sales values, improvements are focused on best-selling products. This approach corresponds to the ABC classification of the products. ABC analysis comes in handy to understand the way of using the tool in terms of assessment. In other words, it draws the management attention to the best-selling products.

This analysis describes how the company categorises the articles and narrows them down. As illustrated in figure 2, A class products constitute 70% of the sales values, although they represent only 14% of all the products.

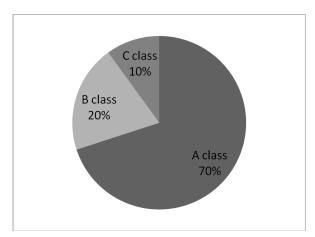


Figure 2: ABC analysis based on sales value.

ABC analysis proposes that products do not have equal values, therefore they are categorized in three groups (**A**, **B**, **and C**) in order of their importance (in this case, sales value) [26].

Like Pareto's principle, a small number of products have a large share of sales value, but there is no certain portion for each class [27]. Since this financial analysis is focusing on the current situation and future is less considered thus, there is a need for a combination of strategic and financial analysis at the same time in order to identify which products are financially and strategically important.

4.4 Sustainability assessment analysis

As illustrated in figure 3, after sustainability assessment of all products with sustainability tool, 45% are classified as more sustainable which. When we combine these results with ABC analysis, 79% of more sustainable products are A class, 14% B class and 7% C class.

The combination of sustainability assessment and ABC analysis declares more sustainable products are mostly from A class.

These results also support the results from interviews which indicate that the company is focusing on best-selling products for sustainability improvements. This analysis is used as an input for complementary interviews.

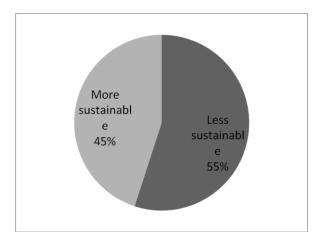


Figure 3: Sustainability status based on company's tool

5 STRATEGIC ANALYSIS AND LIFE CYCLE ANALYSIS (LCA)

The complementary interviews with focus on financial and sustainability analysis show that, there are concerns about B class and C class products that are growing and will join the A class products in future. Therefore, ignoring those products would not be wise

Results show that, as illustrated in figure 4 some products that have high sales values (A class) will be soon declined from the market. In other words, these products are in A class but are close to the end of their life cycle (decline stage).

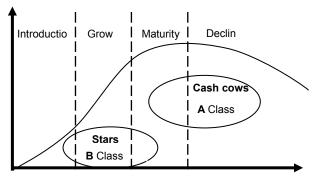


Figure 4: ABC analysis combined with life cycle analysis.

Documents show that the company uses Boston Consultant Group (BCG) matrix as a strategic tool in order to analyze its strategic position in the market compared to other competitors. The other interesting results of investigating the internal documents and complementary meetings show that the company has done the strategic analysis for products in A class.

As shown in figure 4, Considering the ABC analysis and BCG results From Boston Matrix perspective, there are products that represent cash cows in the matrix, and they are in A class, but soon they will be declined by the market and turned to the dogs. On the other hand there are products that represent stars in the matrix, and are growing in terms of market share. Additionally, findings show that there are some B class products that will be in A class in future, considering their growing market.

6 MODEL DEVELOPEMENT

Based on evidence and internal documentations, as mentioned in sustainability analysis, mostly products that have high sales values were focused on, for sustainability improvements. After conducting interviews in that regard, results showed that it was not a deliberate reaction based on a clear road map. By combining other tools and analysis, the company learns that A class products are more important in terms of sustainability. This approach is modified by other tools such as Boston matrix and lifecycle analysis.

This model shows how the company tries to identify critical products by narrowing down all products using these three dimensions to find out critical articles, which are strategically, financially and sustainability important. Combining the company's approach strategy and this model will answer the research question.

Combining all results from previous analyses delivers a three dimensional model (figure 5). Therefore, all A class articles which are strategically important and (stars in BCG matrix) and also not going to be declined from the market are company's critical articles. As mentioned, critical articles play an important role in the early stages of sustainability implementation.

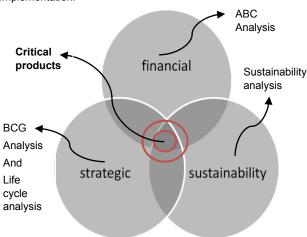


Figure 5: The developed model to find critical articles

These products, critical products, are the ones that company will focus upon for sustainability improvements. This model

- Testa, F. and F. Iraldo, Shadows and lights of GSCM (Green Supply Chain Management): determinants and effects of these practices based on a multi-national study. Journal of Cleaner Production, 2010. 18(10): p. 953-962.
- Spangenberg, J.H., A. Fuad-Luke, and K. Blincoe, Design for Sustainability (DfS): the interface of sustainable production and consumption. Journal of Cleaner Production, 2010. 18(15): p. 1485-1493
- 3. Ammenberg, J. and E. Sundin, Products in environmental management systems: drivers,

represents the combination of short term strategies of the company.

As can be seen in figure 5, combining financial analysis (ABC analysis in this case), strategic analysis (BSG and LCA in this case) and sustainability assessment (SPS in this case) leads to a model which is focusing on the product level.

This model describes how the company moves toward sustainability without compromising in their financial objectives in short term. Sustainability index tool as a component of short term strategy is combined with financial analysis in order to consider financial objectives. On the other hand, strategic analysis is the other component of the model which addresses the products which are currently significant and also in the future.

7 SUMMARY

As mentioned, companies try to simplify the life cycle of products and make sustainability index (tools). The internal acceptance and fast evaluating process compared to other techniques e.g. Life Cycle Assessment are the main reasons behind this simplification.

By approaching products with high sales values and low sustainability, companies have difficulties to find critical products not only based on sale but also based on sustainability, therefore they try to categorize products with combinations of tools.

It is concluded that in order to reach sustainability goals companies strategy in short term are:

- To be very tool oriented and try to simplify LCA to enhance adoption process.
- Still having a higher priority for financial aspects
- Focusing on product level for improvements to find critical articles to reach the goal

8 FUTURE RESEARCH

The following research questions are recommended for further research in this context:

manufacturers and consumers have very different perspectives on the importance of different sustainability elements [23] how can sustainability index(tool) consider both perspectives?

What is the relationship between companies' sustainability strategy and competitive advantage?

How positionening in the market regarding sustainability could be identified?

9 REFERENCES

barriers and experiences. Journal of Cleaner Production, 2005. 13(4): p. 405-415.

- Hallstedt, S.I., A.W. Thompson, and P. Lindahl, Key elements for implementing a strategic sustainability perspective in the product innovation process. Journal of Cleaner Production, 2013(0): p. 1-12.
- Gaziulusoy, A.İ., C. Boyle, and R. McDowall, System innovation for sustainability: A systemic double-flow scenario method for companies. Journal of Cleaner Production, 2012.
- Porter, M.E., 2. Green and Competitive: Ending the Stalemate. The Dynamics of the eco-efficient

- economy: environmental regulation and competitive advantage, 2000: p. 33.
- 7. Nidumolu, R., C.K. Prahalad, and M. Rangaswami, Why sustainability is now the key driver of innovation. Harvard business review, 2009. 87(9): p. 56-64.
- Wilkinson, A., M. Hill, and P. Gollan, The sustainability debate. International Journal of Operations & Production Management, 2001. 21(12): p. 1492-1502.
- Hallstedt, S., et al., An approach to assessing sustainability integration in strategic decision systems for product development. Journal of Cleaner Production, 2010. 18(8): p. 703-712.
- Willard, B., The next sustainability wave: Building boardroom buy-in. 2005: New Society Pub.
- Dangelico, R.M. and D. Pujari, Mainstreaming green product innovation: why and how companies integrate environmental sustainability. Journal of Business Ethics, 2010. 95(3): p. 471-486
- 12. Nedergaard, P. and R. Töreman, The Sustainability Product Scorecard at IKEA:-framework and range analysis. 2012, KTH.
- 13. Boks, C., The soft side of ecodesign. Journal of Cleaner Production, 2006. 14(15): p. 1346-1356.
- Hallstedt, S., A foundation for sustainable product development. 2008: Department of Mechanical Engineering, Blekinge Institute of Technology.
- Deutz, P., G. Neighbour, and M. McGuire, Integrating sustainable waste management into product design: sustainability as a functional requirement. Sustainable Development, 2010. 18(4): p. 229-239.
- Johansson, G., Success factors for integration of ecodesign in product development: a review of state of the art. Environmental Management and Health, 2002. 13(1): p. 98-107.
- Jørgensen, T.H., A. Remmen, and M.D. Mellado, Integrated management systems-three different levels of integration. Journal of Cleaner Production, 2006. 14(8): p. 713-722.

- Robèrt, K.-H., et al., Strategic sustainable development—selection, design and synergies of applied tools. Journal of Cleaner Production, 2002. 10(3): p. 197-214.
- Komassi, E., The sustainability product scorecard at IKEA – Strategy development Analysis, in Swedish school of textile. 2013, Boras University.
- 20. De Silva, N., et al., A new comprehensive methodology for the evaluation of product sustainability at the design and development stage of consumer electronic products. International Journal of Sustainable Manufacturing, 2009. 1(3): p. 251-264.
- 21. Walmart, b. Developing a sustainable standard for products 2012 [cited 2013 15 May]; Available from: http://corporate.walmart.com/global-responsibility/environment-sustainability/sustainability-index.
- Schmidt, W.-P. and A. Taylor. Ford of Europe's product sustainability index. in Proceedings of 13th CIRP International Conference on Life Cycle Engineering. Leuven May 31st–June 2nd. 2006.
- Jayal, A., et al., Sustainable manufacturing: Modeling and optimization challenges at the product, process and system levels. CIRP Journal of Manufacturing Science and Technology, 2010. 2(3): p. 144-152.
- Kaebemick, H., M. Sun, and S. Kara, Simplified lifecycle assessment for the early design stages of industrial products. CIRP Annals-Manufacturing Technology, 2003. 52(1): p. 25-28.
- Walmart. Welcome to the Walmart Sustainability Index Supplier Resource Center. 2013 [cited 2013 15 May]; Available from: http://customers.icix.com/walmart/sustainabilityindex/.
- Lun, Y.V., K.-H. Lai, and T.E. Cheng, Shipping and logistics management. 2010: Springer.
- 27. Lysons, K. and B. Farrington, Purchasing and supply chain management. 2006: Ft Press.