

Chapter 3

“Fuben-eki” in Service Design



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Abstract Based on my research on corporate marketing measures over the years, I continued to collaborate with Ph.D. Hiroshi Kawakami on the application of the technology to the inconveniences service design field. As a result, seven inconveniences, such as “increase of number of operation” and “less information,” and seven benefits, such as “feel affirmative” and “be fun,” were extracted. We also introduced the concept of “Nudge” in the sense of “gently pushing them back” what kind of “Fuben-eki” arose in the processes of influencing factors, marketing measures, and products/services. By showing this in the structure diagram, the company succeeded in creating 20 types, including “value co-creation.” Based on the analysis of the “Fuben-eki” gained in this way, we explored the utility of the inconveniences in service design by drawing on the <inconveniences→benefits> seen in various service design areas, including product service development, space business, SDGs, human resources strategy, Gen Z, and democracy. In the future, we will apply this knowledge to the design of “Fuben-eki” measures and to the introduction of VoC data analysis.

Keywords Benefit of inconvenience · Service design · Nudge

3.1 Introduction

“Fuben-eki” is a thought of excavating the value positively from inconvenience. According to Ph.D. Hiroshi Kawakami, who advocates the concept of “Fuben-eki,” this thought was originally proposed in the field of system design. Subsequently, R&D began in the field of product design, starting with “Prime number ruler.”

Considering that this could be applied to the field of service design, Hakuodo and Ph.D. Kawakami began joint research. I would like to summarize the research

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results that have been carried out for more than 2 years, the applications to each field, and the outlook for the future.

3.2 Approach from Corporate Marketing Measures Research

As a worker at Hakuhodo, I learned about Kawakami's advocated "Fuben-eki" when he introduced a book in 2018, entitled "The idea of Fuben-eki," (Kawakami, 2017) which he wrote.

At that time, I was in the Department of the Research and Development Bureau and was in charge of collecting and analyzing useful knowledge related to the advertising business. One of these was the case studies of corporate marketing measures, which had been conducted for many years, and my supervisor suggested that it would be possible to take advantage of the "Fuben-eki" to corporate marketing measures.

Originally, however, corporate measures are undertaken to provide "convenience benefits" such as usability and rationality to customers (or users). As I read his books (Kawakami, 2017; Kawakami et al., 2017), I wanted to make a plan measures based on this idea. Currently, the pursuit of "convenience benefits" is progressing further, as exemplified by the fact that most of all corporate marketing measures are completed with smartphone apps.

However, the more efficiencies and rationalizations are pursued regardless of industry, the more companies are faced with the problem of not being engaged in by consumers (i.e., being unable to attract consumers' attention, and being unable to be regarded as themselves). So, I thought that the customer approach of "Fuben-eki," which indicates the benefit of inconvenience, would also be effective.

That is why, having felt as if searching for sand from a sandy beach, we reviewed the measures taken by each company in various industries over the past 20 years to see if there had been any measures that could find such "Fuben-eki" in the past. And we found a few dozen of such measures that had involved it somehow. Next, we attempted to classify these inconvenient and benefit factors according to the "inconvenient card" and the "benefit card" described in Ph.D. Kawakami's book. In some cases, there were notable benefits such as "fun" and "grad" that were peculiar to the corporate marketing measures. These were also added as items of benefit, and we made a prototype matrix to deal with inconvenience and benefits and sent an e-mail. This led to the start of a relationship with Professor Kawakami, who was a teacher at Kyoto University at that time, and in April 2019, a joint research was officially started in the form of an industry–university collaboration between us (Hakuhodo) and Kyoto University.

Since then, for more than 2 years, we have been engaged in research to identify principles from various past corporate marketing measures cases, discuss them, and conduct structural analyses. First, we reviewed the "inconveniences" and

“benefits” that constitute “Fuben-eki.” In order to design a marketing strategy that incorporates Fuben-eki, the most important aspect is what kind of means (inconvenience) and how to motivate customers and users (benefit). To do so, as Ph.D. Kawakami noted in his book, it was necessary to scrutinize the objective–means relationship regarding inconvenience and to distinguish between objective and subjective (emotional) aspects regarding benefits. In the analysis, a sample of 20 Fuben-eki corporate marketing measures was analyzed into seven instrumental inconveniences and seven emotional benefits shown in Fig. 3.1 (Nosaka et al., 2019).

3.3 The Structural Analysis of the Fuben-eki in Service Design

Next, we clarified the structure of corporate marketing measures (Fuben-eki measures) that can provide Fuben-eki to customers, and clarified which of these processes results in the Fuben-eki (Nosaka et al., 2020; Kawakami et al., 2020).

Corporate marketing measures are basically implemented to promote the continued purchase and use of products and services and to increase loyalty by eliciting and enhancing the attractiveness of the company’s products and services. Naturally, there are inconveniences and benefits inherent in the products and services themselves, and there are also inconveniences arising from corporate marketing measures and their relationship. In doing so, we must also consider Influencing Factors such as the “COVID-19 crisis.” This is because this factor may cause inconvenience. In other words, when considering Fuben-eki in “corporate marketing measures,” it is necessary to consider factors such as “Products and Services” and “Influencing Factors.”

In addition, the concept of “Nudge” has been introduced to form a framework for expressing the structure of “Fuben-eki” in corporate marketing measures in a uniform manner.

The term “Nudge” has recently become widely known as a term used in behavioral economics, but it has long been known in the field of design as one of the tricks and tips and is described as a “method of promoting behavior without limiting options or providing special rewards.” (Lidwell et al., 2015).

In “Fuben-eki measures,” customers generally do not necessarily feel the benefit just because they feel inconvenient. On the contrary, some customers unconditionally avoid situations that are inconvenient. This is why drivers are included in the Fuben-eki measures to encourage customers to move from inconvenience to benefit, which is what makes it appropriate to call “Nudge.”

This “Nudge” has the following five principles (conditions) (Lidwell et al., 2015):



Fig. 3.1 Seven instrumental inconveniences and seven emotional benefits

1. **Convenient default (default)**

The first setting is to choose the most convenient and most desirable option, rather than the least harmful one.

2. **Clear feedback**

Provide visible and clear feedback on actions immediately.

3. **Remuneration (Nature of mankind) directly related to objectives**

Rewards lead directly to desirable actions and do not create situations that are in conflict with each other.

4. **Structuring of alternatives**

To facilitate decision-making by providing a means to clean up and simplify complex issues.

5. **Visualization of goals**

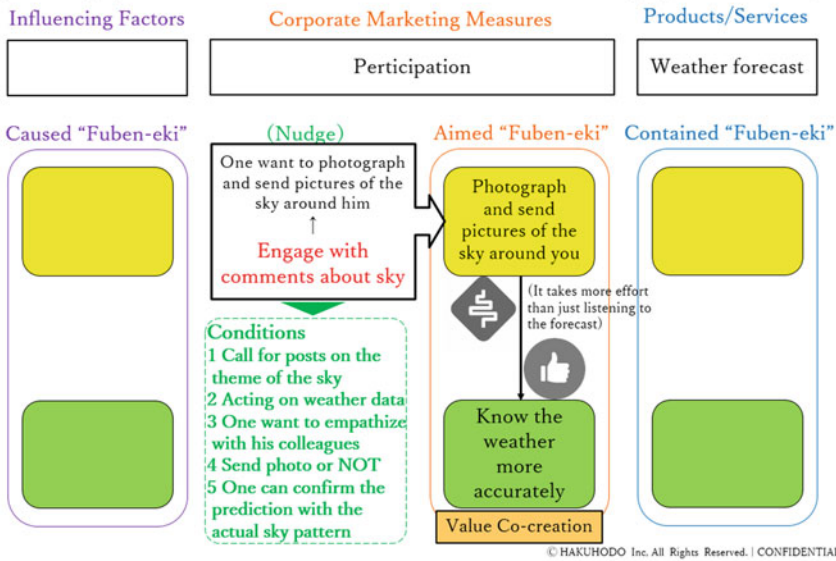
Create a mechanism for easily measuring performance and display it at a glance. Then people can then immediately assess their achievements against the goals.

The structure of the Fuben-eki can be illustrated by considering how the “Nudge” that satisfies these conditions is driving the “inconvenience” of the Fuben-eki measures.

For example, if a member takes a picture of the sky above him/her and sends it to his/her club, it gathers from all over his/her country, so the club gets an accurate picture of the weather, and the result is returned to the member. It takes much effort for members to take pictures of the sky at their locations and send them to the club. That is why detailed information on the whole country is collected, making it possible to obtain a more accurate picture of the weather (Nosaka et al., 2019). Not only is this in the public interest but the weather in the vicinity with members can be predicted more accurately. It is hard to get people to take pictures and send them to us, but if they want the Web community to be happy about the sky, they will be able to accept it in their favor. We classified the relationship between inconvenience and benefit as “value co-creation.” “Value-co-creation type” is based on the previous analysis of the type of Fuben-eki measures in which one cooperates with a company’s services so that one can enjoy the benefits better.

The present example is shown in Fig. 3.2. Seven instrumental inconveniences shown in Fig. 3.1 for influencing factors, corporate marketing measures, and products/services are shown in yellow slots (three middle-row boxes) and seven emotional benefits are shown in green slots (three bottom-row boxes), and the relationship is explained by the up-down arrows. The inconvenience of corporate marketing measures depends on the “Nudge” that supports it. The Fuben-eki of corporate marketing measures are classified into around 20 types, but one of them is “value-co-creation type.”

A service that allows members to take photographs of the sky around them, collect them, and provide highly accurate forecasts to each member who sends them a high-precision forecast.



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Fig. 3.2 The example of the type (Value Co-creation) of Fuben-eki measures

3.4 Application of Fuben-eki Analysis to Various Service Designs

We have thus proceeded with the analysis of Fuben-eki based on corporate measures, but these can be considered in the broader area of service design. The Fuben-eki can be applied in a variety of contexts described below. This chapter discusses it in various categories.

3.4.1 Product Service Development and Fuben-eki

The Fuben-eki includes not only corporate marketing measures but also the development of UI/UX embodied in products and services. This is another service design.

In fact, I have worked with a home appliance manufacturer, but many of the appliances that I have used so far have become more convenient, able to do everything automatically, and have added so much functionality that people cannot keep up with them that they have promoted commoditization or become unable to fully use them. As a result, price competition intensified, and the market was lost

to single-function products. This meant that executives with a sense of crisis were trying to find a way out of their inconvenience.

Although I will not go into detail, it was shared that the design of Fuben-eki, which elicits objective benefits such as creativity, discovery, and understanding of the target system was useful for the purpose of realizing the important value of fostering rich of human relationships through the use of home appliances and the rest of the fun of using home appliances.

3.4.2 *Space Business and Fuben-eki*

Space is a treasure trove of inconvenience. We are forced to live a tight life in outer space. The data obtained from satellites is from a panoramic perspective of the earth, but there are various limitations (SORABATAKE, 2021).

To convey the appeal of the universe, we often see it creating a theme park-like pleasure, but the universe is a place with many elements, such as adventure and exploration. This is where we want to actively apply Fuben-eki. In fact, the “constraint that cannot be used smoothly” brings many possibilities to people (Kawakami, 2021). Using the seven instrumental inconveniences and the seven emotional benefits shown in Fig. 3.1, the relationship between inconvenience and benefit in Fuben-eki is shown below.

Deterioration— > Be motivated

Focusing on “inconvenience” without the atmosphere (oxygen), water, and gravity, which are naturally present on the earth where there is enthusiasm to do so, we can reconsider outer space as a living device that can obtain ideas for life. By doing so, we may be able to think about new possibilities, such as lifestyle changes, from the outset, and we may be able to use them in various corporate measures.

Indeed, even within us, there are plans for demonstration experiments on whether we can apply Fuben-eki theory to outer space data and promote behavioral change in humans.

3.4.3 *SDGs and Fuben-eki*

The SDGs (Sustainable Development Goals) are sustainable development goals whose essence is often described as “three good” by Omi merchants, known as representative examples of management philosophy in Japan (Oki et al., 2018). In other words, this concept satisfies the environment, society, and economy and extends it spatially and temporally (Oki et al., 2018). This is what I call “pan-marketing,” because there is an expanded exchange of satisfaction, a market is formed, and a business is established.

Part of this can only be realized with inconvenience. It is a kind of “value-co-creating” corporate marketing measure that can only be achieved with the cooperation of customers, such as the introduction in Chap. 3, in which weather forecasts can be obtained with greater precision by having customers send a photo of sky. Not only do the benefits of this become the public interest, but it also gives members a more accurate indication of the surrounding weather, which makes them feel that their actions have been useful and that they have been able to gain a sense of self-affirmation that they have done secondary good things. In other words, they satisfy the environment (precise understanding of weather), society (public interest), and the economy (corporate and member benefits). In this way, value-co-creating corporate marketing measures are also effective in the context of the SDGs. The relationship between inconvenience and benefit in Fuben-eki shown in Sect. 3.4.2 is as follows.

Increase the number of operations— > Feel affirmative

Let me introduce another. A detergent manufacturer has implemented a policy of collecting and donating clean clothes to be sent to developing countries. At this time, the participants have to bring their donated clothes to the venue.

But they can make sure that the profitable clothes they donated become clean and neat by the manufacturer’s detergents. In other words, they are proud of their contributions to society without feeling guilty. Of course, the manufacturer’s awe and gratitude for the product will also be felt. This is a so-called “witnessed and realistic” corporate marketing measures, and the SDGs have been established. The relationship between inconvenience and benefit in Fuben-eki is as follows:

Increase the amount of operation— > Feel affirmative

3.4.4 *Human Resources Strategy and Fuben-eki*

The four quadrants shown in Fig. 3.3 are often used in conceiving Fuben-eki (Kawakami et al., 2017). In other words, they are classified into four groups based on the following categories: “convenience” or “inconvenience” and “benefit” or “harm.”

- **“Convenience Benefits”** - > **“Inconvenience Benefits”** i.e., **Fuben-eki**
(Uncover new benefits by making them inconvenient)
- **“Convenience Harms”** - > **“Inconvenience Benefits”** i.e., **Fuben-eki**
(Solves problems arising from convenience by making them inconvenient)

It is about thinking about the Fuben-eki in such ways.

I would like to add the time horizon to these. We can see that there are things that become inconvenient in the changing times, or things that are harmful.

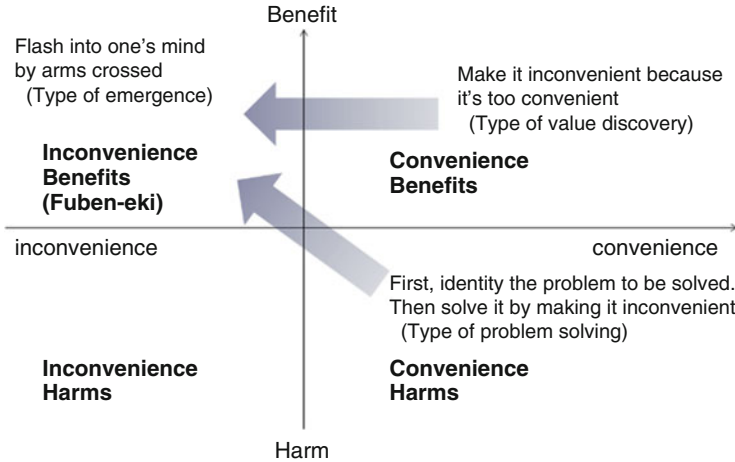


Fig. 3.3 The four quadrants often used in conceiving Fuben-eki (Kawakami et al., 2017)

For example, abacuses, which used to be a convenient tool for calculation, have been regarded as a time consuming and inconvenient tool since the advent and spread of calculators over time.

When plastic straws appeared at a time when only thatching straws and paper were available, they were really beneficial. However, when the environmental degradation caused by plastics was considered a problem over time, they were regarded as targets to be reduced. This is why it is important to keep the idea of “Fuben-eki” in mind.

The “Convenience Benefits” of abacus should be thought of as a Fuben-eki, not” Convenience Harms,” by seeing that it will eventually change to inconvenience, and finding its inherent utility (the ability to cultivate computational power and internalize its ability in the form of mental arithmetic). The relationship between inconvenience and benefit in Fuben-eki is as follows:

Increasing the number of operation— > Feel affirmative

Plastic straws can be solved by remembering tools that existed before they were targeted for reduction and restoring lost abundance (straw and paper eventually returned naturally) to a modern age with advanced science and technology. The relationship between inconvenience and benefit in Fuben-eki is as follows:

Degradation— > Make assure, Feel reliable

I think that HR strategy is the best way to take advantage of this concept. In the case of personnel education, it may not be the best simply to develop everyone into convenient and profitable human resources. This is because, as time goes by, it may turn into an inverse evaluation, as in the case of abacus or plastic straws. We have

a motto of “Uniqueness over uniformity.” This is because we can continue to be a flexible organization at any age.

People can be either convenient or inconvenient in the first place, but at the very least they can be developed in the direction of Fuben-eki. The former can be solved by identifying the problem to be solved and making it inconvenient. The latter may well encourage growth by looking at whether there is something good about it or whether it will be used in the future. It is also important to look ahead to the future and discover the essence of the benefit of those people who are more profitable. It may also be useful to transfer to an entirely different department and make it inconvenient to see how it contributes to it. This is the utility that has been hidden in the safe habitat that has never been polished, and that will expand the possibilities for its human resources, and lead to the continued generation of profits even as the times change.

3.4.5 Generation Z and Fuben-eki

The Fuben-eki is an antithesis of convenience and rationality, which does not seem to fit into the young people represented by generation Z (Gen Z).

However, there are some trends that are not in fact. For example, some apps can simulate analog cameras around the 1960s by manipulating smartphones like film cameras. However, not only can analog photos be taken, but the fact that they realistically reproduce the “feeling of using film cameras” is becoming popular among young people. There was a revival boom for film with lens a few years ago, but this generation seems to be more attracted to analog items on the contrary because it can do anything with a single smartphone. The relationship between inconvenience and benefit in Fuben-eki is as follows:

Degradation– > Be personalized

In addition, there is a social game for smartphones, in which cards featuring popular characters appear during play are popular. Instead of simply buying a ready-made card, they are making their own portable goods, and looking at them at the hard times at part-time job and other places. It is meaningful to make this card yourself. However, the inconvenience favored by some people may vary because they want to cut and create an existing picture (the kit should be assembled) or they want to make an original picture (in this case paper and brush should be provided). The relationship between inconvenience and benefit, in this case, is as follows:

Increase the number of operations– > Be personalized

Ph.D. Kawakami, who was mentioned earlier, also reported in a magazine that women like inconvenience more than men, and the younger more than the elder (Kawakami, 2021).

3.4.6 Democracy and Fuben-eki

Democracy takes much more time and effort than dictator decision-making. However, this is precisely why the checking function works, so the results chosen are more reliable and reliable.

Elections are at the heart of the process, but they are always cumbersome and require a vote at the polling station. Electronic voting seems to be less time-consuming, but in this case it is easy to vote according to mood. The current election system is indeed Fuben-eki.

It is an cumbersome process that reaffirms its importance each time. Instead of leaving it to others, we can say that it gives rise to the power of self-determination (Yamaguchi, 2021). It takes a lot of time and effort, but the results are more reliable because the control function also works. Above all, we can decide our own destiny—democracy is indeed “Fuben-eki.” The relationship between inconvenience and benefit in Fuben-eki is as follows:

Increasing the number of operations— > Make assure, Feel reliable

3.5 Further Outlook and Challenges

3.5.1 Design of Fuben-eki Measures

Chapter 3 introduces the structural analysis of Fuben-eki measures. This can be used to conceptualize and design new Fuben-eki measures. The idea is that it may not be difficult to develop methods using conventional materials. In this case, however, the inconvenience should also be considered. This can lead to reactions that are different from what is intended.

This design cannot be made overnight. Deep insights and analytical capabilities will be required. Chapter 4 looks at the Fuben-eki in a variety of contexts, but this is actually the case.

We believe that the first step will be to conduct experiments and observations to capture the Fuben-eki of service design in a wide range of areas and to optimize them.

3.5.2 Introduction to VOC Data Analysis

VOC (Voice of Customer) can also be viewed as a trove of Fuben-eki, not just a claim. Usually, such a voice is an attempt to solve the inconvenience with convenience benefit, but it takes considerable energy to do so. There are even things that do not work out. Therefore, we will also consider the solution by Fuben-eki.

If we can accumulate solutions by “Fuben-eki,” not only can we know how to do it, but we can also do machine learning so that we can respond appropriately. The benefits of large-scale VOC data analysis by AI will be incalculable. With this in mind, I would like to continue R&D in the future.

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