The Research of Sharing Economy with a Platform Demonstration

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Abstract. In recent years, the word "sustainable" become popular in both academic and industry area. Furthermore, thanks to well-developed Internet service and smart device, people can approach to information more easily. Hence, the Sharing economy, or platform economy, which has been proved being able to reach sustainability, is a growing market to every industry. The concept of sharing economy is simple; however it lack of practice sometimes, so this paper aims to review the pros and cons of sharing economy, and utilize a case study of a liqueur sharing platform with web demonstration to perform the practice. In chapter 1, we discuss what sharing economy and platform is and how they considered being able to reach sustainability. Chapter 2 illustrates the methodology and the framework of this study and the web construct concepts. The case study of a liqueur exchange/sharing platform website and demonstration are showed in chapter 3. Conclusions and potential research issues for future study are given in chapter 4.

Keywords. Sharing economy, Platform, Web, Sustainability

1. Introduction

Nowadays, industries are more and more interested in sustainable development under not only expectation from stakeholders but also from the government. And with the help of well-developed Internet service and smart devices which make people can approach to information more easily. For reasons explained above, the sharing economy, or platform economy become very popular ever since.

Sharing economy is proved to be sustainable for its function such as reselling, giving, swapping, short-term renting and lending (Damien Demailly, 2014). Additionally, it has great potential profits for industry, some success examples like Uber(market capitalization estimated to be 70 billion us dollars), AirBnB, Sharing Kitchen, Ubike, etc. Examples above are all well-explained why every industry is interested in sharing economy.

Then, take Uber as an example; there are two reasons why it can succeed. One is because it see the potential need of both customers and service provider. Second, Uber set up an easy-to-use platform on smartphones which makes it spread so fast and guarantee the safety of all stakeholders additionally.

This paper aims to discuss sharing economy, and how does it work in a practical

way. We will utilize a case study of a liqueur sharing platform with web demonstration to perform the practice.

Literature Review

1.1 Sustainability

The changes in the laws and regulations governing the environment, together with growing pressure and demands from stakeholders have resulted in companies developing greater environmental responsibility in recent years (Gordon, 2001). After years and years of discussion in research, the concept of sustainability is divided into three categories, also known as triple bottom line (John Elkington, 2009). Triple bottom line (*Figure 1.*), went beyond the traditional measures of profits, return on investment, and shareholder value to include environmental and social dimensions. Interest in triple bottom line accounting has been growing across for-profit, nonprofit and government sectors. Many businesses and nonprofit organizations have adopted the TBL sustainability framework to evaluate their performance, and a similar approach has gained currency with governments at the federal, state and local levels(Timothy F. Slaper, 2011).
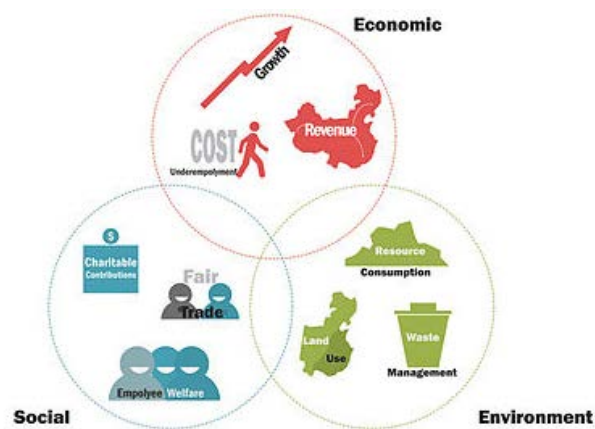

Figure 1. Model of triple bottom line *(John Elkington, 1994)*

1.2 Sharing Economy and Platform Economy

Sharing economy is an umbrella term with a range of meanings, often used to describe economic activity involving online transactions (Taeihagh, 2017). Originally growing out of the open-source community to refer to peer-to-peer based sharing of access to goods and services(Hamari, Juho, 2016), the term is now sometimes used in a broader sense to describe any sales transactions that are done via online market places, even ones that are business to business (B2B), rather than peer-to-peer.
Forbes (Geron, 2013) has estimated that "revenue flowing through the sharing economy directly into people's wallets will surpass $3.5 billion, with growth exceeding 25%, meaning sharing economy is also very profitable.

On the other hand, platform economy has many implications such as Amazon use it as shopping businesses while Facebook use it as social platform. And here, we talks about how a digit platform works to support achieving sharing economy like what Uber or AirBnB did. Airbnb and Uber use these newly available cloud tools to force deep changes in a variety of incumbent businesses and accelerate the development of sharing economy. Wiertz and de Ruyter (2007) propose that firms that own and operate such online platforms do not control the actual sharing at all. Instead, the development is led by social dynamics, such as enjoyment and self-marketing of a community (Lin and Lu, 2011; Wasko & Faraj, 2000). Therefore, sharing economy platforms act merely as economical-technological coordination providers.

1.3 Sharing Economy and Sustainability

The point of sharing economy is to focus on accessing rather than owning a product. As resources are being quickly depleted, a new economy has emerged to address this problem. When societies are able to come together and share tools and materials, it generates less waste, promotes smarter consumption, and builds stronger communities. The sharing economy is both environmentally friendly and economically sustainable (Nitin Dani, 2015). However, there're still some arguments about whether it will just waste more resource just to achieve sharing economy. For example: one seller mailed a second hand goods to buyer, it seems pretty sustainable on the surface, but how about the CO2 emission during the shipment, and maybe it cost more pollution than just dump it and get a new one. To that, is a very good question to talk about. Damien Demailly answered: "Shareable" goods account for about a quarter of household expenditure and a third of household waste. If sharing models could be operated under the most favorable conditions, savings of up to 7% in the household budget and 20% in terms of waste could be achieved.

1.4 Summary

After reviewing these paper mentioned above, we concluded several points. One, the sharing economy and platform economy are growing very fast simultaneously, even more, they sometimes are depending on each other. Second, the potential benefit of sharing economy is huge, if you could find a yet satisfied customers' need. Third, sharing economy is proved to be effective to attain sustainability if under the most favorable conditions.

2. Method

The aim of this paper is to establish a platform through website, which could become a tool for establishing a sharing business, and reach the final goal which is sustainability for economic, social, and environment. This platform, combined all the techniques I learned from class, has some basic functions such as main page with information, member subscribe, member log in. The key function of this website-based platform is this website has a message board function which allows member hold an event by themselves. People who ever visit this website can all see the message board which contains all the event information, but only members could use the "post" function.

So the process of how this platform works is very simple. Every person visiting this website can first go to message board browsing which event they want to join, decided by the information given on the message board, including event host's name, date, place, contents and a Line Band account. If one is interested in this particular event, then he can use the Line Band account given bellow to contact the host to get further information. On the other hand, if one is interested in hosting an event, he must register to be a member of our website so that he can use "post" function to leave a message on message board.

3. Case Study

In this chapter, I'll use a website I build to perform the idea of how to use a platform to realize sharing economy and achieve sustainability. The subject I pick is a liqueur sharing platform. We all know that, firstly, some fine whisky, wine or sorghum could be very expensive. Second, sometimes we don't want to just get drink but only to taste the special flavor of different. So for those reasons, sharing liqueurs is totally a good way to solve the problems.

3.1 *Main page*
This main page (Figure 2) present the overall concept of why we build this platform and how do we use it. Additionally, on main page there will update the newest liqueurs information for people to read.
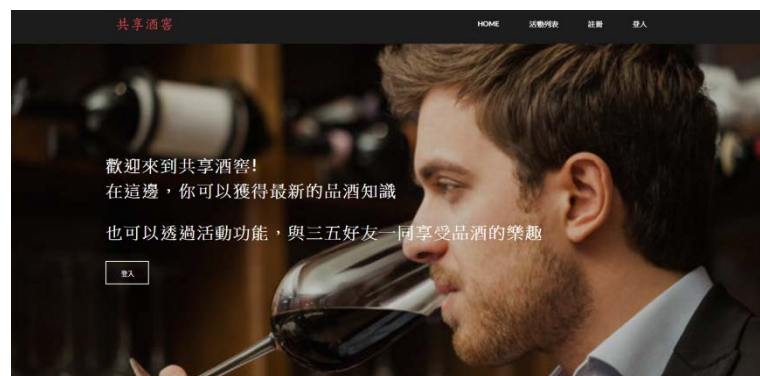

Figure 2. Main page

3.2 *Message board*
This page is the soul of the platform. It allows visitors to browse the information of liqueur sharing event, included host's name, when and where it holds, what's the criterion to join this event, and how to contact with the host (Figure 3). Why I choose Line Band to be the guest-host-communication tool is because it's a well-developed app which allows them communicates faster and more efficient than website. Additionally, it has more powerful functions like uploading pictures and videos, privacy guarantee, etc.

Figure 3. Event page

3.3 Registered page

If one wants to hold a liqueur sharing event by himself, one must register to be our member (Figure 4). The reason for this process is because we need to make sure the host of any event must be responsible for all this, so we required the name, email for we can contact to them first.
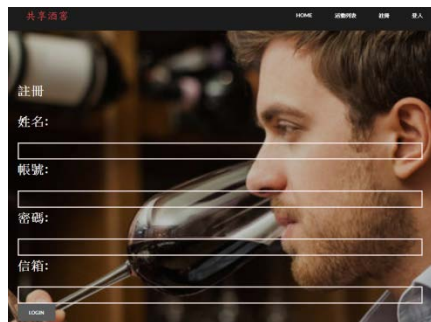

Figure 4. Register page

3.4 Log In page

After you become a member of this liqueur sharing platform, you can go to log in page to type in your username and password (Figure 5). Then, if you log in successfully, the website will automatically transfer to "post page", which allows you to hold an event by yourself.
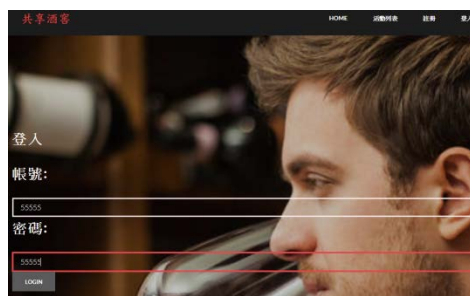

Figure 5. Log in page

3.5 Post Message

To hold a liqueur sharing event (Figure 6), there are some information needed to offer to every platform visitors, included your name, when and where does it hold, what's the criterion and demand to join this event, and how to contact with the host. After you finishing fill out all the information, hit the post button, then your message will automatically be print out on the message board for everyone to see.
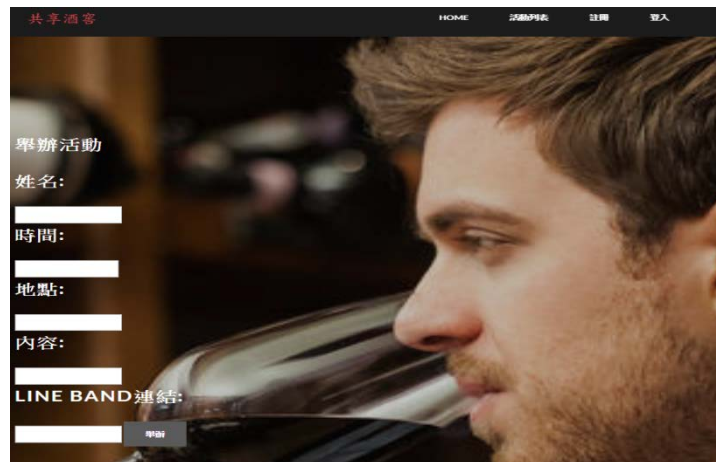

Figure 6. Post page

3.5 Database

To make those function works perfectly, we must build up a database to store all the information. We evaluate the functions that we need to build up two databases, one is for storing member information(Figure 7), and the other is for event information(Figure 8). We use phpMyAdmin as our database, and using MySQLi language to connect it to website. There so, our platform can work smoothly and be improved by programmer.

Figure 7. Member data

Figure 8. Event data

4. Conclusions and Potential Research Issues for Future Study

In the beginning of this paper, we emphasize the importance of sharing economy especially during these years, which because it can not only reduce resource waste but also has great potential profit for industries. Then we adopt a case study of liqueur sharing website to high light the relationship of how a platform could work as a economical-technological coordination providers for sharing economy. And by those concept performed in platform, we could say that to succeed is such sharing businesses, finding the potential need of customers is very important and so do the system design. If we can see through that and operate it under the most favorable conditions, then sustainability could be reach.

However, there are still some gaps and suggestions could be filled in future research. First, the website could be built under the Discuz! framework (a forum website) because it's easy to use but very powerful. Second, what's the CSFs a platform required to support sharing system is unknown and complicated.

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