Vending Machine Business as a Solution to Feminine Hygiene Products Necessary

A S Yunita*, I Pangaribuan2
1Departemen Sastra Jepang, Universitas Komputer Indonesia, Indonesia
2Departemen Sistem Informasi, Universitas Komputer Indonesia, Indonesia
Email: aryani.sapta@mahasiswa.unikom.ac.id

Abstract. The purpose of this research is to see benefits vending machine in supply necessary of society, especially in an emergency. The method used in this research submitted a questionnaire to 42 female respondents. The result of this research was besides being able to be used as an effort to make a big profit; vending machine business can be a solution to necessary of society with a high level of urgency. Because, a business that is supported by technology can accelerate the distribution of a product to consumers, so the necessary can be fulfilled quickly, easily and practically. Impact of this research is to show that the vending machine helps the customer to get a product easier. The businessman can see the vending machine as an alternative way to get profit. Conclusion of this research is good businessman not only has to be good at finding business opportunities with nice prospects but must be able to be a solution to the necessity of society, including urgent necessary.

1. Introduction
According to E. S. Soegoto that creativity and innovation that is manifested by involving many people can create business opportunities to produce products or services needed by consumers. Success or failure of a business is seen from the positive contribution of the business in improving the quality and standard of living of society [1]. A vending machine has a positive contribution to the business. According to Asmita P. Bodhale, vending machine, or in Japanese called Jidouhanbaiki, are a machine that sells a product to the consumer automatically without human resources assistance. The consumer makes a payment by entering a coin in the slot or using credit or debit card to buy a product [2]. Vending machines are widespread throughout the world as proof that this machine is an important human resource [3] With this machine, a product will reach consumer faster, because the customer only has to put the coin into the machine to get the product they need. A vending machine is one example of a creative economy that is supported by technology, which not only gives benefits to the businessman but also becomes a solution for the needs of society. Vending machine has been known since the 1880s. The first vending machine sells postcards in London and England [4]. In its development, Japan became a country that had a vending machine with a total of 5,030,000 units in 2014, or there was one automatic machine for every 23 Japanese residents [5].

As a country, famous for its technological development, Japan has succeeded in becoming an example in providing convenience and comfort for its society to fulfill their daily needs, including health and sanitary products. One of the health products sold is feminine hygiene products, sanitary napkins. Of course, this sanitary napkin vending machine is a profitable business for Japan, because 100% of women in the country use sanitary napkins when they have menstrual cycle [6].
This machine has been known and used in Indonesia. Like Dian Indrawati's research about Mandiri Ticket Kiosk Innovation or KTM, the sale of train tickets using vending machines. With this innovation, the ticket purchase transaction process can be effective because passengers serve themselves in buying train tickets [7]. However, the amount is still very small, and the procurement has not been maximized. Although there is a place that already used it, such as stations that provide vending machines for tickets, this machine is not too popular.

Aside from being a business tool, vending machines also become effective health effort. Previous research conducted by Vishnupriya also shows that vending machines that offer medicinal products are very important to reach people who are below the poverty line or in remote areas [8]. This, of course, also applies to feminine health products. This sale of sanitary napkins with automatic machine systems has also been implemented in India. A woman can get three sanitary napkins by inserting 10 Rupees coins into a vending machine [9]. This was done to raise awareness of Indian women about the importance of reproductive health, especially during menstruation. Because menstruation has always been an important health topic, although it has not been prioritized by WHO [10].

The purpose of this research is to find out the benefits of a business that is supported by technology. The research method used is the observation method.

2. Method
This research used an observation method. Marshall and Rosmann (1989) said that observation as "the systematic description of events, behaviors, and artifacts in the social setting chosen for study" [11]. Erlandson, Harris, Skipper, and Allen in Doing naturalistic inquiry: a guide to methods said Observations enable the researcher to describe existing situations using the five senses, providing a "written photograph" of the situation under study [12]. Check and Schutt said Survey research is defined as "the collection of information from a sample of individuals through their responses to questions." [13] The author submitted a survey by asking four questions for 42 female respondents regarding the society's need for feminine hygiene product vending machine.

3. Results and Discussion
In Indonesia, as many as 88% of women use sanitary napkins during their menstrual cycle [5]. Although it does not reach perfect numbers like Japan, this figure has shown that the level of sanitary napkins needs of Indonesian women will be very high. Also, many women enter the menstrual cycle suddenly while outside the home. The author conducted a study of 42 female respondents aged 17-30 years as shown in Figure 1.

![Figure 1. Age](image-url)
The results in Figure 2 mention that 95.2% of women had entered menstrual periods suddenly while in a public place.

**Figure 2. First Question**

More than 95% of them felt troubled because they did not prepare or carry sanitary napkins during a menstrual cycle in a public place.

**Figure 3. Second Question**

From these facts, a businessman can take the opportunity to run a vending machine business that sells feminine hygienic products. An example is providing sanitary vending machines in women's toilets in various public facilities. This business can be a promising business area. Not only is it financially profitable, but the presence of this machine can also be a solution for women who need sanitary products as soon as possible.

Figure 4 shows that around 80% of respondents choose to look for shops, minimarkets, or supermarkets to get the sanitary products they need. Given this fact, the availability of sanitary vending machines is certainly very much needed, so women do not have to bother going out of the toilet and...
looking for shops or go shopping at the minimarket and queue just to get one item needed in certain situations.

Figure 4. Third Question

Figure 5 shows that all women who were respondents agreed that they felt helped if public places (public facilities) provided vending machines that sold health products such as sanitary napkins in women's toilets.

Figure 5. Fourth Question

In order for sanitary vending machines Figure 6 to be a business tool that creates good prospects, entrepreneurs must be good at determining the placement of vending machines. Women's toilets in public places, such as campuses, airports, shopping centers, cinemas, schools, gas stations, hospitals, and tourist attractions, can be a strategic place to place these sanitary vending machines.
5

Figure 6. Sanitary Napkins Vending Machine.
The figure was adopted from www.saranapkinincinerator.com

The use of vending machines will be easier to implement on campus, which has a versatile student ID card system. Students can easily get a sanitary napkin just by tapping their identity card. Payment with an electronic money system that has begun can also be used to manage this business. In other public places, payments can be made using e-money or coins.

The more women who visit a place, the level of need for this machine can also increase. This business is also expected to be long-lived and sustainable because sanitary napkins are items needed by almost every woman in the world.

4. Conclusion
Based on the results of the research, it can be concluded that there are big opportunities for the businessman to sell sanitary napkin using the vending machine at public places. Moreover, a good businessman not only has to be good at finding business opportunities with nice prospects but must be able to be a solution to the necessity of society, including urgent necessary.

Acknowledgment
The author works thanks to supervisors and the parties who have helped with these issues, something that can be done well.

References
[1] Soegoto, Eddy Soeryanto, Dr. Ir.. 2014. Entrepreneurship : Menjadi Pemisnis Ulung. Jakarta: Elex Media Computindo.
[2] Bodhale, A. P., and Kulkarni, J. S. 201. Case Study on Different Vending Machines. International Research Journal of Engineering and Technology (IRJET). pp. 3531-3535.
[3] Cardaci, R., Burgassi, S., Golinelli, D., Nante, N., Battaglia, M. A., Bezzini, D., and Messina, G. 2016. Automatic Vending-Machines Contamination: A Pilot Study. Global Journal of Health Science, 9(2), pp. 63.
[4] Das, N., Mandal, R., Mitra, A., Maiti, B., Nandy, S., and Datta, D. 2018. FPGA Based Vending Machine.
[5] NUNOKAWA, H., and SATO, K. 2016. The Analysis of the Works of Route Man in Beverage Vending Machine Business. Transactions of Japan Society of Kansei Engineering, 15(4), pp.471-478.
[6] Sachdeva, S. 2016. Biomedical waste and solid waste management draft rules India, 2015: a comment.
[7] Indrawati, D. 2014. Inovasi Penjualan Tiket Kereta Api Sebagai Upaya Untuk Meningkatkan Kenyamanan Calon Penumpang Dan Efisiensi Pengelolaan Penjualan Tiket Di 4 Stasiun Di Kota Surabaya. Sumber, 449(7), pp.89-155.

[8] Vishnupriya, K., and Mamatha, N. P. 2018. Health Automatic Medicine Vending Machine.

[9] Hossain, S., and Sen, V. 2018. Factors Influencing Hygienic Practices During Menses Among Girls From Jaipur, Rajasthan. International Journal Of Scientific Research, 6(11).

[10] Fan, F. and Jeong J. 2018. Stigmatization of Menstruation. World Health Organization

[11] Marshall, Catherine and Rossman, Gretchen B. (1989). Designing qualitative research. Newbury Park, CA: Sage.

[12] Erlandson, David A.; Harris, Edward L.; Skipper, Barbara L. and Allen, Steve D. 1993. Doing naturalistic inquiry: a guide to methods. Newbury Park, CA: Sage.

[13] Check J., Schutt R. K. Survey research. In: J. Check, R. K. Schutt. 2012. editors. Research methods in education. Thousand Oaks, CA:: Sage Publications; pp. 159–185