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Description	

Risk Factors of the Long Tail in Mobile Manga Sales

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Abstract--After the Long Tail was proposed by Chris Anderson in 2004, people started believing his theory that internet services, such as Amazon.com, can achieve great success in retailing. Internet stores can sell enormous numbers of books, comics, CDs, and DVDs and make great profits through the reduction in distribution costs that is achieved through this medium. Despite the fact that mobile internet retail is on equal terms with retail through PCs, the properties and modes of usage of a mobile phone, which strongly influence the purchasing aspect, have not been considered as the Long Tail of mobile retail. In this paper, therefore, we have discussed whether the Long Tail of mobile internet retail is profitable, especially in connection with mobile manga sales. Three series of researches were conducted in this study: a Pareto analysis for mobile manga sales, two focus group and individual interviews on how to use and purchase mobile manga, and a field experiment to determine the influence of distributors' recommender systems. The results we found were that when users searched for novel titles, they did not devote sufficient time toward retrieving the same and mostly depended on best seller rankings. We thus concluded that the Long Tail of mobile manga sales has few prospects of profitability.

I. INTRODUCTION

The term "The Long Tail" has fascinated people since it was proposed by Andersen in 2004 [1]. Many people believe the theory that this term is associated with—that internet retailers succeed in their businesses because in comparison with exclusively real-world retailers, they have the great benefit of cutting down on distribution costs. Several researches have also supported this idea. For example, Brynjolfsson, Hu, and Smith have indicated that online retailers of books, music, movies, consumer electrons, and computer software and hardware can enhance the welfare of their customers because of the Long Tail [2] [3]. On the other hand, Elberse [4] has questioned the profitability of the Long Tail by citing the sales data of Rhapsody and Quickflix as examples. Her opinion stands squarely against Anderson's theory, and their conflict is ongoing.

Conventional researches have focused on Internet access through PCs. However, it is a well-known fact that many people use their mobile phones to access the Internet in Japan [5] and use several mobile Internet services for downloading novels, news, ringer melodies and songs, horoscopes, and so on. The mobile Internet is apparently also widely used for downloading manga. According to the mobile contents forum of Japan, the total sales figure of digital books (including mobile manga) in 2007 was 22.1 billion yen, marking a 320 percent growth for that year [6]. Despite the fact that the importance of this mobile retailing is on equal terms with the

retailing done through PCs, the Long Tail of mobile retail has never been considered. Mobile retailing meets the requirements for the Long Tail: Huge amount of products—which not only include best sellers but also niche titles—can be stored, reducing distributing costs and eliminating the holding costs of actual products. This article, therefore, discusses whether the Long Tail is profitable in mobile internet retail, especially with respect to mobile manga sales. Needless to say, Japan is a manga stronghold. It would thus be meaningful to discuss this issue.

Three series of researches were conducted in this study to clarify the risk factors involved in mobile manga retail: a Pareto analysis for mobile manga sales (Research 1), two focus group and individual interviews on how to use and purchase mobile manga (Research 2), and a field experiment to determine the influence of distributors' recommender systems (Research 3).

Section 2 describes the results of the Pareto analysis and poses research questions for further empirical researches. In Section 3 we present a series of interviews on situations relating to the reading of mobile manga. We show a field experiment on niche comic recommendation in Section 4. Section 5 discusses the risk factors of mobile manga retail and Section 6 concludes the paper.

II. PARETO ANALYSIS

A. Result

To realize the Long Tail phenomenon in mobile manga sales, the tail which consist of niche titles have to contribute to total sales. Proportion of the tail in total sales is known as approximate twenty percent on general retailing. If the phenomenon is brewing in this service, the proportion exceeds twenty percent.

A Pareto analysis was carried out on a month's real world sales data provided by Bitway Co., Ltd.—one of the mobile manga sales companies in Japan—to analyze the pattern of mobile manga sales and determine the manga titles that were purchased during that month.

The Pareto chart (Fig. 1) revealed that the top twelve percent of titles dominated 80 percent of the earnings. One of the requirements of the Long Tail is known as the 20/80 rule. For a beneficial Long Tail in mobile manga sales, the sales proportion of niche titles has to be much less than eighty percent. The tail, however, was long whereas it did not be less contribution in sales proportion. Consequently, this was a point that merited consideration while studying in mobile manga sales.

B. Research questions for empirical studies

In spite of the fact that mobile manga can be considered a typical example of the digital economy as well as other internet services, the fact that the Long Tail theory does not hold for mobile manga sales is very interesting.

To discuss the risk factors of this phenomenon, we investigated two empirical studies that focused on two sets of research questions:

When did the readers start to read manga through their mobiles?

1. How did the readers find the manga that they desired?

There are two essential factors for the Long Tail to prove beneficial in the case of mobile manga: sufficient time for unearthing and reading the comic books, and readers' active willingness to search for a niche title. Information regarding these manga (e.g., contents, genre, author(s), publisher, and title per se) is not common knowledge for readers in the first place. Moreover, readers do not have the solid intention of finding the target(s) in the initial phase of retrieving them. To dig out niche titles from among numerous manga, readers need enough time to look for their uncertain target(s) through a trial and error process. Furthermore, an aggressive attitude is required to accomplish their goal because their target(s) are not easy to unearth. Readers have to conduct several Internet searches toward fulfilling their demand.

We carried out focus group and individual interviews to uncover the research questions. Moreover, we also conducted a field experiment that involved recommending niche titles to readers and not leaving them to depend on best seller rankings.

III. RESEARCH ON THE READING SITUATIONS OF MOBILE MANGA

Focus groups and individual interviews were conducted in order to clarify ordinary situations of mobile manga reading. To understand the real manga reader market, we have to determine the period when the readers of manga start reading these comics, the kinds of manga that are selected, and the factors that differentiate print from mobile manga.

The real readers of mobile manga were selected on the basis of five factors that were determined in the preliminary survey that was part of this research. These were the following:

a. the participants reading the mobile manga for over three months;
b. the participants using other paid mobile services such as novels, news, ringer melodies and songs, horoscopes and so on;
c. the participants having no insider information regarding the mobile service firms;
d. the participants who did not know each other until this interview started; and
e. the participants living within the Tokyo metropolitan area.

We interviewed the focus groups for two hours. These two groups comprised six informants. During the initial phases of these interviews, we informed the interviewees about their rights and received their informed consent. Both the series of interviews employed a semi-structured style and the interviewees answered the following questions:

- When do you read mobile manga?
- Where do you most frequently read mobile manga?
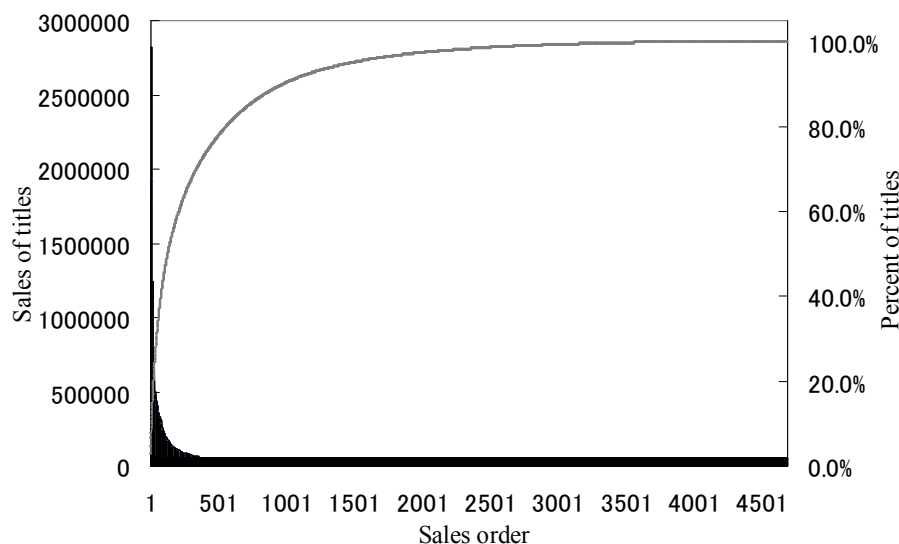- How would you describe the experience of reading manga through your mobile?

Fig. 1. The result of the Pareto analysis

Six participants were selected from among these focus groups and interviewed in depth on the above particulars relating to their reading of manga.

Although the participants gave plentiful and meaningful feedback regarding mobile and print manga, our analysis was focused on the particulars related to the reading of manga. We made transcripts of the recording and inferred the situation related to the reading of mobile manga on the basis of these transcripts.

Table 1 shows the results of the abovementioned interviews. These series of interviews revealed that mobile manga were read when brief periods of free time were available to the interviewees. The interviewees took advantage of the time spent in commuting to work/school or traveling elsewhere for reading mobile manga because they usually took the train to their destinations. They also read mobile manga during the short chunks of free time that were available to them; for example, one housewife mentioned that she sometimes watched mobile manga films while waiting for her laundry to be done. Apart from this woman, one businessman and one undergraduate told us that they often browsed mobile manga while simultaneously watching TV. While some of the participants indicated that they devoted large blocks of time to the reading of mobile manga, such as long commutes or while attending lectures at their university, these cases formed a minority.

In addition to the above, we investigated the method through which the readers searched for the titles that they were not aware of. Their answers are summarized below:
- By referring to the best-seller list
- By referring to the topics featured on the mobile site that the firm provided

Feature topics are included on the firm's mobile site on the commencement of a TV drama, animation, or movie originating from the manga. The participants said that they started to browse comics on coming across titles they found attractive and did not mention anything about employing aggressive tactics toward retrieving them. This result implies that a best seller gains additional sales acceleration and niche titles cannot sell well.

TABLE 1. SITUATIONS DURING WHICH MOBILE MANGA WERE READ.

Situation	Cases
Commuting	a1. On the train when commuting to work/school
Brief intervals of free time at home	b1. Before sleeping
	b2. During CM broadcasts
	b3. While their child was sleeping
	b4. During breaks in housework
Brief interval time for waiting	c1. When waiting for the train at the station
	c2. While waiting outdoors for their friends
Other	d1. During lectures

For achieving the long tail, it is important for readers to devote enough time to search for their demand, especially in the case of niche titles. However, we found that readers did not dedicate sufficient time to seeking out titles or subscribing to mobile manga. Both the short time spent in reading and the readers' passive attitude toward searching for mobile manga are risk factors associated with the Long Tail of mobile manga.

Furthermore, the readers felt that the retrieval system for mobile manga was not user friendly. Despite the fact that the richness of the function was equivalent to that of their personal computers, the readers said that they were not likely to use the retrieval function because of the smallness of its display size. We figured that this was an additional risk factor for mobile manga sales.

However, having to read the manga through a small display did not influence the readers' purchasing behavior. They indicated that the negative impact of the small display size was restricted to the time before they subscribed to the mobile service. One of the typical answers of the readers was "I had already assumed that the display size would be small, so I did not really care about this aspect while reading mobile manga."

IV. RESEARCH ON NICHE TITLE RECOMMENDATIONS

What readers consider "helpful information" needs to be revealed to clarify the reason for their purchases. We examined a field research conducted on the mobile manga retailing system of Bitway, which used a corroboration filtering system.

We formed the following hypothesis on the basis of the previous study:

H1. Readers only buy recommended titles from providers.

The procedure of the field research was as follows:
1. Collecting ordinary sales data for a month
2. Deciding the new threshold for this research conducted with respect to recommending manga titles
3. Starting to recommend on the basis of the new threshold and collected data for a month.

The threshold for this research was set to one hundred of the total number of sales. The group of titles falling below this threshold was 2.7 percent of the total number of downloads. In other words, the titles were niche. The other functions of the ordinary system and experimental system were identical.

Figure 2 shows the result of the ordinary sales and Figure 3 illustrates the result of the new threshold. Figure 2 indicates that the best sellers were concentrated in a small number of titles and a huge number of titles were niche titles; it had no signs of searching for niche titles by users. There is a high possibility that users purchased manga in order of recommendation from the provider as the informants in our interview mentioned. On the other hand, Figure 3 showed that distinctive pattern appeared around the threshold; numbers of sales rapidly raised only near the threshold.

Although the titles were not famous and trendy for users, many users bought recommended titles. As with the result of ordinary month, we concluded that one of the important factors for purchasing was to be recommended items for users, that is to say, what is the most significant to buy manga was whether titles could be displayed on their mobile screen.
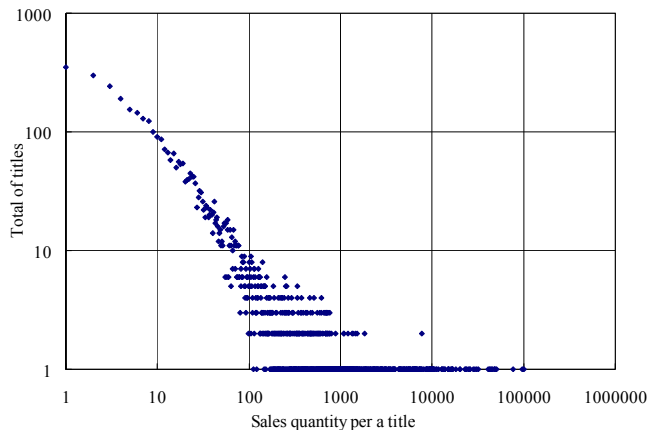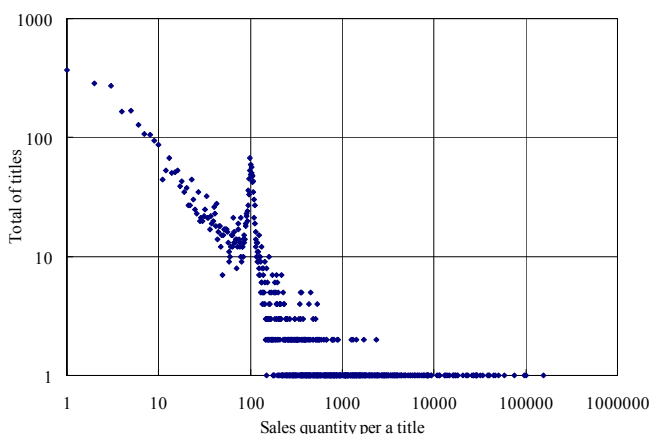

Fig. 2. Sales pattern of an ordinary month.

Fig. 3. Sales pattern of an ordinary month.

The results revealed that the recommended niche titles of the experimental system were widely purchased. The rest of the sales patterns were not very different from each other. These findings validated our hypothesis and bore out what the interviewees in our research had mentioned.

V. DISCUSSIONS

The result of Research 1 indicates that the Long tail does not benefit mobile manga sales. The results of Researches 2 and 3 reveal the actual readers' attitudes toward the reading of mobile manga. The series of researches uncovered the fact that the operating and reading time periods of mobile manga were too short for retrieving the items that the readers demanded, although whether or not they devoted sufficient time toward searching for the same was an equally important factor. Readers used their mobiles for reading manga during very short intervals in their work and during the short periods of free time that were available to them. These intervals usually spanned a few minutes. This fact becomes one of the high risk factors for mobile manga sales because readers are ideally expected to devote an extensive amount of time for finding the items that they want; their demands are often ambiguous and are deeply buried in an enormous pile of titles.

The readers' passive attitude causes the risk associated with the Long Tail of mobile manga sales. They usually use the best seller ranking or special features supplied by a service provider when they start to search for their ambiguous targets. According to the result of Research 3, we found that readers purchased the recommended titles regardless of topicality or publicity. In general, a service provider lists best sellers or includes special features like recommended items. Consequently, the earnings from these kinds of titles increase. In contrast, niche titles cannot contribute to the tail.

To avoid those problems, service providers have to address their order of recommendation. It is essential to consciously display niche titles. The result of Research 3 indicated that readers purchased niche titles if the titles appeared on their mobiles' display.

There is no denying the fact that the recommendation system affected the users' buying behavior. In the results of their marketing researches on the recommendation system, several researchers revealed the influence of the recommendation systems on the users. Felder and Hosanagar suggest that a recommender system with a simple collaborative filter would help in decreasing the average online sales diversity [7]. Senecal and Nantal examine an online experiment that is conducted to clarify the influence of recommendations on customer choice. Their results indicate that a recommender system is more influential than the conventional recommendation sources, such as other customers [8]. Cooke et al. conduct two studies in terms of the influence of familiarity, context, and item-specific information in electronic agent recommendations and find that users' evaluations depend on the inclusion of attractive items in the list of recommendations [9]. Although we did not consider the influence of recommendation system in our own research, future research on this factor would prove to be very significant.

VI. CONCLUSION

While mobile retailing has progressively been gaining significance over the years, there has been little research related to the Long Tail of mobile retail. We focus on this problem, concentrating especially on the risk factors related to mobile manga sales.

A Pareto analysis of a month's mobile manga sales, focus group and individual interviews as follow-up research, and a

field study of niche title recommendation (a recommendation system usually lists best seller items) were adopted to uncover the risk factors.

We isolated two risk factors from the series of researches we conducted: insufficient time to retrieve the items that readers want, and the readers' passive attitude in the phase of searching for these items. Whenever readers cannot secure enough time to search, it is difficult to find little known niche titles. Moreover, the targets of the readers are sometimes unclear and the total number of manga titles available is uncountable. The fact that readers do not take advantage of the retrieval function means that readers cannot see niche titles. They often exclusively choose well-known or repetitively purchased titles. These risk factors are likely to negatively affect the Long Tail of the mobile manga sales.

Obviously, we were unable to find a prefect conclusion to this study and do not deny that niche titles play a meaningful role in the Long Tail. We have merely show-cased the real situation of the Japanese mobile manga market through this study. The tail may prove to be profitable only if the number of readers and titles increases from what it presently is. Since research on this topic is relatively new, a concrete method of achieving the above objective is yet to be arrived at. To improve our study, we have to collect the data of sales of mobile manga sales and conduct follow-up investigation of the long tail. Both to conduct additional interviews for users and to carry out a questionnaire survey to clarify users' characteristics are important. We also have to discuss by the results what the risk factors are and what the most critical factor is.

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