**SI 686/786. Final Report**

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* **Introduction**

Dianping.com is a Chinese website whose main purpose is to provide guidance for people to make consumption decisions. By the end of the second quarter of 2011, Dianping had more than 42 million active users with approximately 20 million customer reviews. It has covered 30 major cities in China including Beijing, Shanghai, Guangzhou, Shenzhen and so forth. It is an online community providing its members information from multiple aspects. The functionality of Dianping is supported by the voluntary users who would like to share their experience and review the items. It is an exact example of pure public goods.

Dinpian.com first started in Shanghai in April, 2003, focusing on restaurants reviews and then expanding from two dimensions. One is the coverage of geographical areas and the other is the business scope. From the year 2003 and 2005, Dianping expanded from Shanghai to other 22 cities. From the year 2006, it started to expand both from the geographical coverage to more cities and from the business scope to other domains apart from reviewing restaurants. There are currently eight categories on the homepage of Dianping. In each category, the reviewers have to provide ratings from three dimensions in addition to an overall rating in a 5-star scale and a comment with at least 50 characters and at most 2000 characters. There are also some optional evaluations, such as the parking information, average spending, recommendations, waiting time and so forth.

* **Incentives to Contribute**

Dianping.com is a typical example of pure public goods. Everyone could look at the reviews generated by others for free and without any limits. The relevant sets of players of this game are all the users. The cost of the users is the time and effort spent on reviewing. The benefit contains two parts: the individual interest and the shared benefit from common contribution. It is a rational strategy for every user to free ride. But there are also some people who would like to contribute reviews regardless of this disappointing fact. Knowing what motivates them to contribute could benefit the site in the long run because of its high dependency on the users’ voluntary contribution. Apart from the reviewing section, Dianping.com has two other sections which they call public community and personal community. They are essentially two forums for the user to discuss whatever they are interested in. The public community is controlled by the site while the personal community is managed by the users themselves. However, these two communities deviate from Dianping’s main purpose; instead, they are more likely to be a social media. Therefore, I did not analyze this part in my report. There is a topic in the forum asking people why they contribute reviews. I went through all the 121 posts on the message board. Most of the messages are off-topic and meaningless. However, some users did provide their incentives to review the items and the incentives fell into the following five categories:

* **For Fun and Making Friends**

Several users mentioned that they write reviews simply for fun. They considered it an interesting thing to do to kill time. Making friends is another incentive reported by users to review items. However, given the fact that the main part of Dianping is quite topic-centered and does not involve user interaction, it is not an appropriate place to make friends. My postulation is that the users were referring to the function of forums, where the user could discuss whatever they like.

* **Benefits-driven**

A noticeable proportion of users explicitly expressed that they are motived by the gifts provided by Dianping. Users could get gifts from several different approaches. One main approach is to redeem gifts in the online gift store with D tokens. D token is essentially the “money” gained from contributing to the site. Usually, it is rewarded to the user as well as the user points. There are also some contribution competitions that will compensate the users’ efforts with gifts. For instance, every month Dianping will announce the 50 most salient contributors in several major cities to reward them with gifts. There are more ways to get gifts. Apart from the motivation of winning gifts, some users whose contribution is below a certain level are incentivized by reducing inconvenience, because they are required to type in a Captcha every time before they submit a review. Therefore, some users mentioned that they review the items in order to avoid that inconvenience. Also, some of the privileges are only possessed by high membership levels, such as some services of the website, priorities in some events and so forth.

* **Altruism**

Some users mentioned that they would like to share their consumption experience to help others make decisions. If they had unpleasant experiences, they would like to write bad reviews to complain and to help others avoid making the same wrong decisions. Likewise, they wrote good reviews to appreciate the item and to share this wonderful experience with others. There are also some users who would like to provide more detailed information and specific recommendations for others to refer to.

* **Reciprocity**

Dianping provides a lot of information on free deals and coupons. Some users review the items because Dianping has benefited them. Also, if the user really appreciates the service of a certain item, they would like to give good ratings and positive comments in return.

* **Social reward**

Some users said that they write comments because they want to upgrade their membership level in the reputation system so that their recommendations could be more valued by others. This is because Dianping will use a star scale to visualize the contribution of the users so that others could refer to them when they are making decisions.

* **Evaluation of Contribution**

Dianping has a point system to evaluate the contribution of the users. And also they have a corresponding star system to visualize the membership levels of the users. For instance, for a user whose total points are below 50, they have no stars; users whose total points are between 50 and 99 would have one star to visualize their membership level. The visualization of membership levels is a way to help other users differentiate between good reviewers and less experienced reviewers so that they could choose whose reviews to believe. Actually, this is not a very reasonable method to determine the reference value of the reviews because the contribution point is a measurement of quantity contribution instead of quality distribution.

There are several ways to gain the user point. First, users could gain points by reviewing the items. Users could gain 2 to 6 points depending on how specific the reviews are and if the review happens to be the first review of that item, the user could get 2 extra points. Second, users could gain 2 points by uploading pictures of the item and likewise, if the picture is the first picture of the item, the user could get 2 extra points. Third, users could also gain 0 to 5 points by adding an item and the points gained are determined by how specific and valuable the item is. And also, the points could be gained through editing items others have added. Fourth, 0 to 5 points could be gained from creating lists of items depending on the popularity of the list. For instance, a user has created a list of top 10 snacks of Beijing. Sixth, the users could get 1 point if their reported mistakes of others are accepted.

* **Strengthens**

Dianping has become the largest website in China for people to share consumption experiences and to seek recommendations. Generally, it works pretty well due to the large user base and its strong functionality. The 42 million active users ensure Dianping gets sufficient reviews so that it can attract more users to join the site and make contributions. This virtuous cycle plays a crucial role in Dianping’s success. In addition, Dianping successfully maintains the identity-based feature by an explicit mission statement and a series of communication rules.

In addition, the structured reflection and the anonymity ensure that users would not post messages deviating from the topic. For instance, if a user wants review a restaurant, he/she is required to first give an overall rating on a five-star scale and then rate the restaurant from three dimensions which are taste, environment and service on a 0 - 4 scale. Apart from the rating, the user also needs to type in a free-text comment with 50 words at least and 2000 words at most. Besides, there are also some optional fields for the users but they are also pretty structured, such as the average cost, time, favorites, waiting time, parking information and so forth. Other kinds of items share almost the format but have some slight differences because of their innate features. All these factors mentioned above enable Dianping to better serve its users’ purpose of seeking consumption recommendations.

Dianping has a very impressive feature that allows users to sort the customer reviews by different criteria. There are four options to sort the reviews which are time (newest first), time (oldest first), membership level (number stars decided by the point system) and number of flowers (one could appreciate others’ review by clicking the button “send a flower”). This design provides the users a convenient way to select valuable information. Simply listing the reviews in a chronological order, which is now being adopted by most websites, would considerably reduce the reference value of the reviews because no one would like to spend a lot of time and effort exhausting all the comments and discover meaningful and informative ones. With this function of sorting reviews by different criteria, especially the criteria of membership level and number of flowers, the information seeking process would be very efficient.

* **Weaknesses**

Although it is to some extent a successful online community, there is still some room for improvements.

Firstly, Dianping does not have an effective strategy to reduce free-riding. Every registered user is able to view others’ reviews without any limitations and expenditures. Dianping is very tolerant to free riders because it never penalizes them. There are no rules specifying the penalty towards free riders.

Secondly, as mentioned by Feldman et al (2006), the reputation system acts as an efficient role to identify free riders. However, Dianping’s reputation system seems not to function as well as it should. The reputation system does not serve the original purposes of the site owner. Dianping’s intention to have a reputation system is to help users make consumption decisions because they could choose who to believe based on the reputation of the information provider. However, the reputation system is heavily dependent on quantity contribution instead of quality contribution, which has, to a large extent, decreased its own reference value. Although different points would be given to the user depending on the content of the review, it is hard for the website to know how good a review is and give different points accordingly.

Another issue is that although Dianping came up with a fairly insightful design that allows users to sort the reviews in their preferred ways, the functionality is limited due to the flaws of the reputation system. As mentioned above, the reputation system evaluates quantity contribution more than quality contribution. Therefore, the value of “sort by membership level” is undermined. Although “sort by numbers of flowers” is very informative to discover valuable reviews in a short period, fewer people would bother to click the button after viewing the comments and of course, because they have no incentive to do so.

Moreover, Dianping is not doing well with less popular items. Because some items are geographically not convenient to most users, such items are left with no reviews and even no basic description.

* **Ways to Improve**

I would like to improve three aspects if I were to design a similar online community.

Firstly, I would like to differentiate the users with different contribution levels and users at different levels with different privileges. Put differently, not everyone is free to look at the reviews made by others unless they have contributed to the community. What Dianping is doing now is to exclude users of low contribution from some additional services provided but not the basic service, for instance, viewing others’ reviews. To realize the goal of deterring free riders, excluding them from some core services is essential. For instance, users of different contribution levels could only view limited numbers of items. But the standard must be well designed so that this would not crowd out newcomers and cause current members to depart the website. In addition, free coupons are one of the two main purposes for user to visit Dianping.com; therefore, preventing free riders from downloading free coupons would be very effective to reduce free-riding behavior.

Secondly, in order to extract reviews with high quality from the large amount of reviews, encouraging users to evaluate others’ reviews is necessary. Because of the large amount of customer reviews every day, there is no way that Dianping could evaluate the quality of the reviews by themselves. However, the large user base is a very valuable resource to utilize. Currently, Dianping enables users to report biased reviews and appreciate good reviews, but this is not included in the point system. Thus, these “nominal” editors would feel less motivated to examine others’ reviews. If Dianping could incorporate editing in the contribution evaluation, a lot of users would like to contribute to this part. Consequently, the reference value of sorting by “number of followers” would be elevated.

Finally, send personalized emails to people to solicit reviews of local items. Even though a lot of items are left unrated because it is geographically inconvenient, there is still a demand for these items because of the existence of travelers. This kind of information should come from local people. To make local people contribute reviews, Dianping could create groups by sending personalized emails telling them that some items around them are not reviewed or only have a few customer reviews and they could help the owners of the items to stand out. The emails should also emphasize the salience of the users’ contribution to such items. According to Tajfel and Turner (1986), people tend to benefit ingroup members. This actually creates a geographical group consisting of the users and the items owners and will lead them to maximize the utility of the group. Therefore, the users would like to review the local non-popular items.

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