Personal data - recommendation

1. In cultural goods, what are the consequences of the digitalization of business (the marketplace) and the digitization of content on the selection offered (supply side of the market)? In other words, compare the characteristics of catalogs offered by a modest physical shop and a large online retailer (shape of the sales volume curve for each product, in decreasing order of sales).

2. Given the answer to the previous question, compare the economic characteristics of products that sell a lot versus those that sell very little : what is the competitive environments ? As a consequence, how do their profit margin compare (under the common fair and open competition) ? Why would demand-side practical behaviour not necessarily apply a product-per-product competition principle ?

3. For an on-line business of physical goods, what conditions must be respectively be met on the supply side and the demand side to create a large product catalog and sell efficiently ? What fields of competence does they correspond to ?

4. Could we imagine a commercial solution where the business focuses primarily on the performance of the relationship on the demand side, and where the supply side consists of a second market relationship?

5. Have a look on amazon.com : what general “information retrieval” approaches to matching supply and demand ?

6. The “network effect” is an economic phenomenon where a product or service becomes more useful as more people use that same product (for the same purpose). Find a few examples of old and modern products that exhibit this effect.

7. The “indirect network effect” is an economic phenomenon where the more a product or service is used by a first group, the more it grows **another** group of users. Find a few examples. Does the growth of the second group favor the growth of the first? This situation is often called a two-sided platform.

8. Slightly different from a network effect purely based on users is the network effect on data: find two examples of services where more users increase a quantity of data that improves the service, thereby encouraging service adoption.

9. Another phenomenon is economies of scale, i.e., a cost per product or per subscriber that decreases as the number of subscribers increases. Are there any in the examples you found above? If not, find some in the field of software services.

10. Do these mechanisms lead to a “Winner-takes-all” phenomenon?

11. Who are the economic stakeholders in a two-sided recommendation system? What can be deduced regarding the optimal functioning of the system?

12. In a two-sided market platform that is just starting up, one initially faces a low number of participants which makes network effects difficult. Find 2 or 3 examples of platforms where free participants (subsidy side) are attracted in order to attract paying participants (Money side). Can you find situations where both free and paying participant exist on the same side ? Is the free side really free ?

13. While recommending a book to a reader does not require the reader to please the book, do situations exist, where liking needs to operation in both ways ? What particular difficulties arise?

14. Do you think diversity is a valuable property of the output of recommender engines ?

Fairness

Exercise 1