Implications of social justice for the pricing of information goods

Shana R. Ponelis

During the past few years information has increasingly become a commodity. As a commodity, the atypical cost structure of information goods in competitive markets results in the price of reproduction of information goods tending to zero, implying that market failure is highly likely. Intellectual property rights prevent such market failure by protecting the ability of creators and/or distributors to charge for information goods and as such serve to stimulate and support the creation of information. But information also plays a vital role in enabling people's human rights in their everyday lives and it is therefore of paramount importance that such information be accessible. Pricing of information is one of the main factors determining accessibility, and pricing strategies should aim to maximise access and not just profit, thereby contributing to a socially just world. This chapter examines the nature and pricing of information goods, and suggests differential pricing of information goods based on Rawls' principles of social justice.

Contents

Author's details

Ms Shana R. Ponelis
Department of Informatics, School of Information Technology, University of Pretoria, 0002 Pretoria, South Africa
☎ + 27 – 12 – 420 3372
✉ shana.ponelis@up.ac.za

The nature of information goods in the marketplace

Information goods, used here to denote information products, have certain characteristics that distinguish them from other economic goods:

- First, an information good is an *experience* good; that is, it must be used or consumed in order to demonstrate the good and to determine the associated value.
- Second, information goods are typically *non-rival;* that is, one person's consumption does not diminish another's ability to consume the same information good.
- Third, information goods can also be *non-excludable;* that is, one person's consumption cannot exclude another person from consuming the information (Varian, 1998), or as Barlow (1993) put it: "Information can be transferred without leaving the possession of the original owner", particularly when in electronic format.

In economic theory goods that are both non-rival and non-excludable are called public goods.[1] Individual gain-seeking in the market unfortunately does not lead to efficient results with respect to public goods:

- Consumers can take advantage of public goods without contributing sufficiently to their creation (the so-called "free rider" problem).
- The production of public goods results in positive externalities that are not remunerated. Since private organisations cannot reap all the benefits of a public good that they have produced, there may not be sufficient incentives to produce it.

Thus problems in the production of public goods may occur which, in turn, may lead to market failure. Market failure[2] is a term used to describe a situation in which markets do not efficiently allocate goods and services, or where markets are unable to provide goods in the desired quantities, or where market forces do not serve the perceived public interest.

One solution to prevent such market failure is to create intellectual property laws, such as copyright or patents. The aims of these laws are to provide a legal mechanism for removing the natural non-excludability of information goods by prohibiting reproduction thereof for a limited period of time and, at the same time, to encourage the creation and sharing of non-rival goods. In this manner public goods are turned into private goods. Although intellectual property laws can solve the free rider problem (assuming the enforcement thereof), the limitation of these laws is that they, together with the unique characteristics of information, result in a propensity for monopolies or dominant players in the market to be created.

In addition to judicial means, technological developments can also provide the means to make information goods excludable. For example, encryption allows broadcasters to sell individual access to their broadcasts, or digital rights management (DRM) allows control of the information goods' use by consumers according to the preferences of the creators and/or distributors.

Pricing of information products and services

One of the main mechanisms through which resources are allocated in society is price (Du Toit, 1994:162; Rowley, 1997:179). Price is the quantity of payment or compensation for an economic good. Competitive markets drive prices of all economic goods towards the marginal cost. Information goods, however, tend to have high fixed costs but low marginal costs; that is, creating the first copy is expensive but making a copy is relatively inexpensive. This implies that the price of information goods tends to zero. From an organisation's perspective, an efficient price is one that is very close to the maximum that consumers are prepared to pay in order to maximise profitability, and it must therefore be based on the value it offers the consumer. The rule of thumb is that the more something is worth to an individual, the more that individual would be willing to pay in order to acquire it.

[1] Note that goods termed "public goods" may be produced by the public sector but also by private individuals and organisations, civil society, NGOs or other collective action. They may be available naturally, like air, or may even not be produced at all.

[2] Note that market failure is a somewhat subjective term. What one considers to be market failure may not be considered as such by another, as efficient distribution of resources depends on the prior conceptions of what the distribution ought to be.

Price is therefore also a measurement or function of the value that a consumer (buyer) places on the good exchanged (Du Toit, 1994:162; Rowley, 1997:180). Value is intrinsically related to the worth derived by the consumer. Put differently, value is a measure of the worth that is based on the utility derived from the consumption of the good. Utility-derived value allows goods to be measured on outcome instead of demand and supply. The value that information can have varies, and the same information can have more than one type of value, as determined by the use towards which it is put.

According to economists, price discrimination[3] is a pricing strategy that is particularly appropriate in monopolistic markets, as the seller can charge higher prices than would be possible in a competitive market. According to Shapiro & Varian (1998:109), information goods can generate more revenue for sellers if they are offered in multiple versions catering to potentially different values consumers can place on a particular information good, and thus result in different prices. Price discrimination entails the sales of identical goods or services at different prices from the same provider to different groups of consumers.

Shapiro & Varian (1998:109–110) are of the opinion that a particular type of price discrimination is the only pricing strategy for information goods that can succeed in the marketplace, namely second-degree price discrimination, or what is popularly called "versioning". The perceived quality and its value or utility to the customer determine the customer's willingness to pay a particular price and in this way customers segment themselves:

> *The version they choose reveals the value they place on information and the price they are willing to pay for it.*

Such versioning can be performed on the basis of features offered, levels of performance, or timeliness.

Because the same information can have multiple uses and is non-rival, creating effective rate fences[4] between the uses in terms of access is a particularly difficult undertaking. Price discrimination is thus more common in services, where resale is not possible. Although consumers can jump the rate fence with respect to information goods (Britz & Ponelis, 2005:29), this does not seem to present a major problem as it is still widely used with respect to information goods, for example, by book sellers like Amazon and publishers like Elsevier.

Next, Rawls' principles of social justice are examined before considering their implication for the pricing of information goods.

Social justice

According to the social contract tradition, justice is derived from the mutual agreement of everyone concerned, or from what they would agree to under hypothetical conditions including equality and absence of bias. John Rawls (1973) argued from a hypothetical "original position" where everyone concerned would be behind a so-called "veil of ignorance" in order to arrive at principles of justice that would be fair to all. He argues for the fair distribution of social goods in a society. In the context of this chapter, society is seen to be the global society as a whole, as globalisation has essentially rendered the world a single market where organisations operate across borders.

Approaching justice as fairness is necessary to ensure that the basic rights and liberties of all are protected, and if social and economic inequalities exist, these should still be to the benefit of all. Rawls (1973:60–61) formulated two principles of justice to ensure fair distribution of social goods in a society. These principles state that:

- Each person is to have an equal right to the most extensive total system of basic liberties compatible with a similar system of liberty for all.
- Social and economic inequalities that do exist are to be arranged so that they can be

[3] "Price discrimination" is a technical term meaning differentiation in price. It does not imply unfair or biased behaviour.

[4] Rate fences prevent individuals in a higher price segment from purchasing goods at the prices available to members of a lower price segment. This is possible either by purchasing the product directly from the seller at the lower price, or indirectly by purchasing from an individual who bought from the seller at a lower price.

reasonably expected to be to everyone's advantage and be attached to positions and office that are open to all.

These principles accord with the basic economic problem (Du Toit, 1994:162):

> *... to allocate resources among members of the society to maximize the welfare of the society as a whole. To achieve this welfare objective, each resource should be utilized to perform a function in order that it contributes most efficiently to society.*

The author proposes that these two principles of Rawls be used as a moral guideline to ensure that the pricing of information goods is socially just.

Socially just pricing of information products and services

Information can be used for many different purposes, for example, education, entertainment, and marketing, but some purposes are more fundamental than others. This leads to the concept of essential information, which is defined as follows (Zielinski, 2001):

> *... information related to the basic minimum needs of humanity, information tools for trade and economic development, information essential to the development of backbone industries, basic science and survival services in health, education, welfare, agriculture and labour.*

Thus, information can be essential to human survival. In this context, information goods are very valuable and therefore should translate into a high price. However, such prices will most likely exclude people with limited financial means from deriving any utility from them. Affordability plays a central role in the availability of, and access to, information goods. It is therefore central to the concept in an information society and as such should be just.

According to Rawls' first principle, all people are fundamentally equal, have equal intrinsic human rights, together with the freedom to exercise these rights without infringing on similar rights of others. These basic rights ought to form the foundation of the fair distribution of social goods in society. The right to access essential information can be seen as such a basic right because of its essential nature in satisfying all basic rights, and should be taken into account in the pricing of information products and services. The second principle implies that information goods can be treated as commodities and be distributed and used unequally in a society. Fair compensation for authors is accommodated through intellectual property rights, and inequalities arising from the competitive value of information are justified. There are certain provisos, however:

- First, such information ownership rights are allowed only when they are to the benefit of all (Rawls, 1973:64). Should this not be the case, it is unjust.
- Second, there should at least be equal opportunities for everyone to access essential information and to contribute as creators of information goods.
- Third, the permissible inequalities are always secondary to the first principle (Rawls, 1973: 65). The author is therefore arguing that the right to access essential information can, and must, take precedence over the right to ownership of, and profit from, information.

Since price discrimination as a pricing strategy for information goods does comply with the implications of the second principle, it is important that organisations understand and take into account the implications of the first principle to ensure that social justice is done. When second-degree price discrimination is very efficient, production can be expanded. Output, however, can also decline when discrimination is more effective at extracting surplus from high-valued users (paying a premium price) rather than expanding sales to lower-valued users (paying a relatively lower price). Thus, the problem arises that those who are unable to pay the price that maximises profit do not get access to the good.

Another form of price discrimination, third-degree price discrimination or group pricing, is therefore more appropriate. With third-degree price discrimination selected groups with a lower willingness to pay (e.g. senior citizens, students, veterans and others) are offered special discounts. Similarly, groups in both developed and developing countries can be offered such discounts, particularly on essential information.

This approach is arguably more profitable for the society as a whole, but it might be difficult to prove that it will maximise profits or efficiency for organisations that implement it. Although it is often implemented as a voluntary gesture, this approach to pricing can more easily be motivated to shareholders, given the emphasis on ethics in business and corporate social responsibility, as this approach is more socially just than the status quo. However, this does imply that rate-fencing mechanisms must be effective to ensure the economic survival of the organisations involved.

Conclusion

Rawls' second principle justifies inequalities in a society, but these cannot be to the disadvantage of the less privileged. Thus, different goods with different prices are acceptable, and the pricing of essential information goods should be such that the less privileged, price-sensitive consumers are also accommodated. Third-degree price discrimination, rather than the more popular second-degree price discrimination, results in pricing of information goods being more socially just.

References

Barlow, J.P. 1993. *The economy of ideas: Selling wine without bottles on the global Net.* http://homes.eff.org/~barlow/EconomyOfIdeas.html. Accessed 4 January 2007.

Britz, J.J. & Ponelis, S.R. 2005. When is it good to steal? A moral reflection on current trends in intellectual property. In Zielinski, C., Duquenoy, P. & Kimppa, K. (Eds), *IFIP International Conference on Landscapes of ICT and Social Accountability.* Turku, Finland, 27–29 June, 23–36.

Du Toit, A.S. 1994. Developing a price strategy for information products. *South African Journal of Library and Information Services,* 62(4): 162–167.

Rawls, J. 1973. *A theory of justice.* Cambridge: The Belknap Press of Harvard University Press.

Rowley, J. 1997. Principles of price and pricing policies for the information marketplace. *Library Review,* 46(3): 179–189.

Shapiro, C. & Varian, H.R. 1998. Versioning: The smart way to sell information. *Harvard Business Review,* November/December, 106–114.

Varian, H.R. 1998. *Markets for information goods.* http://www.sims.berkeley.edu/~hal/Papers/japan/index.html. Accessed 4 January 2007.

Zielinski, C. 2001. *The changing role of information in development.* IIS/IDF Conference, July. http://www.iwsp.org/The%20Changing%20Role%20of%20Information%20in%20Development.htm.