



SIK Work Group: GIS

P r i c i n g P o l i c y S t r a t e g i e s f o r G e o s p a t i a l D a t a

Final Report

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Summary

With technological advances in information processing and a growing demand for highly accurate information, the importance of Geographic Information Systems (GIS) is ever increasing. However, as studies to date have shown, there are a number of uncertainties concerning data protection and, most of all, the dissemination of and pricing policies for government-produced spatial and geographic data (also called geospatial data, or “geodata”). The present investigation (conducted as a preliminary study) seeks to trace the lines of argumentation for or against differing pricing strategies and to justify the arguments using practical examples.

From the perspective of economics, geodata are merit goods. Use of such goods lies in the national interest, or they are so important that they must be produced by the state because they are under-provided by the market. Geodata, furthermore, are characterised typically by high fixed costs (acquisition/maintenance) and very low marginal cost (dissemination). Thus, they have the implicit character of a natural monopoly. For this reason, government itself has taken on acquisition in essential areas. Pricing policies for geodata thus base upon basic principles of efficient regulation of a natural monopoly, for optimal price is not determined by the market.

The spectrum of possible strategies ranges from no-cost dissemination (public domain) to full cost recovery. The present study shows that for pricing policies in the future, a mix of two strategies that lie between these poles promises the greatest degree of success:

Low Cost Strategy (LC): Data are provided to the customer at no more than the cost of copying the data (pure dissemination costs). Compared to the costs of acquiring and updating the data, dissemination costs are very low. Whether or not the data are provided for free (“pure” public domain strategy) or, as here, at low cost is a matter of discretion and depends upon the specific transaction costs. To be provided at low cost are data that lie in the interest of the greater public or that are associated with important “external” benefits. Few external benefits can be proven in a strict economics sense, but the “national interest” quality of the data provides sufficient justification. The main advantage of a LC strategy is the wider dissemination of the data and the ensuing short-run maximisation of general economic benefit.

Partial Return on Investment Strategy (PRI): With this strategy there is an attempt to recover at least a certain proportion of the high costs of data acquisition and updating (full cost recovery, in contrast, would lead to such high charges that demand would practically succumb). PRI data sets are value-added products that are not, or not exclusively, used in the national interest. As such, the data must be clearly differentiated from low cost data sets. The PRI strategy sets correct long-run price signals for data with a higher willingness to pay.

While it is difficult to draw a strict line between LC and PRI data sets, it can still be done if, in addition to fundamental policy decisions, there is a willingness towards inter-departmental cooperation in order to achieve a pragmatic, if need be two-part, solution. The highest priority should be given to nation-wide harmonisation in Switzerland. There must be an effort to establish consistent pricing practices across federal offices, between central government and the cantons, and for the municipalities. This alone will remove the uncertainties that exist today, namely those that have emerged in the wake of the varying practice of New Public Management (NPM).

The securing of financial resources is prerequisite to retaining the level of quality of the data when pricing policies move towards public domain. Here it is important to note, however, that the direct revenue lost in the short run (for data sets newly defined as LC) already today recovers a mere fraction of the total costs. Moreover, in the medium to long term, the resulting increased benefits will clearly overcompensate the loss of direct revenue (or, additional creation of value as a consequence of wider dissemination, and so on). Methodologically, however, it is very difficult to value, or quantify, such increased benefits. A possible approach is estimation of the consumer surplus (via willingness to pay) resulting from reduction in prices; further investigations with regard to the techniques will be required.

