

Open Source Licensing in Mixed Markets, or "Why Open Source Software Does Not Succeed"

June 2008

 Open Source
 Licensing in
 Mixed Markets

BACKGROUND

- A project is called **open source** if its code is distributed under a license that authorises anybody to use, distribute or modify the project's code for free. The open source developer may be motivated by two different sets of motives:
 - (i) the pragmatic (to develop software she needs); and
 - (ii) the social (to get others to use her software, to benefit from network effects, for prestige, or out of altruism).
- Unlike open source licenses, **proprietary licenses** prohibit the unauthorised use, replication and modification of the product by others. The owner is motivated by the profits to be gained from selling the right to use the product.
- The author addresses the question of how the cohabitation of software under such different and potentially conflicting licenses translates into market outcomes.

METHODOLOGY

- A model is presented of two developers who are identical in every respect, except that one chooses to develop software under an open source license and the other chooses to develop software under a proprietary license.
- Data was collected on software quality and popularity that is comparable across open source and proprietary software. Empirical results are shown to conform to the theoretical model.

KEY FINDINGS

- The market outcome is affected by:
 - (i) whether the open source developer is a precursor or a follower, and whether open source developers want to promote adoption of their standard or of their software;
 - (ii) whether network effects are important and whether the majority of consumers are professionals or non-specialists; and
 - (iii) how costly user-interface development is and whether open source software's intrinsic quality is higher than that of proprietary software.

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CCP Policy Briefings

- The paper shows how rivalry between developers of open source and proprietary software encourages open source developers to court users and respond to their needs.
- An open source developer who is a latecomer to the market will be less likely than an early entrant to make her product compatible with that of the proprietary developer, but she is also more likely to orient her software towards the end user.
- Depending on the factors outlined above, a manager may seek compatibility with open source software, borrow open source code, offer interfaces to open source development, or in other cases, be better off developing well away of open source developers and users.

POLICY ISSUES

- Compatibility between software is discouraged by the use of restrictive license terms. In so far as compatibility is socially desirable, as it increases the joint value of proprietary and open source software, and in so far as letting the proprietary follower adopt open source standard is also socially desirable, since a single standard is desirable, then the use of permissive license terms ought to be encouraged.
- On the other hand, open source software developed under restrictive license terms are more likely to offer an interface and thus be easily available to all. It thus provides more effective competition for proprietary software.

THE CCP

The ESRC Centre for Competition Policy (CCP), at the University of East Anglia, undertakes competition policy research, incorporating economic, legal, management and political science perspectives, that has real-world policy relevance without compromising academic rigour.

FOR MORE INFORMATION

The full working paper (CCP Working Paper 08-2) and more information about CCP and its research is available from our website: www.ccp.uea.ac.uk

ABOUT THE AUTHORS

- **Dr Alexia Gaudeul** is an industrial economist with an interest in the Internet, open source software and media industries. She is currently working on the analysis of competition between information intermediaries on the Internet (such as auction sites or search engines). She is also studying the open source software production model in order to evaluate its impact on traditional methods of software production. More generally, Alexia works on the effect of the Internet as it extends the set of available contracts that can be signed between agents, and looks at the new competitive strategies that this allows.