

Adoption of OSS in the Software Industry

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Conclusion

- Significant adoption of OSS in the software industry
 - Close to 50 % integrate OSS components
 - About 15% participate in OSS projects
 - About 5% provide their own OSS products
- A variety of horizontal products provided to all sectors
- More frequent adoption of OSS components in
 - Large companies
 - Consultancy companies
- Research method
 - E-mail screening worked very well
 - Getting companies to participate in surveys is challenging
 - Need for more empirical results and better described research processes

Adoption of open source

- Adoption of OSS products
- In software engineering
 - **Integrating OSS products into software systems**
 - Participating in the development of OSS products
 - Providing your own OSS products
 - Adoption of OSS development practices and tools

-Øyvind Hauge, Carl-Fredrik Sørensen, and Andreas Røsdal. Surveying Industrial Roles in Open Source Software Development. In Joseph Feller, Brian Fitzgerald, Walt Scacchi, and Alberto Sillitti, editors, Proceedings on The Third International Conference on Open Source Systems, pages 259-264. Springer, 2007.

Motivation

- OSS is becoming more mainstream
- Limited evidence/numbers
 - Public sector
 - Infrastructure and desktop applications
 - Focus sometimes unclear
- Understand and show the relevance of our research

-Brian Fitzgerald. The Transformation of Open Source Software. MIS Quarterly, 30(3), 2006

Existing evidence

- Limited adoption in public sector
- Linux is fairly widely adopted
- Indications of significantly larger adoption in the ICT sector
- Some inconclusive numbers

-Rishab Aiyer Ghosh, Gregorio Robles, and Ruediger Glott. Free Libre and Open Source Software: Survey and Study. Technical report, International Institute of Infonomics, University of Maastricht, 2002.

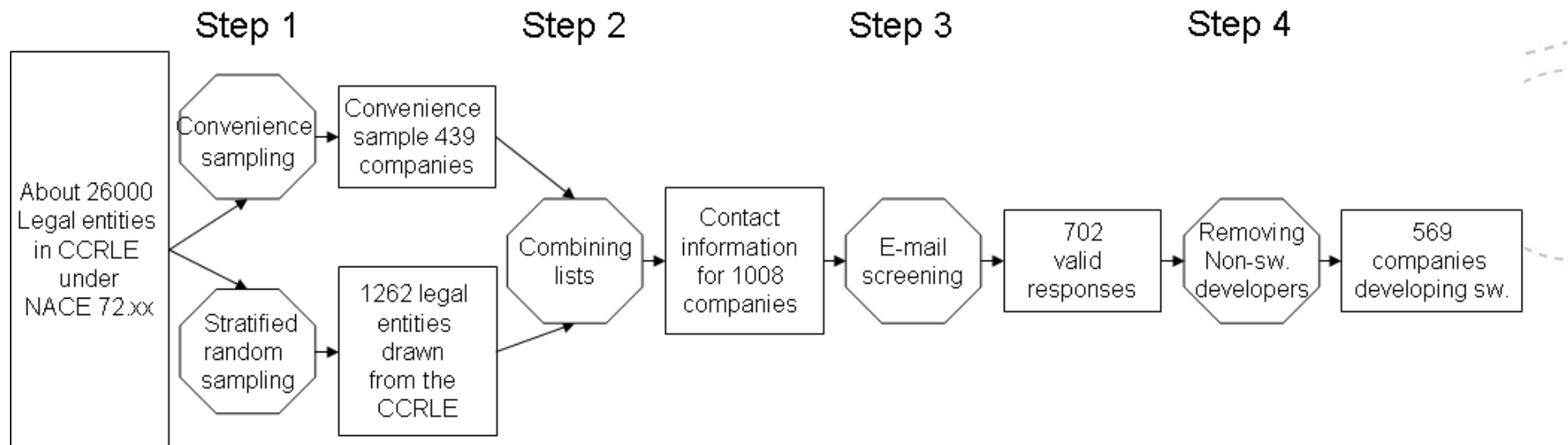
Norwegian software industry

- NACE 72.xx
- 26 000 legal entities
- 38 500 employees
- About 1 300 with five or more employees
- € 22 billion turnover in 2005

Method

- E-mail screening
 - 700+ responses
- Web questionnaire
 - 204 invited
 - 95 complete responses
 - 66 used here

Sampling



Adoption of OSS components distributed over sectors

Sector	Sample Size	OSS Adoption
72.21 Publishing of software	129	34.1%
72.22 Other software consultancy and supply	328	51.5%
72.30 Data processing	18	38.9%
72.40 Database activities	39	53.8%
Other	55	47.3%
Total	569	46.9%

Adoption of OSS components distributed over # of employees

Number of employees	Sample Size	OSS Adoption
0 to 1	33	48.5%
2 to 4	61	42.6%
5 to 9	80	43.8%
10 to 24	189	43.9%
25 to 99	146	50.0%
More than 100	58	56.9%
Total	569	46.9%

Participation and providing

- 16.3% of the companies participated in OSS projects
 - However, 30 of the 66 companies completing the survey said they participated
- 4.9% of the companies have their own OSS project
- Only 368 of the 569 companies responded

Survey Results: Projects

- Products serve all business sectors
 - Small emphasis on public and health sector
- All kinds of horizontal products
 - Mainly web/portals and enterprise solutions
- In 72.7% of the products, OSS components provide less than 40% of the functionality
- 68.2% of the products contain less than six OSS components
 - 80% of the projects spent less than 50 person-months during the last year

Survey Results: Companies

- 75.8% of the companies developed 1-3 products containing OSS components during the last year

Income from OSS	Number of companies
NA/Don't know	22
0%	8
1-20%	33
21-40%	3
41-60%	7
61-80%	9
81-99%	6
100 %	7

Validity

- Focus on components
- 200 companies were not asked if they participated in or provided OSS
- One employee does not know what all the other does
- Response rates
 - Few large companies answered survey
- Uncertainty about the term “product”
- Norway is special

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Future research

- Trends
- Other countries
- More detail on the adoption of OSS: What and how?
- Software development in non-software(-intensive) industry