

Determinants of Open Source Adoption

Final Thesis

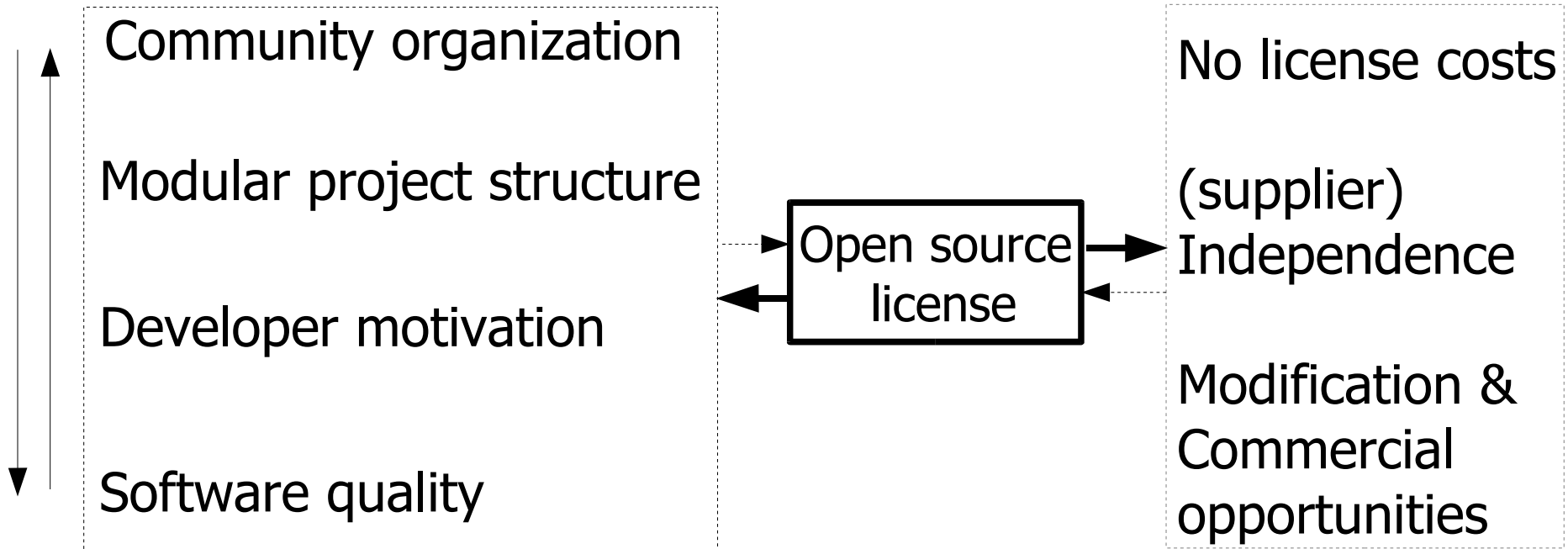
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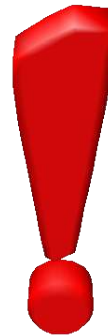
Presentation Outline

- Introduction
- Relevance and contribution
- Thesis context
- Discussion of hypotheses
- Research methodology
- Statistical results
- Main conclusions
- Implications & Limitations

Introduction



Supply side issues





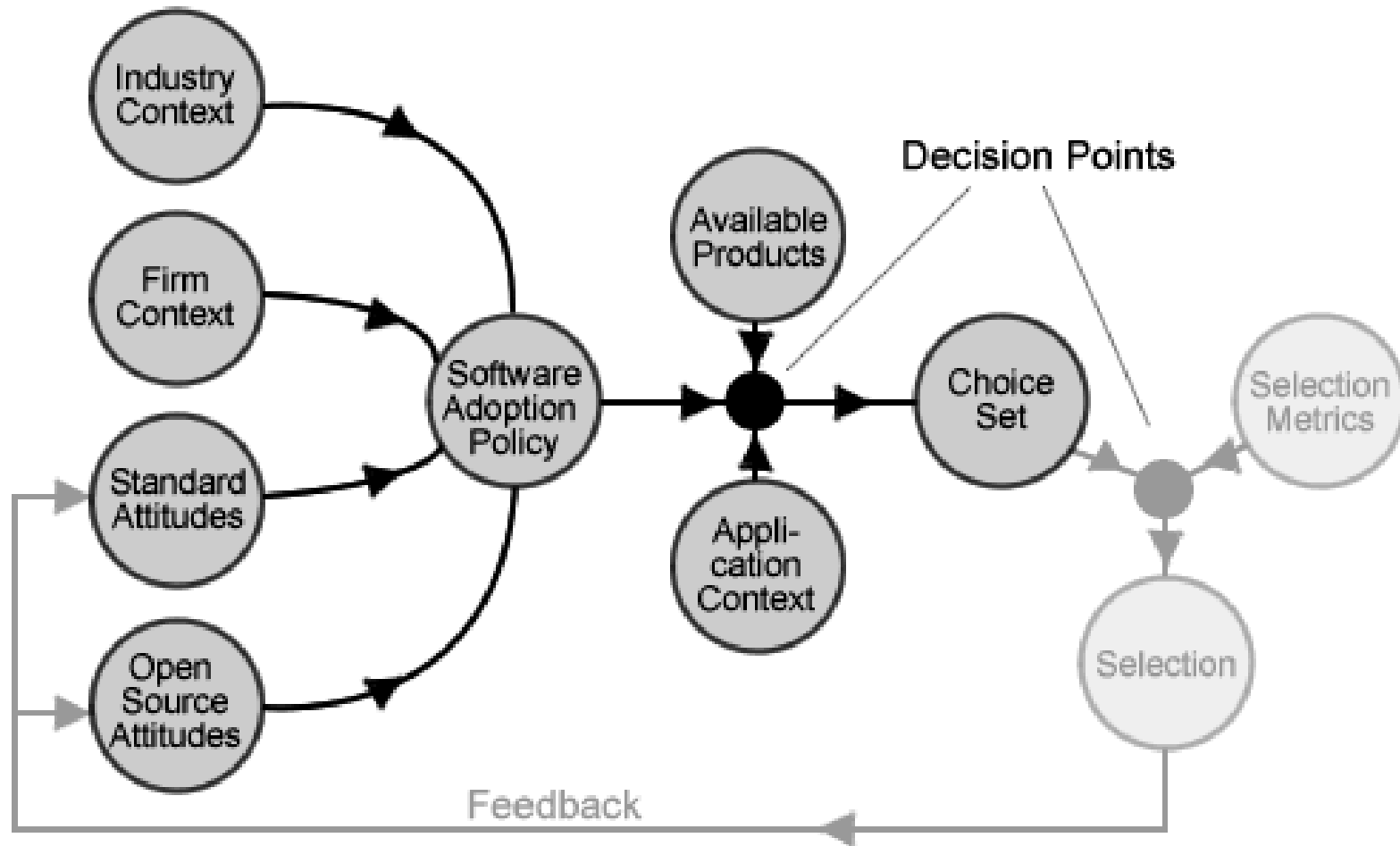
Relevance and Contribution

- Lack of research on demand side, which goes beyond purely descriptive or exploratory research
- Examples
 - a) Chau and Tam (1997) – Adoption of open systems
 - b) West & Dedrick (2003) – Focus on platform issues
 - c) Berlecon (2002) – Descriptives on OSS use across 3 EU states
 - d) Ghosh & Glott (2003) – Government use of OSS
- Contribution: OSS characteristics influence OSS adoption
- Problem statement:

Which factors influence the adoption of open source software among for-profit firms?

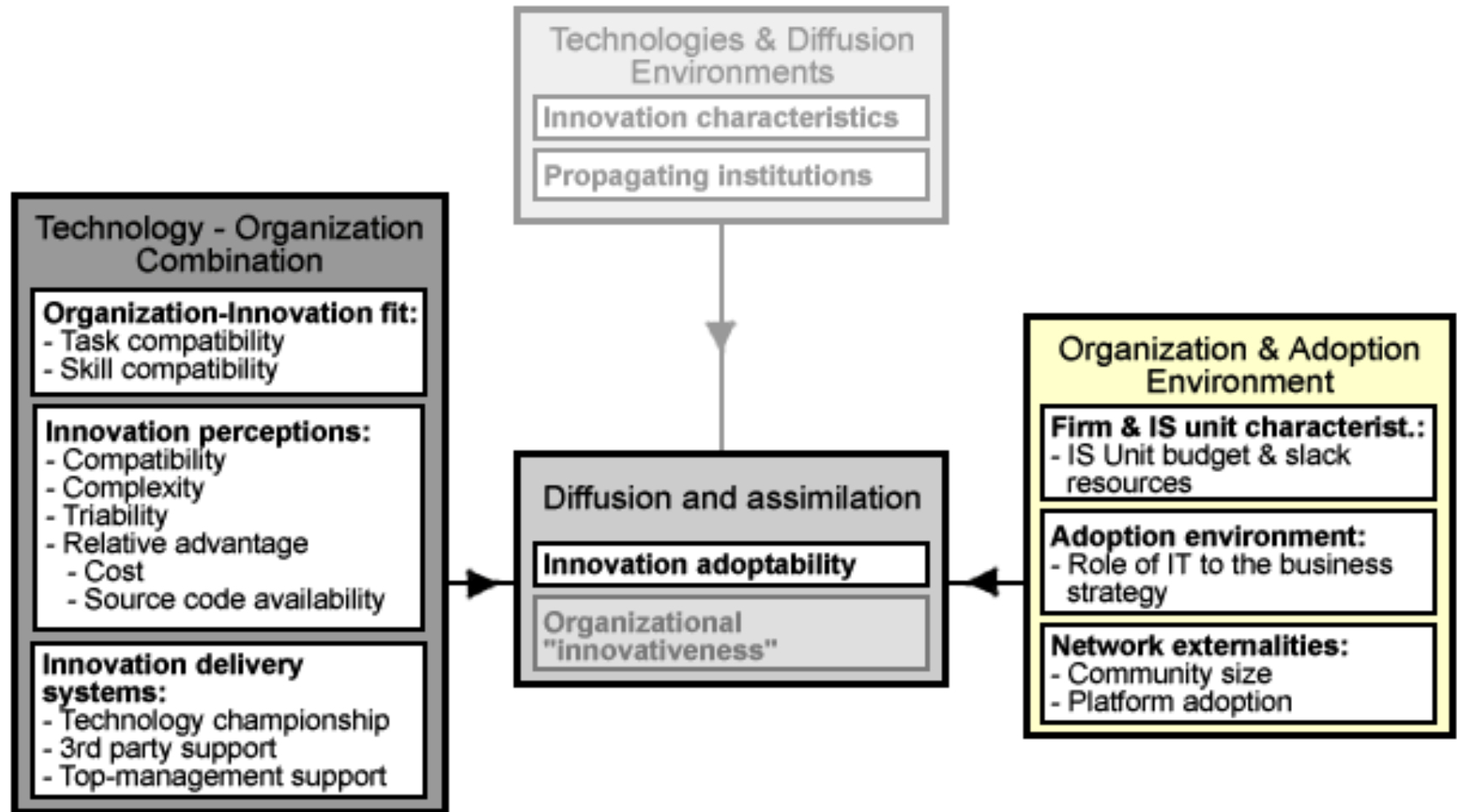
Thesis' Context

- › Model for open source adoption (Kwan & West, 2003)
- › 'adoption of open source software in for-profit firms '

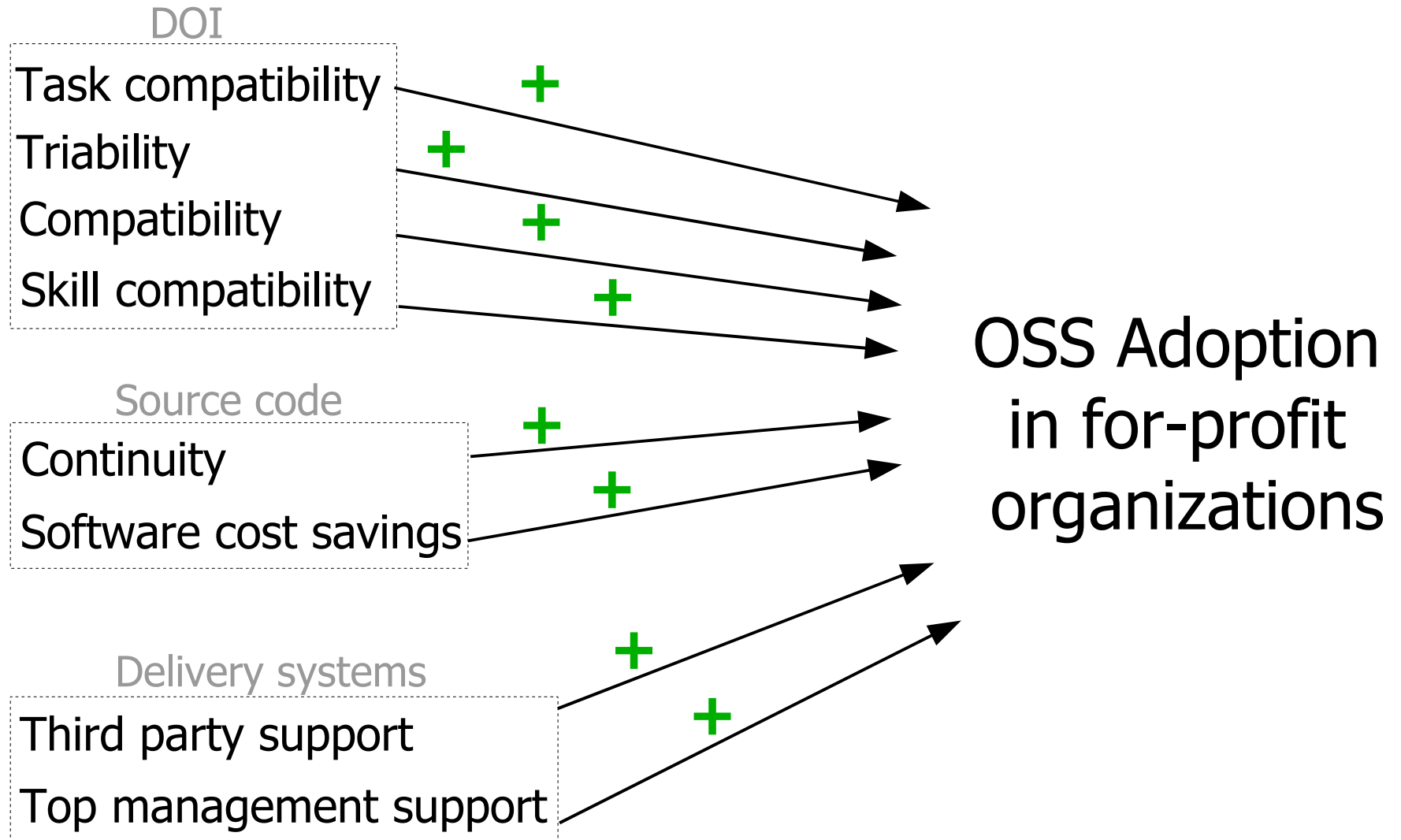


Thesis' Context

- › Classification scheme by Fichman (2000).
- › ' Which factors influence the adoption.... '



Discussion of Hypotheses (1)





Discussion of Hypotheses (2)

- H₁** – Perceived task compatibility is positively associated with OSS adoption
- H₂** – Perceived skill compatibility is positively associated with OSS adoption
- H₃** – Perceived compatibility with key applications and technological infrastructure is positively associated with OSS adoption
- H₄** – Perceived triability is positively associated with OSS adoption
- H₅** – Perceived software cost savings are positively associated with OSS adoption
- H₆** – Perceived continuity is positively associated with OSS adoption
- H₇** – Perceived third party support is positively associated with OSS adoption
- H₈** – Perceived top management support is positively associated with OSS adoption



Research Methodology

- Descriptive research
- Survey method: Questionnaire by e-mail to convenience sample
- Operationalizations of variables based on existing constructs
- Target group: ICT managers of Dutch firms in various industries
- 1770 e-mails, 5% response rate (85)
- Data cleaning, summated scales, validity & reliability testing

Statistical Results

- Multivariate analysis: Logistic Regression (binary dependent variable)
- Model to test hypotheses based on 8 variables

Results of logistic regression analysis						
Factor	B	S.E.	Wald	df	Sig.	Exp(B)
Compatibility	3,093	1,062	8,475	1	0,004	22,040
Triability	1,497	0,688	4,729	1	0,030	4,466
Software costs	0,455	0,556	0,671	1	0,413	1,577
Continuity	-0,569	0,548	1,077	1	0,299	0,566
Third party support	0,194	0,567	0,117	1	0,732	1,214
Top management support	0,025	0,572	0,002	1	0,965	1,026
Task compatibility	1,200	0,667	3,232	1	0,072	3,320
Skill compatibility	-0,216	0,446	0,234	1	0,628	0,806
Constant	-17,317	4,566	14,381	1	0,000	0,000

Main Conclusions

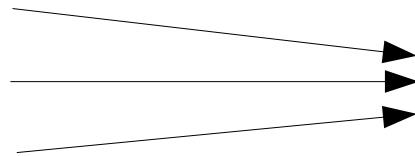
Which factors influence the adoption of open source software among for-profit firms?

➤ This thesis' answer:

1) Compatibility

2) Task compatibility

3) Triability



Classic diffusion innovation characteristics (DOI)

➤ Possible explanation for relevance of these 3 factors out of 8:

➤ Enterprise IS/IT architecture and strategy determines compatibility

➤ Limited binary adoption decision vs. adoption stages

Main Conclusions

Which factors influence the adoption of open source software among for-profit firms?

- Explanation for the non-relevant variables:
 - **Software costs** - Might be irrelevant as compared to switching costs
 - **Continuity/Third party support** - Supplier independence might be replaced by dependence on open source support firms
 - **Top management support** - Might be more relevant at later adoption stages where official backing is needed. Level of adoption is not known.
 - **Skill compatibility** - might be due to the fact that organizational skill change is often not needed, only when linux is introduced at the desktop.



Implications & Limitations

Implications

(from answers to open question, `why not adopt OSS`)

- Hard support, i.e. legal, support contracts; is still required
- There is no need for such software
- Skills not available
- Standardized on MS products or key applications require MS.

Limitations

- Relatively small response set lead to reduction in original number of hypotheses
- Questionnaire involved diverse ICT aspects, not sure whether all respondents were knowledgeable to provide correct answers
- Binary adoption decision vs. adoption stages. Different factors might prove important, and at different stages.