



Research Center
Finance & Information Management



Project Group
Business & Information
Systems Engineering

Towards an optimal investment strategy considering fashionable IT innovations - a dynamic optimization model

by

Olga Bürger, Björn Häckel, Florian Moser¹

appears in: Journal of Decision Systems, 2017

1 Fidor Bank AG

WI-385

University of Augsburg, D-86135 Augsburg
Visitors: Universitätsstr. 12, 86159 Augsburg
Phone: +49 821 598-4801 (Fax: -4899)

University of Bayreuth, D-95440 Bayreuth
Visitors: Wittelsbacherring 10, 95444 Bayreuth
Phone: +49 921 55-4710 (Fax: -844710)



Universität
Augsburg
University



UNIVERSITÄT
BAYREUTH



Towards an optimal investment strategy considering fashionable IT innovations – a dynamic optimization model

Olga Bürger

FIM Research Center, University of Augsburg, Germany

Prof. Dr. Björn Häckel

University of Applied Sciences, Augsburg

Dr. Florian Moser

Fidor Bank AG

Companies regularly face the challenge of deciding whether, when and to which extent they should invest in IT innovations with different maturity. The IT innovation strategy thereby should consider mature as well as fashionable IT innovations as investment alternatives. As previous research's focus is rather qualitative, we develop a dynamic optimization model that determines the optimal strategic allocation of an IT innovation budget to mature and fashionable IT innovations. By using a simulation-based approach, we analyze the essential causal relationships between the theoretical optimum and the factors of major influence. We find that companies should invest in fashionable IT innovations even if their own level of innovativeness is rather low and the technology's success probability has not reached a high threshold yet. Our findings provide a basis for further research on mindful investment decisions in fashionable IT innovations.