

Thomas Kamps

Systematic Chasing for Economic Success

An Innovation Management Approach
for German SME's in Drive Technology Business



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List of Abbreviation

Abbreviation	Meaning
APQP	Advanced Product and Quality Planning
ArbEG	Arbeitnehmererfindungsgesetz - Law on Employees' Inventions
B	Coefficient of Determination
β	Parameters
BilMoG	Bilanzrechtsmodernisierungsgesetz - Accounting Law Modernization Act
BVV	Betriebliches Vorschlags und Verbesserungswesen - Employee Suggestion System
CIP	Continuous Improvement Process
Corr	Correlation
Cov	Covariance
DCF	Discounted Cash Flow
DIB	Deutsches Institut für Betriebswirtschaft
E, e	Residuum
ERP	Enterprises Resource Planing
F_{emp}	Empirical F-Value
F_{tab}	F-Value from Table
FVA	Forschungsvereinigung Antriebstechnik e.V.
GCC/HGB	Handels Gesetz Buch - German Commercial Code
GDP	Gross Domestic Product
GQ	Goldfeld Quandt Value
H	Absolute Frequency
IFM	Institut für Mittelstandsforschung
IFRS	International Financial Reporting Standards
LMT	Low Tech and Medium Low Tech
NPV	Net Present Value
OEM	Original Equipment Manufacturer
R	Range
R&D	Research and Development
s	Standard Deviation
SME's	Small and Medium Size Enterprises
TRIZ	Teoria Reschenija Isobretatjelskich Sadatsch- Theory of Inventive Problem Solving
USP	Unique Selling Proposition
VDMA	Verband Deutscher Maschinen und Anlagenbauer e.V.
WOIS	Widerspruchorientierte Innovationsstrategie - Contradiction Oriented Innovation Process
\bar{x}	Arithmetical Mean
x_{max}	Maximum Value
x_{min}	Minimum Value

1 Introduction

Innovations are a fundamental pillar for profitable company growth. Profitability can be reached by three set screws: volumes, costs and prices.¹ The control over the price is strongly related to unique selling propositions. Therefore innovations are an essential set screw for successful and profitable companies.² This will be stressed out by several studies, e.g. according to *Stern et al.* (2007 p. 5), with product innovations are higher profits possible than with old products (s. figure below).

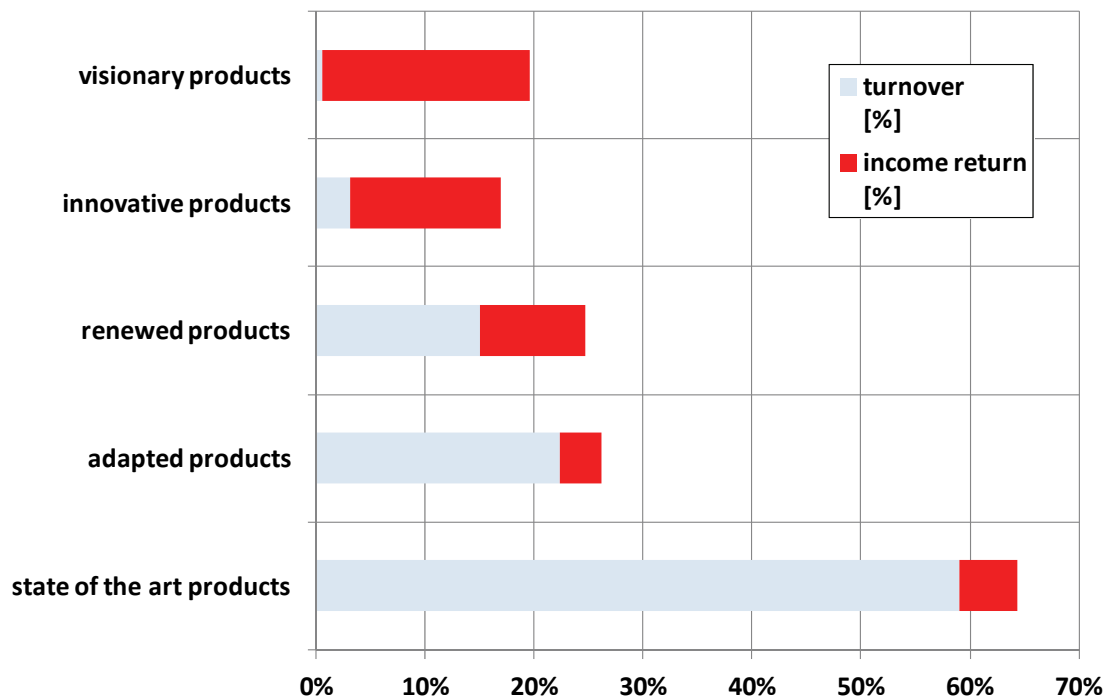


Figure 1 Turnover and income return of different product groups for German companies according to *Stern et al.* (2007 p. 5)

Successful innovations and in this way economic success are often related to an efficient innovation management. The innovation management as well as the economic success will be supported by clear and well defined strategies, ideas and creativity of the employees. Ideas and creativity are not only supporting the innovation process, they are fundamental for innovations. Therefore a huge effectiveness and efficiency of

¹Cf. *Disselkamp* (2005 p. 29).

²Cf. *Disselkamp* (2005 p. 30).

innovation management that integrates idea management can be assumed. Effectiveness and efficiency can be improved by controlling of the innovation process too. Last but not least patents are an important result of the innovation process. Therefore the management of this should also be integrated in the innovation process. These are general views and statements in respect of all markets, products, services etc. For companies in separated markets or industry segments arise some questions in the scope of innovations. Do these general statements and views fit to them? How does a process look like and what kind of tools and/or methods should be used to be successful?

1.1 Problem description

The German drive technology industry is dominated from SME's and must supply its products to customers around the world. In addition this industrial segment is challenged by competitors from many other countries as well as from customers with very different needs. Therefore SME's are faced to two main questions. First challenging question "what will be the best strategy to create competitive advantage?", second: "what are the necessities to carry out this strategy effectively and efficiently?".

1.2 Focus

Based on an analysis of the industrial segment the structure and essential needs and boundary conditions will be derived. In addition a suitable strategy to reach a competitive advantage will be analyzed and assessed. For this strategy a suitable innovation management process as well as a toolbox for SME's to implement this process into the company will be developed.

1.3 Research method and proceedings

A market analysis and descriptive research based on secondary data (market and economic) will be carried out at first. In this analysis descriptive statistics will be partly

used to deduce dependency, needs and challenges for the German drive technology industry. In addition the structure of this market will be analysed.

For the definition of suitable strategies and structures of innovation processes a descriptive research based on secondary data and literature (books, articles and other publishing's) to deduce possible solutions, aims and objectives will be carried out in the second step. This will be focused for use in SME's. Afterwards an assessment and selection of the best solution (strategy and innovation process) by use of value benefit analysis and Pugh matrix will follow. The results of assessment will be evaluated by use of descriptive research based on secondary data and literature (books, articles and other publishing's).

The development of a suitable innovation management process with focus on SME's is the following step. For this descriptive research based on secondary data and literature (books, articles and other publishing's) to deduce an pragmatic innovation management process in combination with a suitable method/toolbox for SME's is used, as well as the evaluation of the innovation management process and methods/toolbox use descriptive research based on secondary data and literature (books, articles and other publishing's).