



Business Development and
Technology Transfer Corporation
of Schleswig-Holstein

WT|SH

Measuring direct impact of business development instruments –a statistical approach

Niels Leininger

WTSH GmbH

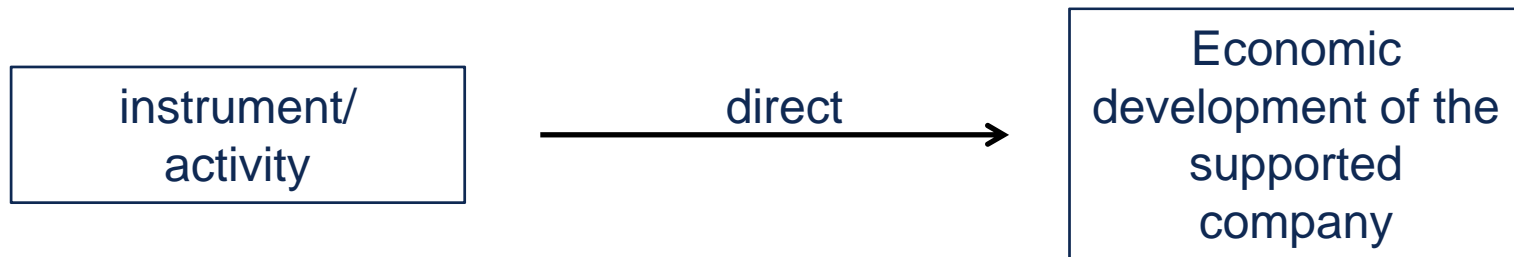
SCINNOPOLI-Conference

Győr, Hungary

08/11/2011



What is the
direct impact
of business development instruments?



Strategic controlling study





• Instrument A	
2000	x €
2001	0 €
2002	x €
....	
• Instrument B	
2000	x #
2001	x #
2002	0 #
....	
• Instrument C	
• Instrument ...	
• Instrument n	

		Number of employees	turnover
Firm 1 →	2000	x #	x €
	2001	x #	x €
	2002	x #	x €
	...	x #	x €
	n	x #	x €
Firm 2 →	2000	x #	x €
	2001	x #	x €
	2002	x #	x €
	...	x #	x €
	n	x #	x €
Firm ...			

strategic controlling study

- study in 2009
- WTSH made the data collection
- statistical analysis by an external consultancy
 - G-predictive Grandient GmbH specialized in statistical analysis and prediction modelling (usually for marketing activities)

study setup

<p>Time frame</p>	 <ul style="list-style-type: none"> • Annual data • 2000 through 2008 • Maximum of 9 observations per company per variable
<p>Companies</p>	 <ul style="list-style-type: none"> • 421 companies • Turnover and number of employees • Mostly SMEs • All companies are based in Schleswig-Holstein
<p>Instruments</p>	 <ul style="list-style-type: none"> • 15 instruments • Some of them only available for a shorter period • Sufficient information for assessment of each instrument
<p>Additional data</p>	 <ul style="list-style-type: none"> • Macro growth data • Industry specific growth data • Spatial information for each company

study setup

Data Preparation



- Set up a panel structure
- Joining additional data
- Thorough check for errors, missing values, etc.

Methods



- Multivariate regression procedures for core instruments
- Basic modelling for peripheral instruments

Multivariate regression



- Allows to isolate the effect of each instrument
- Allows to test for significance
- Delivers numeric parameters

Basic modelling



- Allows to test for significance
- Allows to assess the direction of the effect

Results

instrument	employee effects	additional total sales
innovation consultancy	↑↑	↑↑↑
trade fairs	↑↑	-
technology promotion	↑↑	↑
assistent of innovation	↑	↑↑
SHBC	↑↑↑	↑↑↑



Results

Instrument	employee effects	additional total sales
SCS intensive	+	+
EEN / IRC	+	+
Inno-Audit	+	n/a
trade fair promotion	+	+

Instrument	employee effects	additional total sales
foreign trade granting	n/a	n/a
granting SHBC	+	+
B2B-granting	n/a	n/a
granting of innovation consultancy	n/a	n/a

Thank you for your attention!