



INSTITUTE FOR EMPLOYMENT  
RESEARCH  
The Research Institute of the Federal Employment Agency

# THE GMOP

## HEALTH MEASURES - A REFLECTION OF MANAGEMENT QUALITY OR A DISTINCT CONCEPT?

International Management Surveys Workshop  
Census Bureau Headquarters, Suitland

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THE GMOP

MANAGEMENT AND PRODUCTIVITY  
IN GERMANY

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# THE GMOP SURVEY

## GERMAN MANAGEMENT AND ORGANIZATIONAL PRACTICES SURVEY

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- Study design and questionnaire based on MOPS (US Census Bureau)

- Content

- Retrospective closed-ended questions for 2008 and 2013
- Management practices, health and work-life balance measures
- Firm background information and economic conditions

- Sample restrictions

- Manufacturing industry
- 25 or more employees

- 1,927 valid interviews in 2014/15

⇒ • Response rate: 6%

The image shows the cover page of a questionnaire. The title is 'Questionnaire' in blue, followed by 'Management practices and firm performance in Germany' in black. On the right, there are logos for 'infas', 'i/w' (Institute for the World Economy), and 'IAB' (Institute for Employment Research). Below the title, there are two sections: 'What happens with your data' and 'Who conducts the survey'. The 'What happens with your data' section explains that the research institutes (IHW, IAB) receive data without identifying information and that analyses are carried out in an anonymized form. The 'Who conducts the survey' section states that the study is jointly conducted by the Kiel Institute for the World Economy (IHW), the Institute for Employment Research (IAB), and the infas Institute for Applied Social Sciences. At the bottom, there are contact details for questions regarding the implementation of the study and for further information on the study.

**Questionnaire**  
Management practices  
and firm performance  
in Germany

**infas**  
**i/w**  
**IAB**

**What happens with your data**  
The institutes conducting this survey are jointly responsible for ensuring data protection. All of your information is treated strictly confidential, following German data protection legislation.

**Who conducts the survey**  
This scientific study is jointly conducted by the Kiel Institute for the World Economy (IHW), the Institute for Employment Research (IAB) of the Federal Employment Agency and infas Institute for Applied Social Sciences.

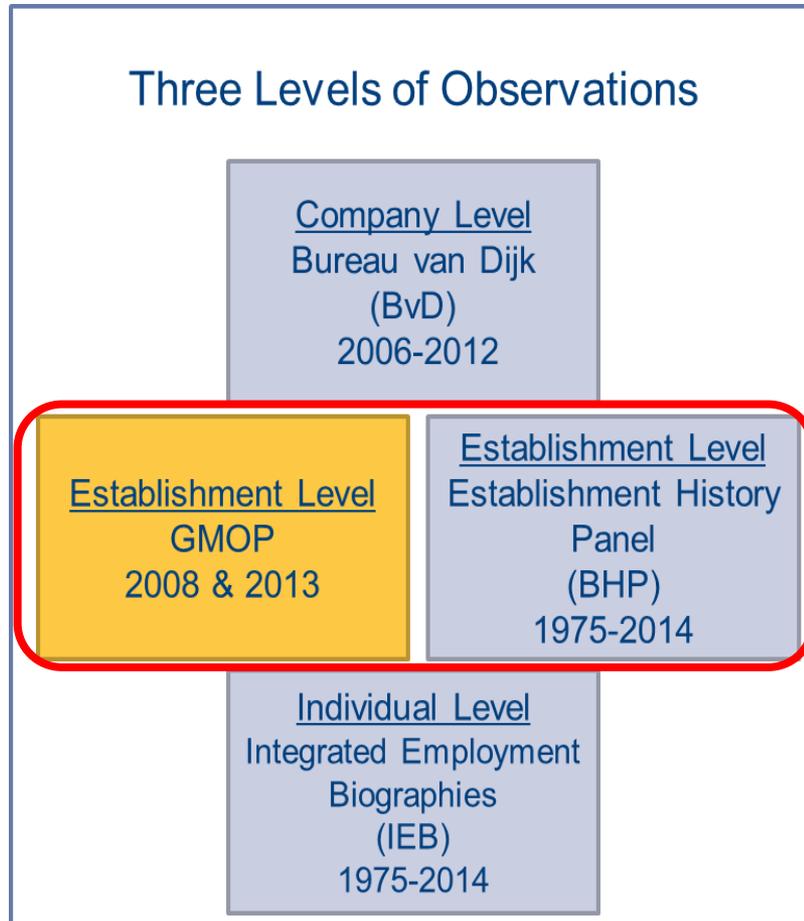
**For questions please contact:**  
For questions regarding the implementation of the study, please contact infas:  
– infas  
Phone: 0800/73 84-500  
Fax: 0228/382 2-894  
Email: mop@infas.de

**For further information on the study, please contact:**  
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# THE GMOP SURVEY

## SAMPLE DESIGN

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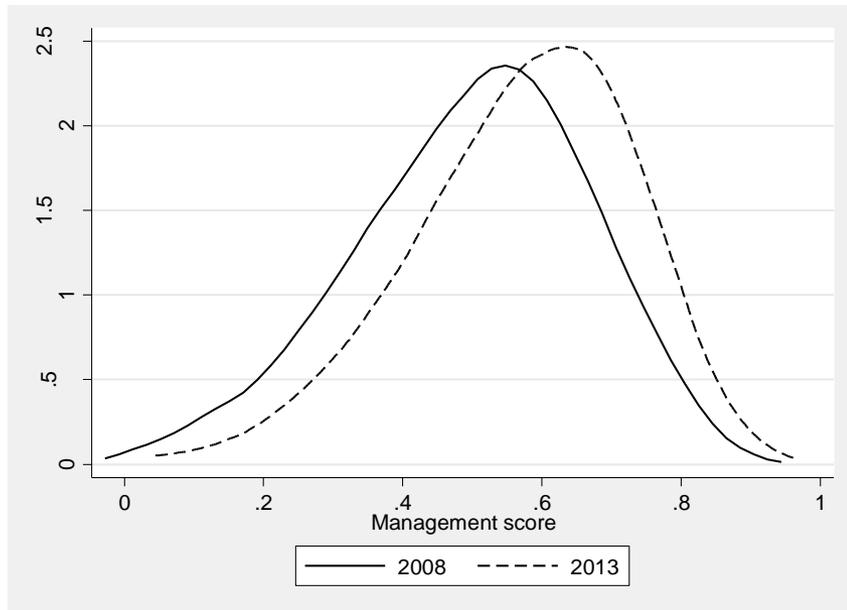
- German administrative data linked with Bureau van Dijk's Orbis database

Consent  
to linkage:  
53%

- Firm-level: GMOP + BHP
  - Survey and administrative data
  - At least one employee subject to social security contributions

# THE MANAGEMENT SCORE

## Distribution in 2008 and 2013



## Distribution Across Firm Size in 2013



# MANAGEMENT AND PRODUCTIVITY

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- ⇒ • Link between management and productivity is stronger for the US:

	<i>Germany</i> <small>(Broszeit et al., 2019)</small>	<i>US</i> <small>(Bloom et al., 2013)</small>
Increase in management score by 0.1 points is associated with an increase in productivity by ...	6.2%	13.6%

- Possible explanations:

- ⇒ - Lower labor market flexibility (firing, works council, collective agreement)
- ⇒ - Smaller firms (lack of necessity, higher costs)
- ⇒ - Driven by monitoring and incentives

- ⇒ • Robust relationship between management score and productivity
- Relationship not affected by inclusion of AKM-type firm-specific effects

HEALTH MEASURES:  
A REFLECTION OF MANAGEMENT QUALITY OR A  
DISTINCT CONCEPT?

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# INTRODUCTION

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- Health measures provided by firms

Health days

Check-ups

Management seminars

Sport and relaxation

Healthy diet

Ergonomics

- Health measures and firm outcomes
  - Introduction of a measure of health quality in firms
  - Relationship with labor productivity and median wages
- Health measures as long-term investment for sustainable performance
  - Increase productivity levels
    - Safeguard employee health
    - Employer attractiveness

# MOTIVATION

## IMPORTANCE OF HEALTH MANAGEMENT

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➤ Firm's voluntary certifications and audits (%)



# WHY SHOULD HEALTH MEASURES MATTER?

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- Possible impact channels of health measures
  - Human capital theory (Becker, 1964)
  - Workplace health and safety measures increase TFP (Buhai et al., 2016)
  - Workplace health promotion programs can ...
    - ... improve health, work ability and productivity, especially for white-collar and younger individuals (Rongen et al., 2013)
    - ... decrease sick days and sickness presenteeism, reducing performance (van den Heuvel et al., 2009)
- Productivity loss in Germany due to sickness absence (BMAS & BAuA, 2016)
  - 57 Billion Euros in 2014
  - Average of 14.4 days missed per employee

# HEALTH SCORE

## ➤ Aggregate score of 6 health measures

Which of the following measures did this establishment offer to promote and maintain employee health and performance?

	2008			2013		
	Yes	No	Don't know	Yes	No	Don't know
	1	2	8	1	2	8
Health days.....	<input type="checkbox"/>					
Health check-ups.....	<input type="checkbox"/>					
Management seminars for health-oriented leadership.....	<input type="checkbox"/>					
Sport and relaxation offers (e. g. back exercise, autogenic training etc.).....	<input type="checkbox"/>					
Healthy diet.....	<input type="checkbox"/>					
Ergonomic measures at the workplace.....	<input type="checkbox"/>					

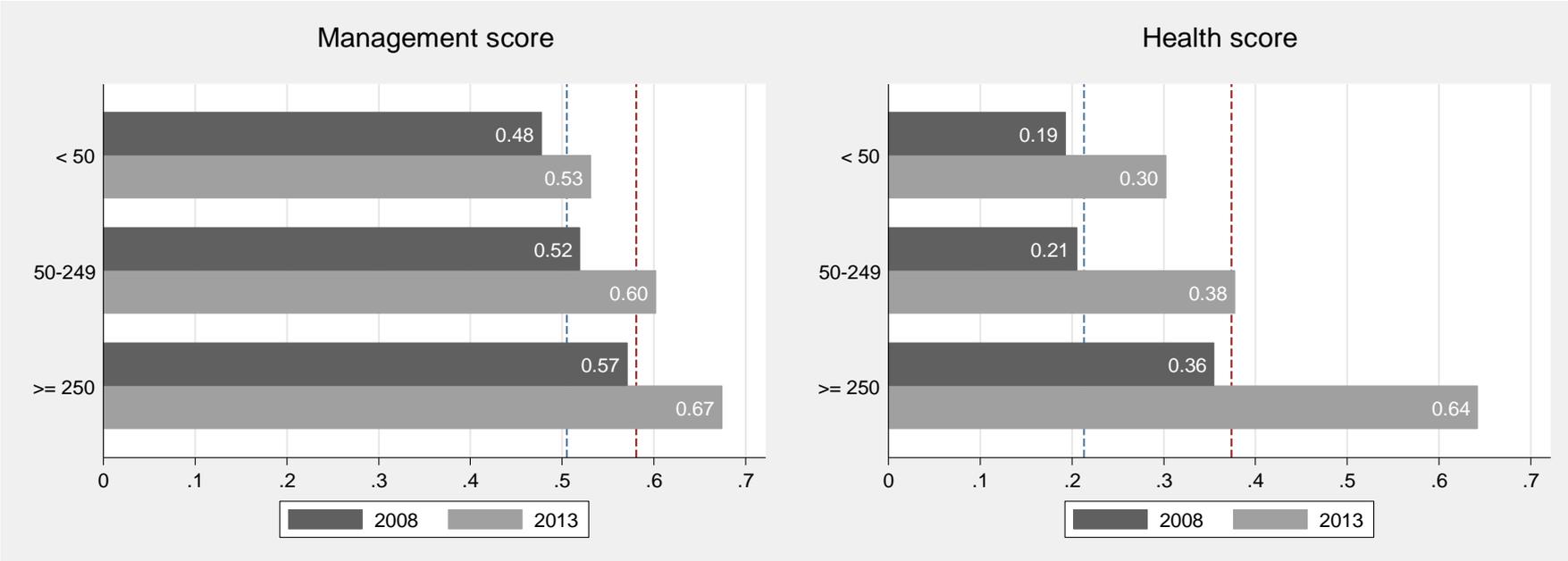
- Construction equivalent to management score
- One health score per firm [0;1] reflecting health quality

# INDIVIDUAL HEALTH MEASURES AND FIRM SIZE



Notes: Weighted. Source: Own calculations based on the GMOP.

# DEVELOPMENT ACROSS FIRM SIZES



Notes: Weighted. Differences for firm sizes significant at 1%-level. Source: Own calculations based on the GMOP.

# ESTIMATION STRATEGY

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## First differences estimations:

$$Y_{it} = \gamma_1 HS_{it} + \gamma_2 MS_{it} + \gamma_3 x_{it} + \alpha_i + e_{it}$$

## Why not stop at labor productivity?

- Labor productivity =  $\ln((\text{sales-intermediates})/\text{number of employees})$ 
  - Comparison of management and health practices
- Labor productivity captures capital and labor
  - Health measures increase costs: Reflected in intermediates
- Median wage =  $\ln$  of daily gross wages of full time employees
  - Human capital theory: Health is an investment in HC

# LABOR PRODUCTIVITY

## BASELINE RESULTS

	POLS	POLS	POLS	FE	FE	FE	FE
Health score	0.282*** (0.087)		0.207** (0.087)	0.052 (0.056)		0.019 (0.059)	-0.258 (0.166)
Management score		0.611*** (0.137)	0.538*** (0.140)		0.239** (0.104)	0.229** (0.110)	0.143 (0.123)
Health x Management							0.442* (0.256)
Controls, noise, year	yes	yes	yes	yes	yes	yes	yes
Firm FE	no	no	no	yes	yes	yes	yes
Observations	936	936	936	936	936	936	936
Number of Firms	468	468	468	468	468	468	468
Adj. R <sup>2</sup> , R <sup>2</sup> within	0.238	0.248	0.254	0.147	0.156	0.156	0.161

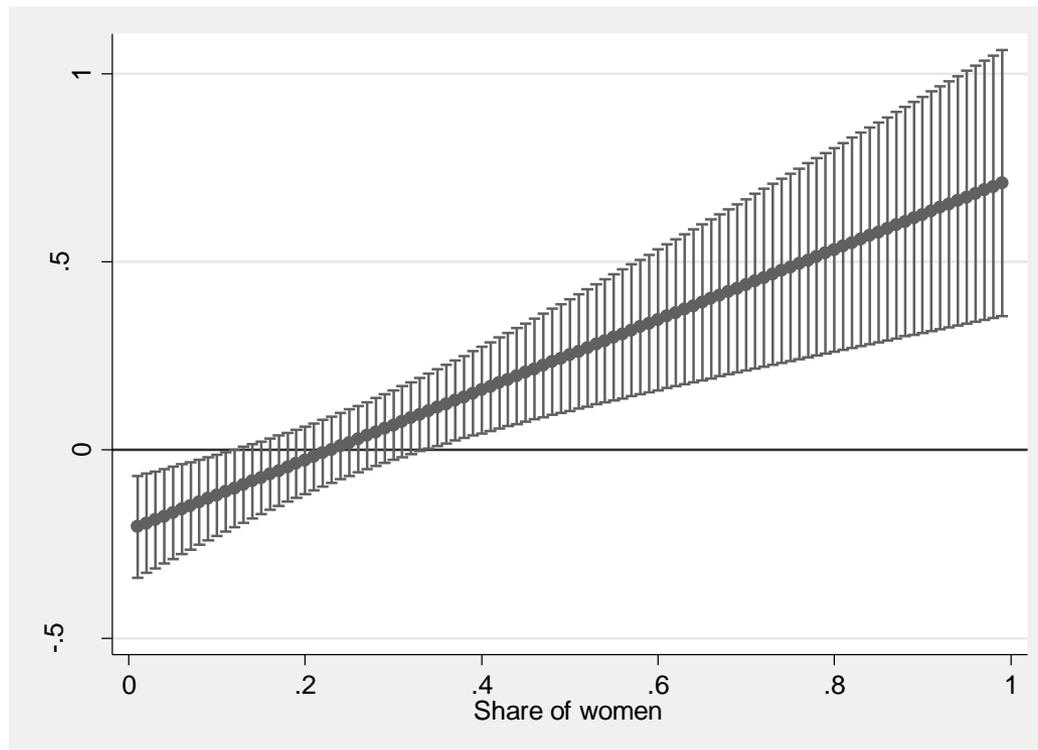
Notes: Pooled OLS and balanced panel FE. Clustered robust standard errors at firm level are in parentheses. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01 indicate significance levels. SD of the health score is 0.255. SD of the management score is 0.161. Controls are employees (ln) from GMOP, foreign ownership (D), independent company (D), works council (D), engagement abroad (D), exports (D), crisis (D), share of women, share of highly qualified employees, mean employee age, firm age (ln), East Germany (D). Noise controls are sampling strata, paradata, deviations between survey and administrative data (D).

Source: Own calculations based on the GMOP and the BHP.

# LABOR PRODUCTIVITY

## INTERACTION: HEALTH SCORE AND SHARE OF WOMEN

- Positive effect of health measures in firms with higher share of women



Notes: Average marginal effects. 90% confidence interval.

Source: Own calculations based on the GMOP and the BHP.

# MEDIAN WAGES

## BASELINE RESULTS

	POLS	POLS	POLS	FE	FE	FE	FE
Health score	0.050*		0.041	0.038**		0.037**	-0.031
	(0.026)		(0.026)	(0.015)		(0.016)	(0.065)
Management score		0.076*	0.061		0.022	0.001	-0.019
		(0.041)	(0.042)		(0.034)	(0.036)	(0.041)
Health x Management							0.108
							(0.100)
Controls, noise, year	yes						
Firm FE	no	no	no	yes	yes	yes	yes
Observations	1,436	1,436	1,436	1,436	1,436	1,436	1,436
Number of Firms	718	718	718	718	718	718	718
Adj. R <sup>2</sup> , R <sup>2</sup> within	0.669	0.669	0.670	0.228	0.223	0.228	0.230

Notes: Pooled OLS and balanced panel FE. Clustered robust standard errors at firm level are in parentheses. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01 indicate significance levels. SD of the health score is 0.257. SD of the management score is 0.168. Controls are employees (ln) from BHP, foreign ownership (D), independent company (D), works council (D), engagement abroad (D), exports (D), crisis (D), share of women, share of highly qualified employees, mean employee age, firm age (ln), East Germany (D). Noise controls are sampling strata, paradata, deviations between survey and administrative data (D).

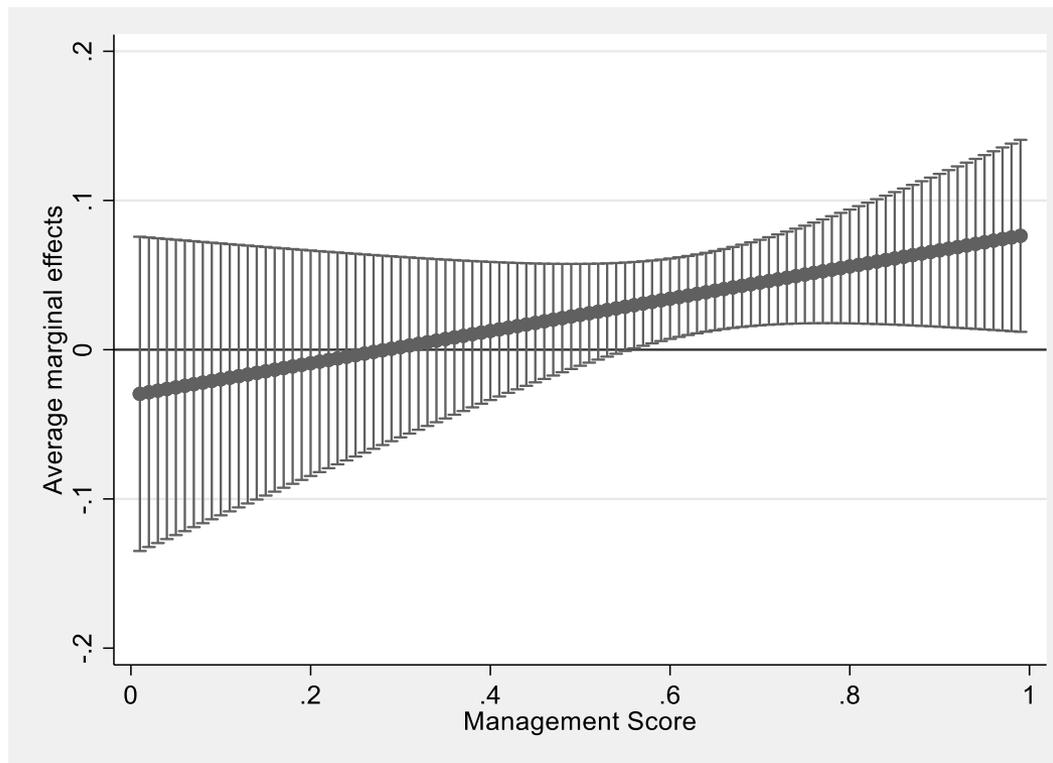
Source: Own calculations based on the GMOP and the BHP.

# MEDIAN WAGES

## COMPLEMENTARITIES

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- Interaction when management score is above average



Notes: Average marginal effects. 90% confidence interval.

Source: Own calculations based on the GMOP and the BHP.

# DISCUSSION

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- “Established” management practices positively relate to productivity  
(Awano et al., 2016; Bloom et al., 2007; 2010; 2013; Broszeit et al., 2016)

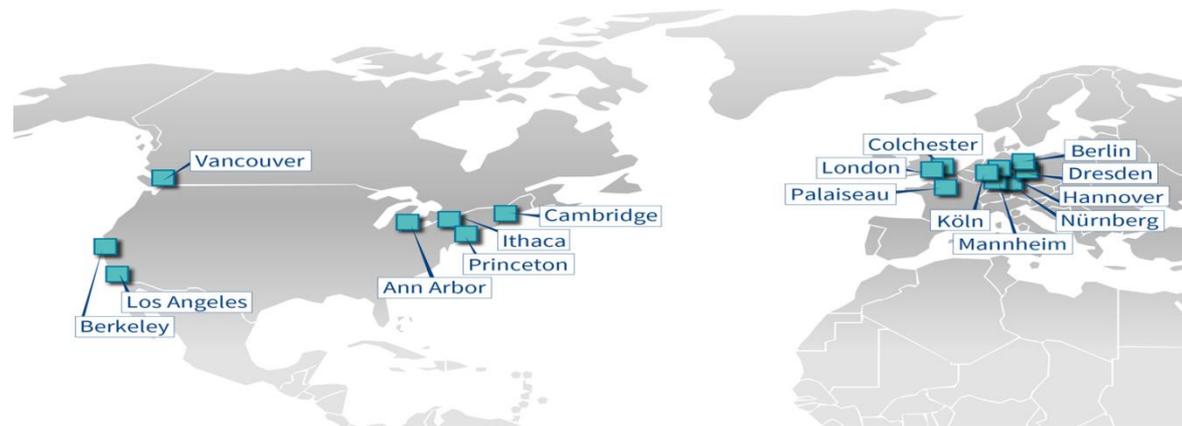
- “Modern” health measures provided by firms



- Value-Added
  - Introduction of a measure of health quality in firms
  - Distinct concept
    - Health measures not subsumed under management score
  - Complementary effects of management and health practices

# DATA ACCESS – GMOP SURVEY

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- On-site use at the RDC in Nuremberg and its outposts (and JoSuA)
- Further information on the GMOP at the RDC:
  - [http://fdz.iab.de/en/FDZ\\_Data\\_Access/FDZ\\_On-Site\\_Use.aspx](http://fdz.iab.de/en/FDZ_Data_Access/FDZ_On-Site_Use.aspx)
  - [http://fdz.iab.de/en/FDZ\\_Establishment\\_Data/GMOP.aspx](http://fdz.iab.de/en/FDZ_Establishment_Data/GMOP.aspx)

# CONTACT

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