



Finnish Institute of  
Occupational Health

# *Collaboration in Successful Work Disability Management (WDM)*

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# Study group

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- Jarno Turunen, M.Sc Econ.
- Pirjo Juvonen-Posti, MD, PD on rehab.
- Lea Henriksson, adj. professor (qualitative research)
- Jukka Uitti, professor (OHS, occup. med.)
- Juha Liira, adj. professor (occup. med.)
- Tiina Vihtonen, D. Sc. (B.A.)
- Johanna Seppänen, Ph.D. (epid. & stat.)
- Timo Leino, adj .professor (OHS)

# Funding



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# Background



Seppo Viljamaa

# Cost of lost labour input in Finland

Rissanen & Kaseva 2014, Ministry of Social Affairs and Health

• Sickness absence	EUR 3.4 billion
• Presenteism	EUR 3.4 billion
• Work disability pensions	EUR 8 billion
• Occupational accidents and diseases	EUR 2-2.5 billion
• Occupational diseases	EUR 0.1 billion
• Health care costs	EUR 7.8 billion
In total	EUR 25 billion

# Aura et al 2010

## Investment in Strategic Wellness

- In Finland, an average annual investment of EUR 789 (range EUR 432-1291) per employee was found in 335 organizations representing seven business areas



# Many type of interventions have been tried and studied

- Health promotion and disease prevention programs
- Fitness/exercise programs
- Disease management programs
- Employee assistance and behavioral programs
- Worksite medical clinics
- Disability management programs
- Combinations of above mention programs

# Lerner et al 2013

- A Systematic Review of the Evidence Concerning the Economic Impact of Employee-Focused HP and Wellness Programs
  - The design of many studies is poor and the results controversial
  - 10 studies with strong designs, eight reported positive financial effects



# Baicker et al 2013

Workplace Wellness Programs can generate savings

**\$3.27**

## **Return on Investment**

On average, employee health care costs fell by \$3.27 for every \$1.00 spent on employee wellness programs.

# Goetzel et al 2014 asked Do Workplace Health Promotion (Wellness) Programs Work?

**Methods:** A compilation of the evidence on workplace programs' effectiveness coupled with recommendations for critical review of outcome studies. Also, reviewed are recent studies questioning the value of workplace programs. **Results:** Evidence accumulated over the past three decades shows that well-designed and well-executed programs that are founded on evidence-based principles can achieve positive health and financial outcomes. **Conclusions:** Employers seeking a program that “works” are urged to consider their goals and whether they have an organizational culture that can facilitate success. Employers who choose to adopt a health promotion program should use best and promising practices to maximize the likelihood of achieving positive results.

# Study question

We wanted to study what work disability management procedures and practices explain the variation of work disability costs.

- The study question came to our mind from an observation that some companies seem to get good results and reduced WD costs even with a modest sum of money invested in WD prevention and some are not?

# Study group

- The study was conducted in 10 large, Finnish companies employing 600-11 500 persons

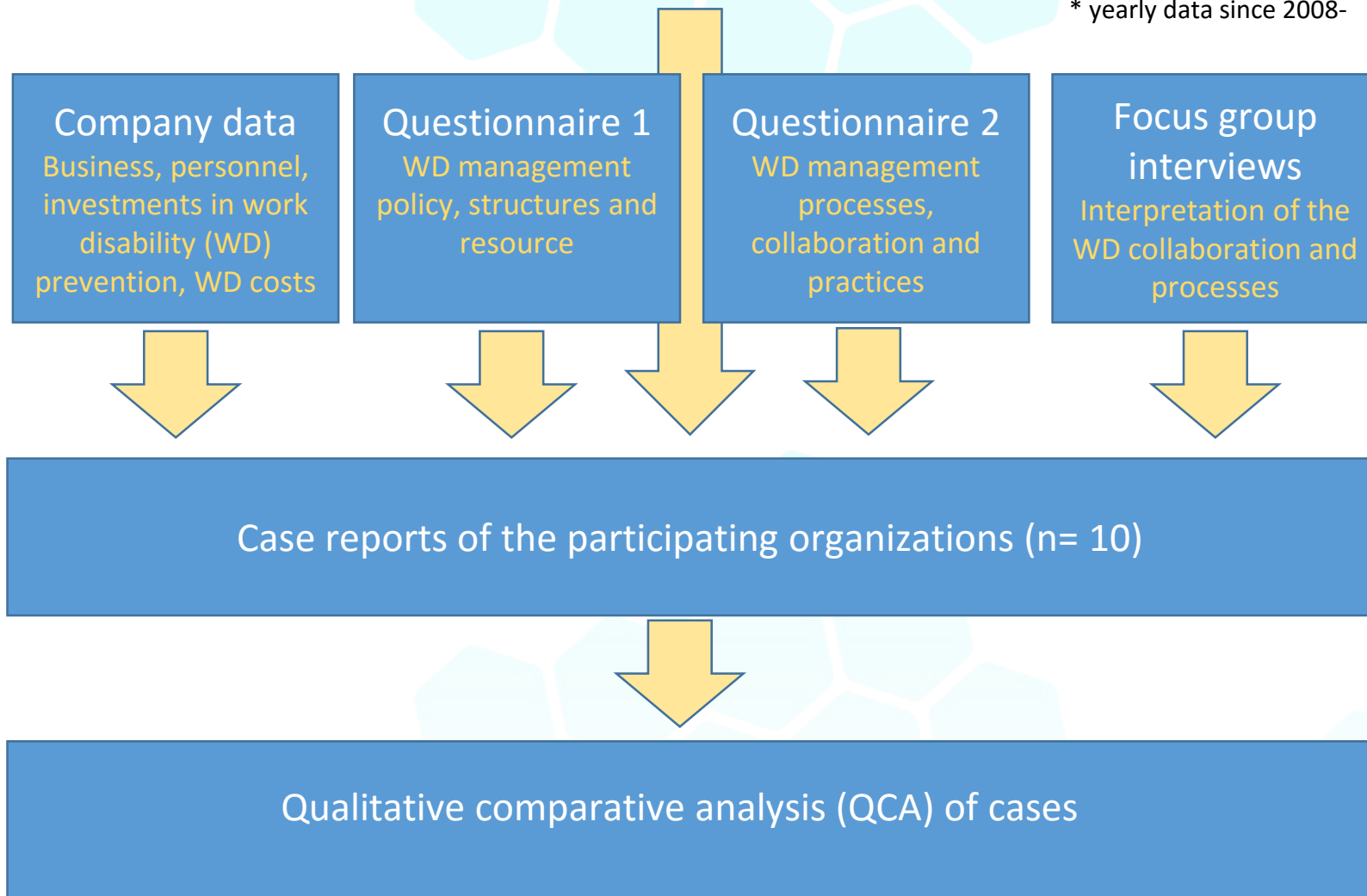


# Study protocol

- Retrospective study
- Data was collected from 20 companies in the years 2008-2013
- Complete data set was available from 14 business units covering years 2010-2013

Health Due Diligence data\*: costs and numbers of man-years, accumulated salaries, working hours, occupational health, absence, accidents, disability pensions  
Public sources: annual reports and other information from the internet

\* yearly data since 2008-



# Company data

## Investments in WD

- Occupational health service
- Work safety organization
- Wellness programs
- Educational programs
- ICT programs
- Projects
- Voluntary insurance and other financing

## Costs of WD

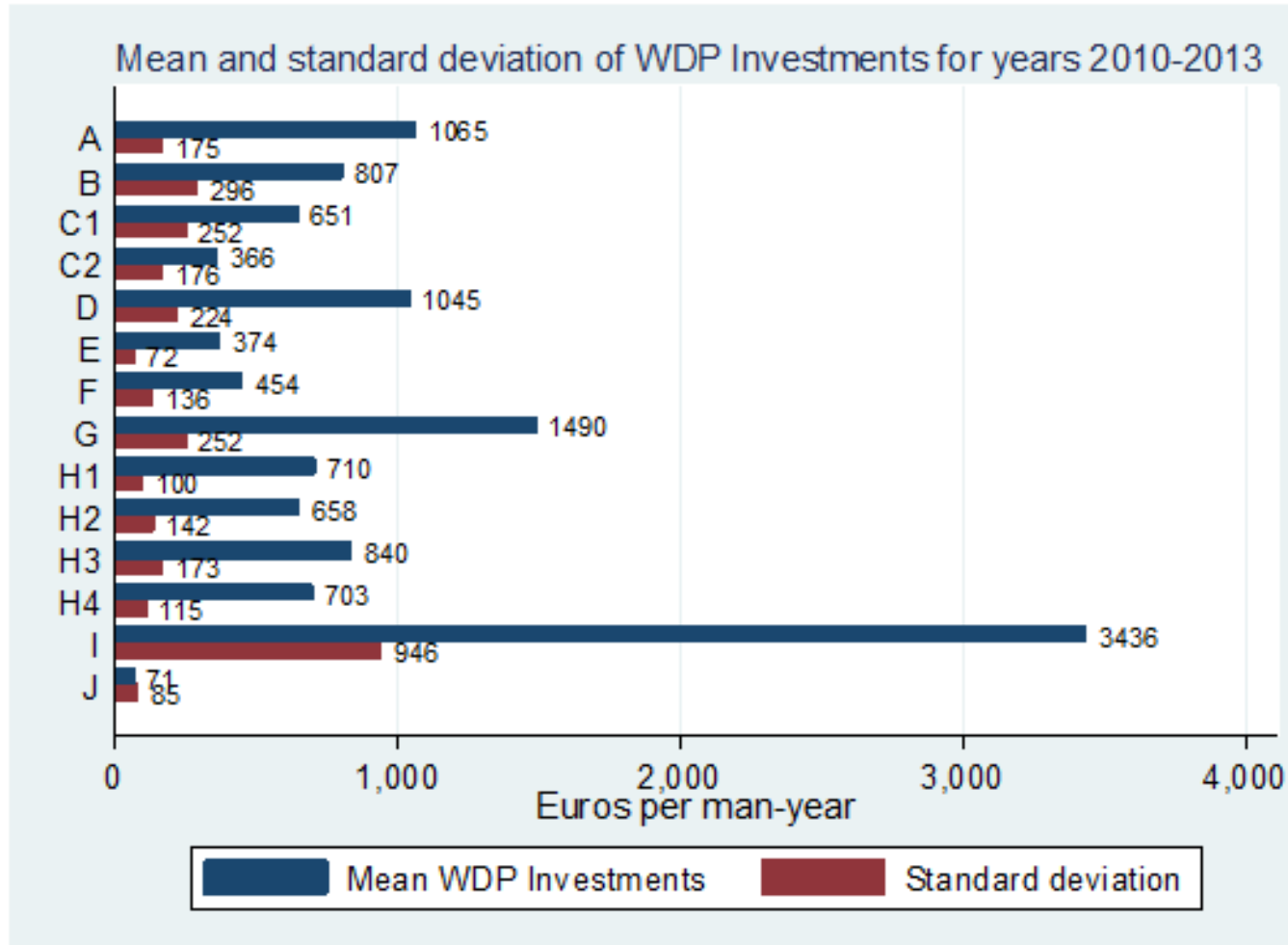
- Sickness absence costs
- Accident insurance costs
- Work disability pension costs



# Results



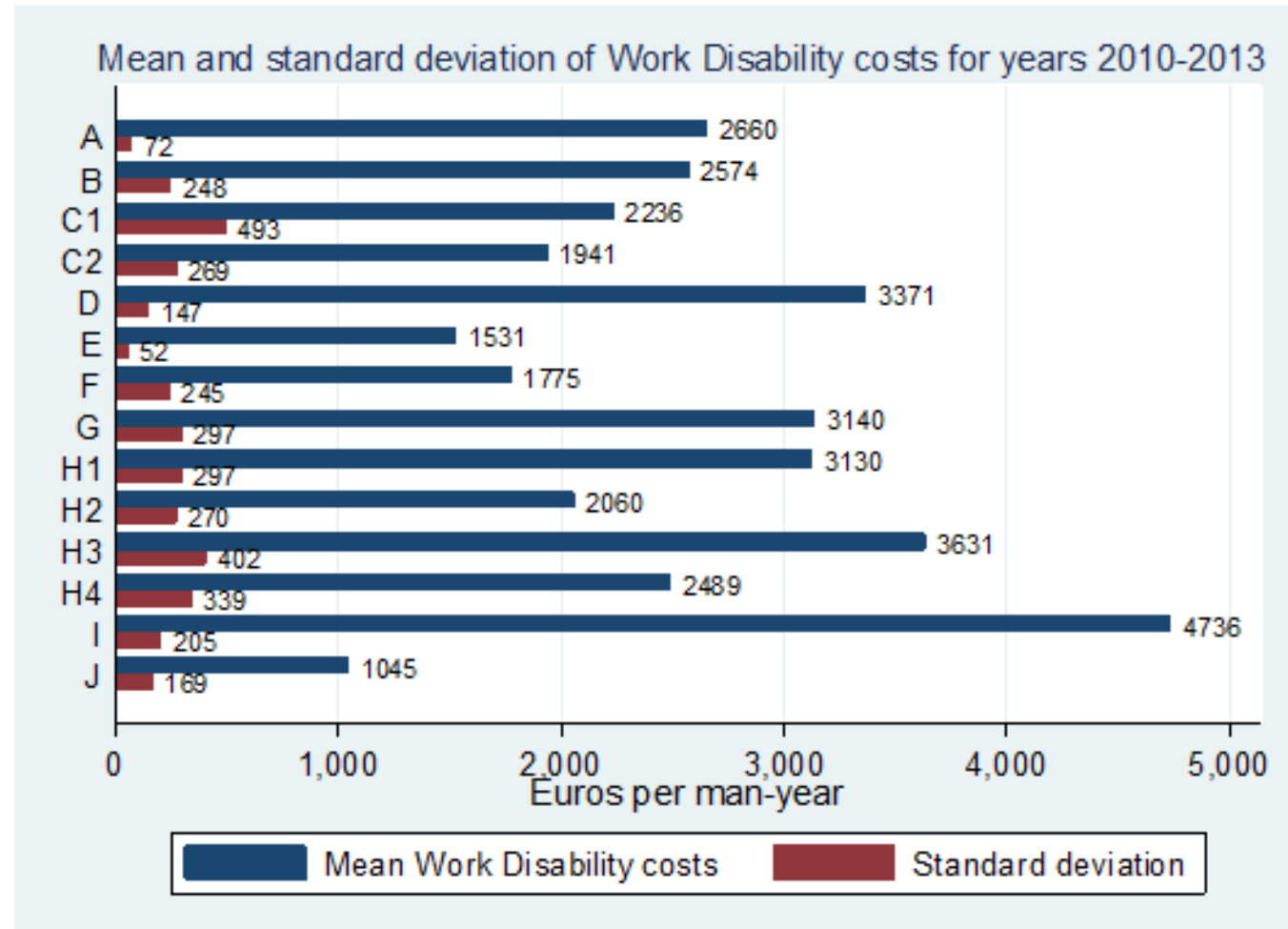
# Investments in work disability prevention (WDP) were on average EUR 900 per man-year



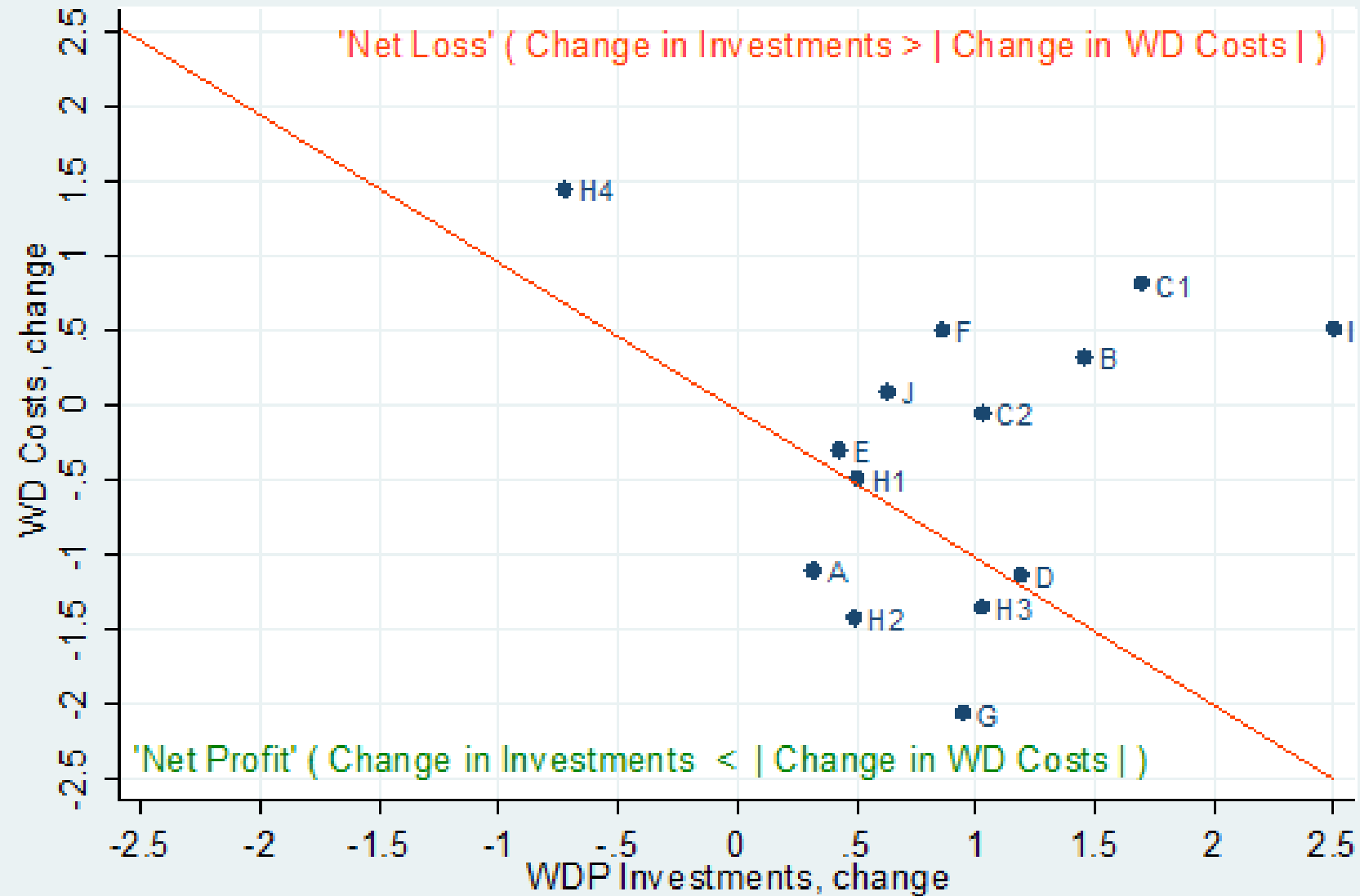
# Total work disability costs

Percentage of sickness absence costs of the total costs

A	72-79
B	49-64
C1	70-75
C2	56-70
D	68-72
E	73-78
F	75-83
G	58-74
H1	67-77
H2	48-78
H3	75-79
H4	50-69
I	79-83
J	68-80



## Change in WD Costs & WDP Investments 2010-13 as a %-share of salaries



# Mixed methods were used in the analysis

- We used Qualitative Comparative Analysis (QCA), as Cragun et al. (2015) states in their article in the Journal of Mixed Methods Research, because "QCA  
a) takes a logical and mathematical approach;  
b) can be used to analyze small, medium and large data sets;  
c) provides a tool for identifying causal complexity and equifinality;  
d) allows the researcher to generate solutions (with the aid of a computer program); and  
e) calculates measures to evaluate the merit of the solutions (i.e. solution consistency and coverage)."
- Boolean minimization process were used to find out the prime implicants

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# Truth table

The conditions for comparing WDM were formulated by using case reports and other available materials

	Conditions / Outcomes	Cases													
		A	B	C1	C2	D	E	F	G	H 1	H 2	H 3	H 4	I	J
Process	Were the factors related to the nature of work or structure of organization contributing to the collaboration in work disability management (WDM) solved?	1	0	0	0	1	1	1	0	1	1	1	1	0	0
Process	Were the strategic objectives of WDM visible in practice?	1	0	0	0	1	1	1	1	1	1	1	1	1	1
Process	Did the WDM procedures target the most relevant work disability risks comprehensively?	1	1	0	0	1	1	1	0	1	1	1	1	0	0
Process	Were the superiors actively involved in safety, health and WDM procedures?	1	0	0	0	0	1	1	0	0	1	0	1	0	1
Process	Did coordination of work ability matters and transfer of information support collaboration between different stakeholders?	1	0	0	0	1	1	1	0	1	1	1	1	0	1
Process	Were the employees actively involved in safety, health and WDM procedures?	0	0	0	0	0	1	1	1	0	1	1	0	1	0
Process	Were indicators used systematically to monitor and further develop safety, health and WDM procedures?	1	0	0	0	1	1	1	0	0	1	0	1	1	0
Outcome	Did the sickness absence rate decrease?	1	0	0	0	1	1	0	1	0	1	1	1	0	1
Outcome	Did the sickness absence costs decrease?	0	0	0	0	1	1	0	0	0	0	0	1	0	0
Outcome	Did the work accident frequency rate decrease?	1	1	0	0	0	1	0	1	1	0	1	1	1	1
Outcome	Did the accident insurance costs decrease?	0	0	1	0	0	1	1	0	1	0	1	0	1	0
Outcome	Did the number of new work disability pension cases decrease?	1	1	1	1	1	0	1	1	1	1	1	1	0	1
Outcome	Did the work disability pension costs decrease?	1	1	0	1	1	0	0	0	1	1	1	0	1	0
Outcome	Did the total costs of work disability decrease?	1	0	0	0	1	1	0	1	0	1	1	0	0	0



# Combination of four conditions were sufficient to lower total WD costs and sickness absence percentage

- The factors related to the nature of work or structure of organization contributing to the collaboration in work disability management (WDM) are solved.
- The strategic objectives of WDM are visible in practice.
- The WDM procedures that target the most relevant work disability risks are comprehensive.
- The coordination of work ability matters and transfer of information support collaboration between different stakeholders.

# The combination of conditions sufficient to lower the work accident rate were

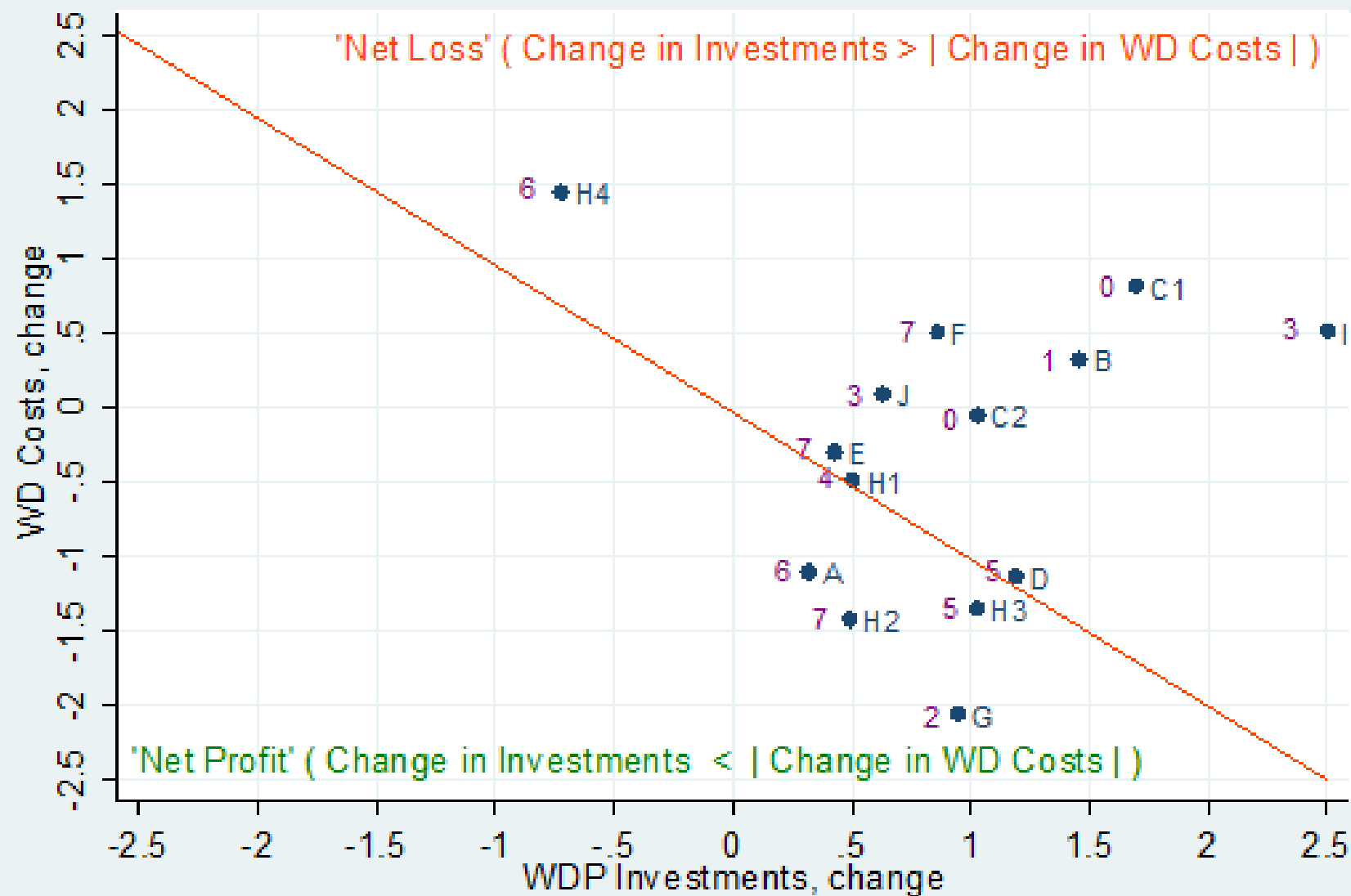
in industrial sector companies employing mainly male workers

- the strategic objectives of WDM are visible in practice.
- the employees are actively involved in safety, health and WDM procedures.

in service sector companies employing both females and males

- the same four conditions that were sufficient in total WD costs and sickness absence %

# Change in WD Costs & WDP Investments 2010-13 as a %-share of salaries



# The number of new work disability pensions decreased in almost all companies (12/14)

- No combination of conditions was related to the decrease of new work disability pensions

# Remarks

- Well-executed strategy in practices lead to lower WD costs even in constantly changing business and personnel situations
- Even though WDM processes are different in studied cases the four conditions are needed to achieve lower WD costs
- While WD costs are constantly scrutinized, to our surprise, WD management and prevention investments are poorly recorded and followed



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# *Thank you!*



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