

Health and Safety and Vulnerable Workers in a Changing World of Work

Conference

8th June 2010 – London

**Applying the Capability Approach and Organizational
Climate to identify the vulnerable workers.**

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Accidents at work

3.2% of workers in the EU-27 had an accident at work in 2007, which corresponds to almost 7 million workers (with commuting related accidents).

Work-related health problems

8.6% of workers in the EU-27 experienced a work-related health problem in 2007, which corresponds to 20 million persons.

Source, Eurostat 2009

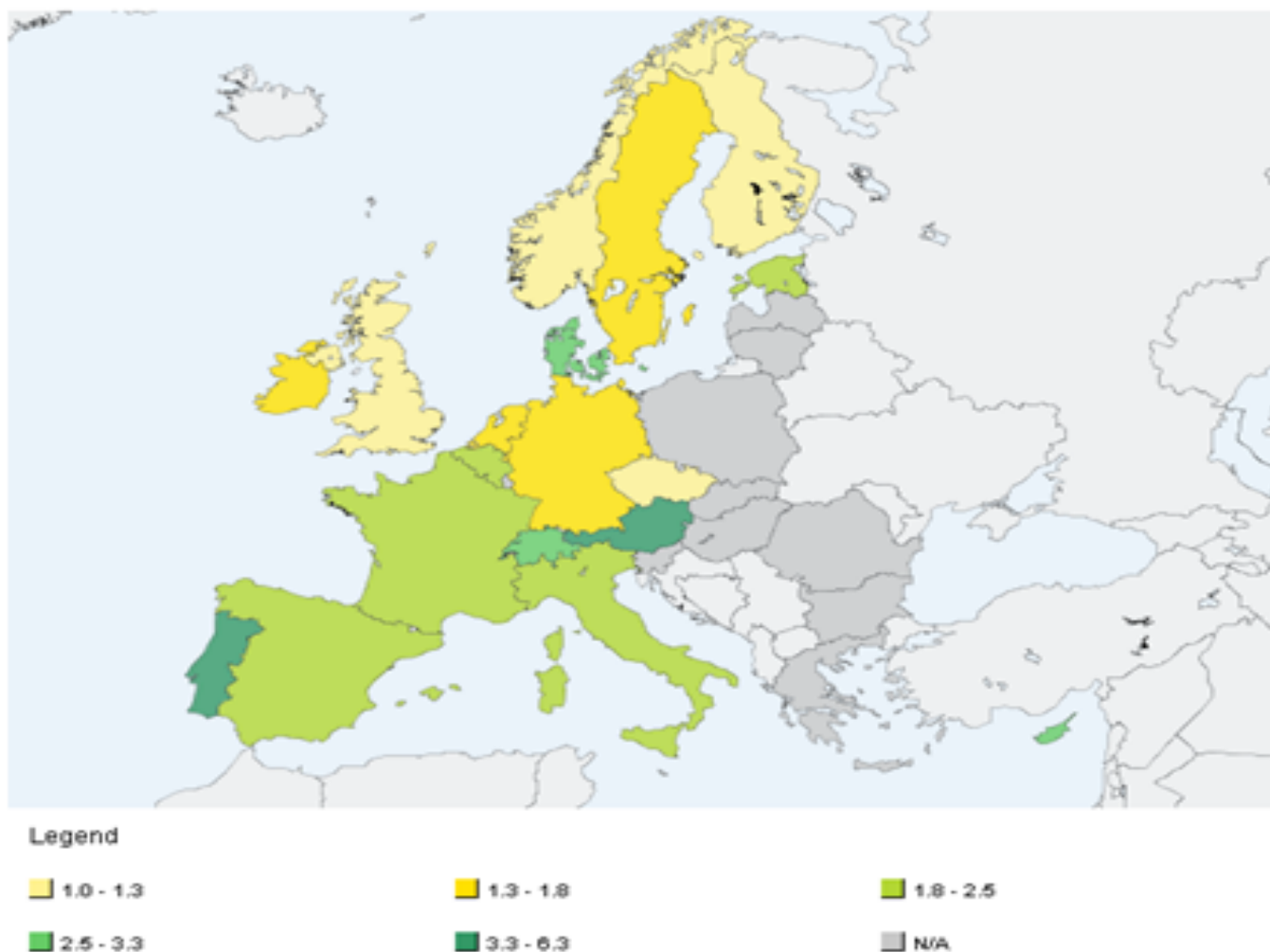
**Among those, who is more in danger?
Who is more vulnerable?**

National differences: a problem but no surprise

Fatal accidents: standard incidence on 100.000 workers UE - years 2001 - 2006

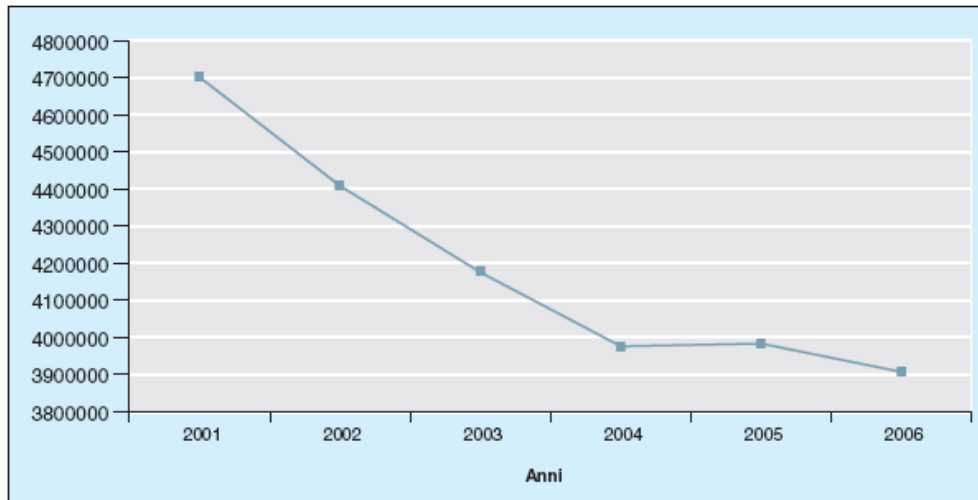
STATES	2001	2002	2003	2004	2005	2006
Portugal	9.0	7.6	6.7	6.3	6.5	5.2
Austria	4.8	5.1	4.8	5.4	4.8	4.2
Greece	2.9	3.8	3.0	2.5	1.6	3.8
Spain	4.4	4.3	3.7	3.2	3.5	3.5
France	3.2	2.6	2.8	2.7	2.0	3.4
Italy	3.1	2.8	2.8	2.5	2.6	2.9
UE12 - Euro Area	3.1	2.9	2.9	2.7	2.5	2.8
Denmark	1.7	2.0	1.8	1.1	2.2	2.7
Belgium	3.8	2.6	2.4	2.9	2.6	2.6
UE15	2.7	2.5	2.5	2.4	2.3	2.5
Ireland	2.6	2.6	3.2	2.2	3.1	2.2
Germany	2.0	2.5	2.3	2.2	1.8	2.1
Luxemburg	1.7	2.4	3.2	:	2.6	1.7
Netherlands	1.7	1.9	2.0	1.8	1.6	1.7
Finland	2.4	2.0	1.9	2.5	2.0	1.5
Sweden	1.4	1.2	1.2	1.1	1.7	1.5
UK	1.5	1.4	1.1	1.4	1.4	1.3

National differences: a problem but no surprise

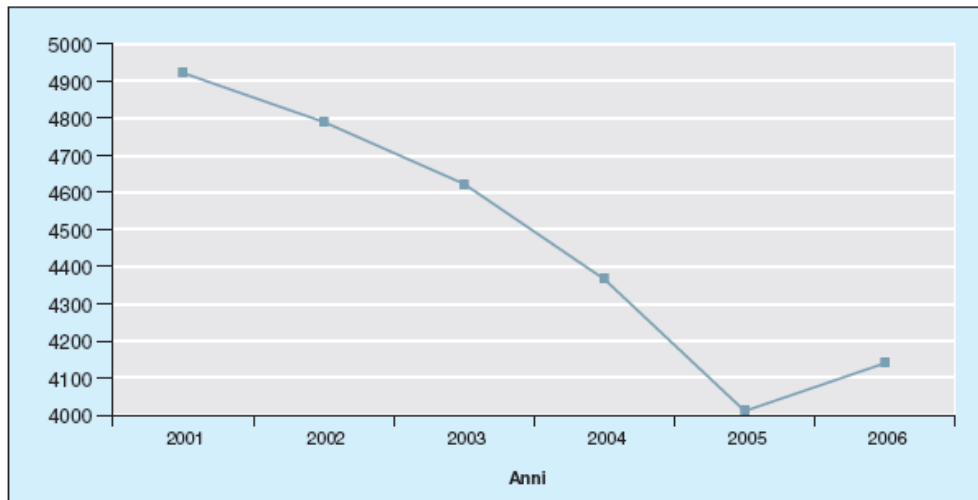


Fatal Accidents at work in Europe, standard impact on 100.000 workers, 2007, source EUROSTAT 2010.

Yet, accidents are decreasing



Accidents at work, EU 2001/2006
(Eurostat / INAIL)



Fatal Accidents at work, EU 2001/2006
(Eurostat / INAIL)

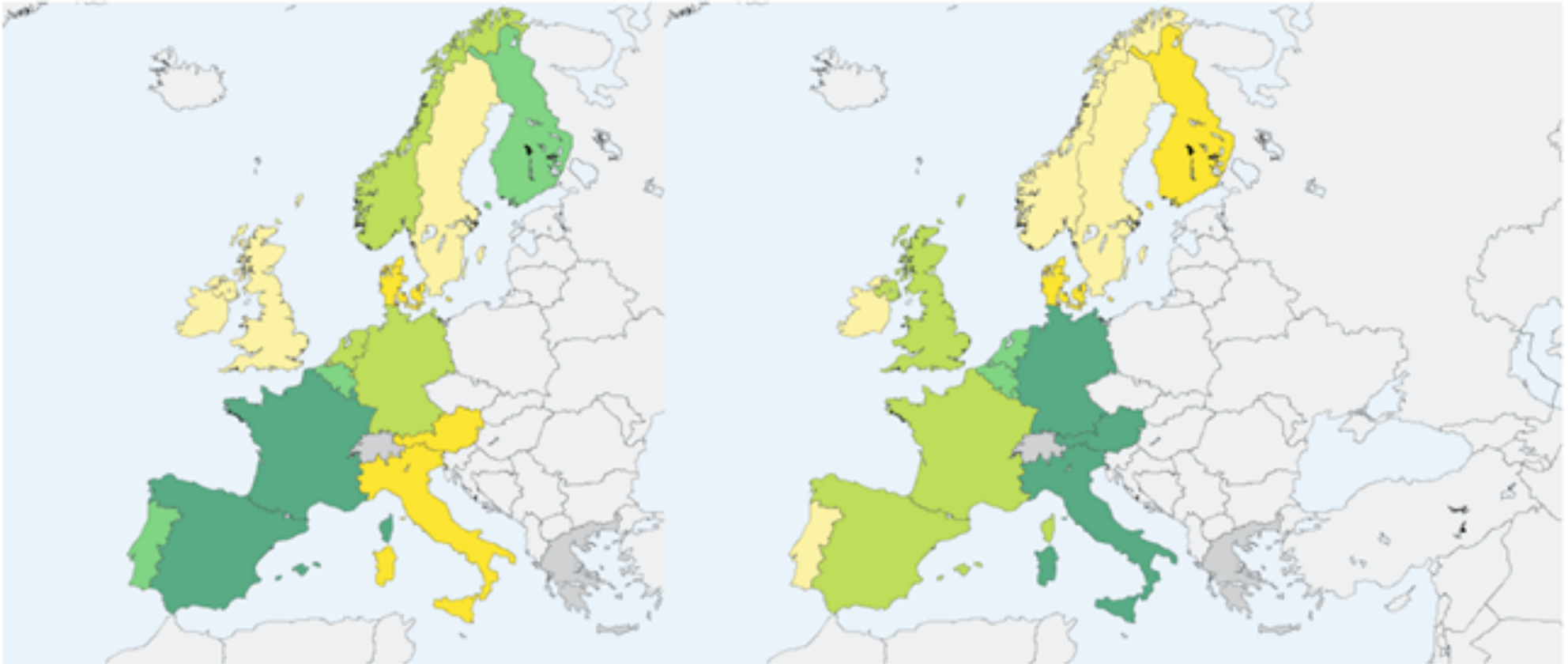
Though somewhere they are decreasing faster

Accidents: incidence rate every 100.000 workers European Union 2001 - 2006

STATES	2001	2002	2003	2004	2005	2006	Var. % 2006/2001
Spain	6,917	6,728	6,520	6,054	5,715	5,533	-20.0
Portugal	4,986	4,054	3,979	4,111	4,056	4,183	-16.1
France	4,819	4,887	4,689	4,434	4,448	4,022	-16.5
Luxemburg	4,585	5,131	5,033	4,439	3,414	3,685	-19.6
UE - Euro Area	4,426	4,035	3,783	3,638	3,545	3,469	-21.6
Germany	4,380	4,082	3,674	3,618	3,233	3,276	-25.2
Belgium	4,242	3,685	3,456	3,306	3,167	3,077	-27.5
UE - 15	3,841	3,529	3,329	3,176	3,098	3,013	-21.6
Finland	2,973	2,914	2,847	2,864	3,031	3,008	-1.2
Netherlands	3,588	1,442	1,188	1,070	2,653	2,831	-21.1
Italy	3,779	3,387	3,267	3,098	2,900	2,812	-25.6
Denmark	2,876	2,630	2,443	2,523	2,658	2,689	-6.5
Austria	2,763	2,788	2,629	2,731	2,564	2,394	-13.4
Greece	2,530	2,441	2,090	1,924	1,626	1,611	-36.3
Ireland	1,509	1,204	1,262	1,129	1,217	1,289	-14.6
UK	1,665	1,632	1,614	1,336	1,271	1,135	-31.8
Sweden	1,500	1,347	1,252	1,148	1,130	1,088	-27.5

Source EUROSTAT – Are not included accidents with less than 4 days leave and accidents to/from work

National differences in sector/industry risk

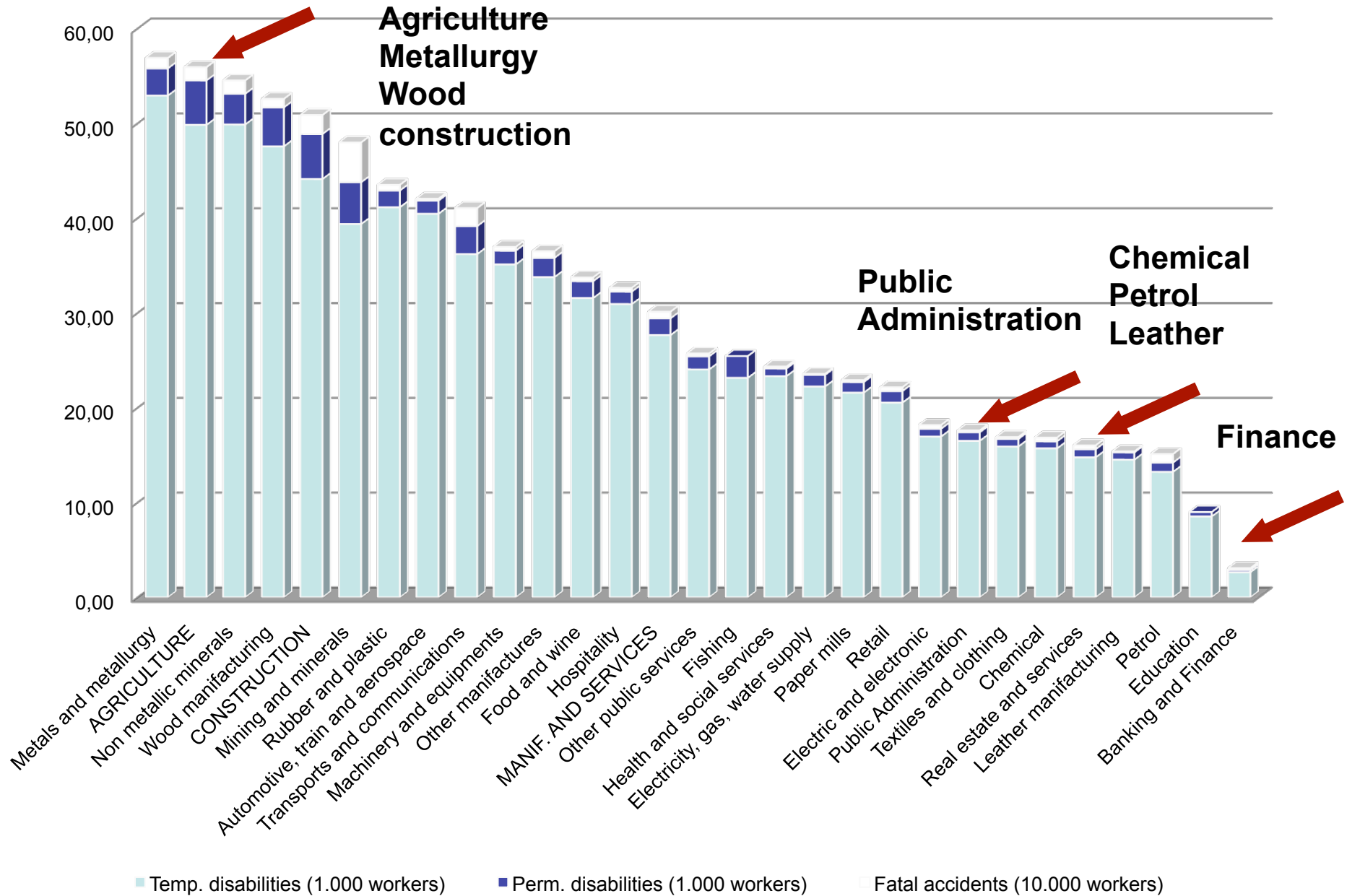


Construction

Agriculture

Accidents at work in Europe, Agriculture (right) and Construction (left), at least 3 days leave, standard impact on 100.000 workers, 2007, source EUROSTAT 2010.

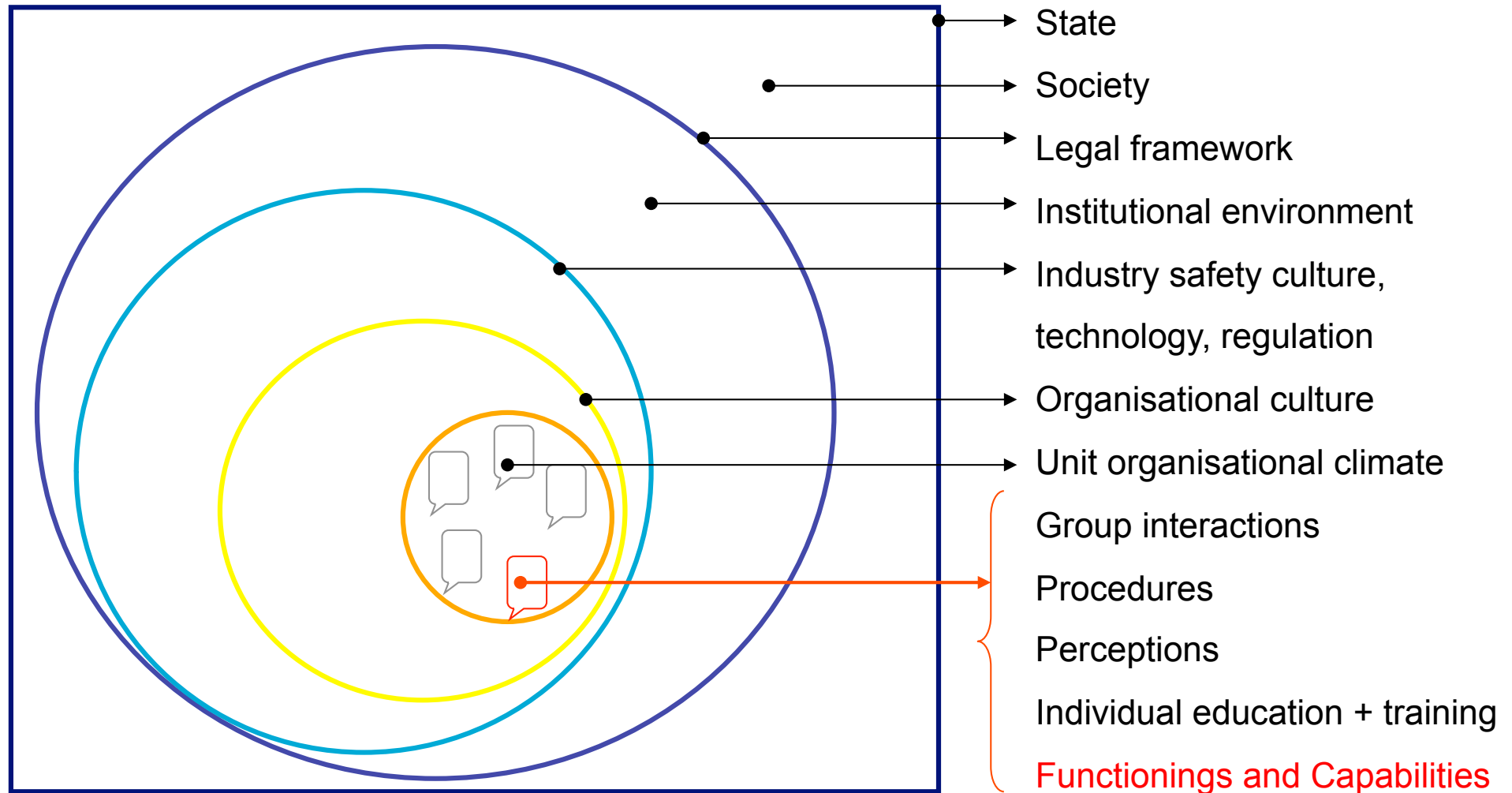
Industry differences in Italy



Disabilities every 1.000 workers and fatal accidents every 10.000 workers in Italy by industry, 2004-2006, consolidated averages, source INAIL 2010.

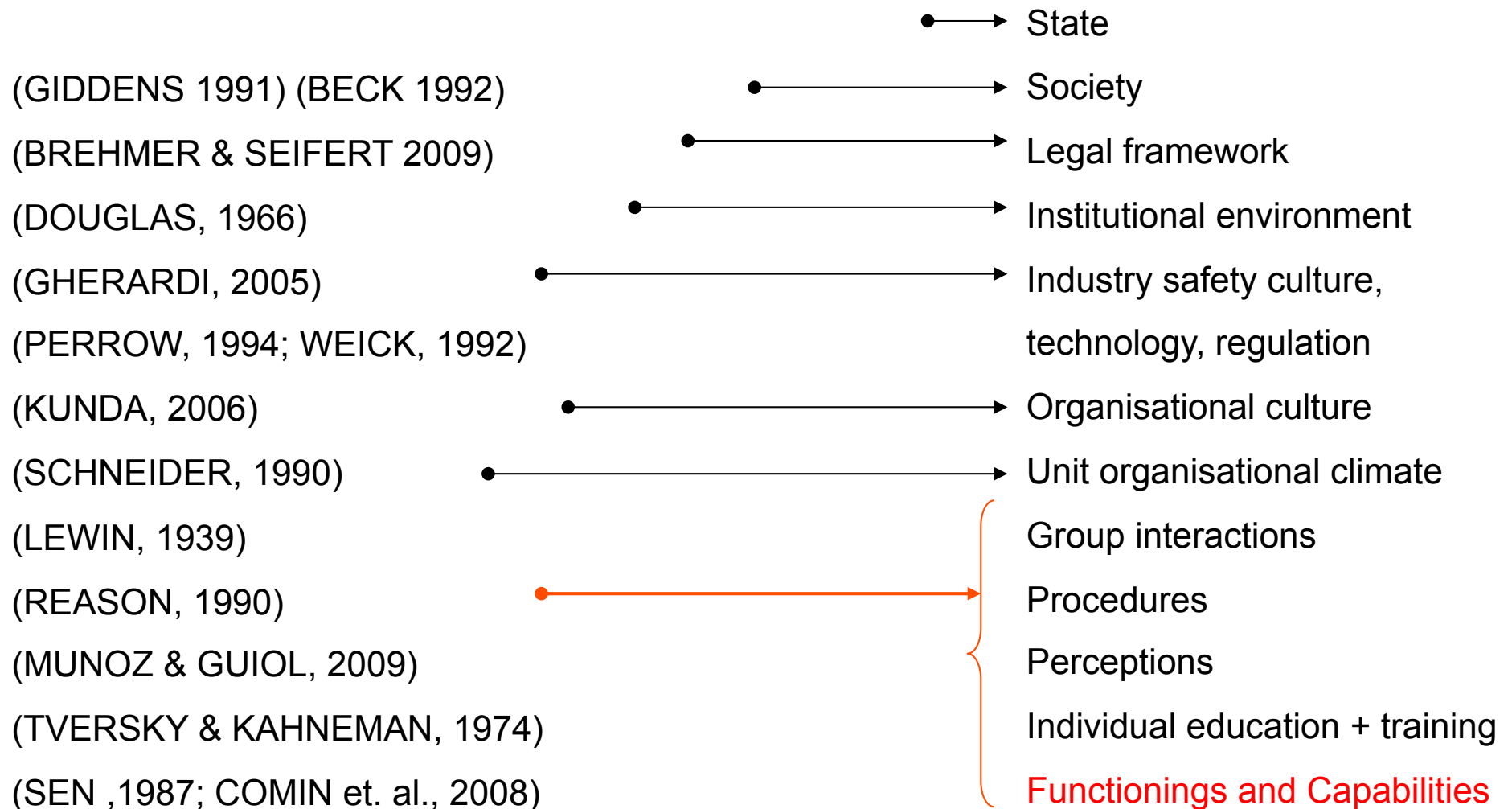
Occupational risks (What we know already)

Risk, safety and well-being are multi level complex phenomena to be studied at a systemic level, taking into account both individual and organizational factors rising economic, ethical, management, juridical, psychological issues.



Occupational risks (What we know already)

Risk, safety and well-being are multi level complex phenomena to be studied at a systemic level, taking into account both individual and organizational factors rising economic, ethical, management, juridical, psychological issues.



Vulnerability is not connected only with national, or institutional contexts, industry, technology, legal framework, organisational culture, gender, age, or jobs...

1300 fatal accidents / 900.000 accidents in Italy 2007

1140 fatal accidents / 874.866 accidents in Italy, 2008

Foreign workers and flexible/atypical workers are more in danger.

Both workers represent a growing portion of Italian workforce.

Old and new polarizations in the labour market:



Insiders / Outsiders
Young / Aged
Permanent / Short term
Unionized / Atypical
Under 35 / Over 45
Migrants / Nationals
North / South

Employment contractual status matters, why?

Statistics in **Italy** show that flexible jobs are in general jobs with lower levels of social protection, higher risks and bigger problems of safety.

The atypical job is today the most typical and common in Italy for under 35 (short term, project contract work, staff leasing, freelance workers, unsalaried workers). Flexible jobs in general assure lower levels of social protection, higher risks, safety and health problems, uncertain pension.

Citizenship matters, why?

In **Austria**: 37% of migrant workers surveyed felt affected by poor health conditions at work, compared with only 16% of Austrian workers; and some 30% of migrant workers felt particularly affected by accidents and injury risks in the workplace, compared with only 13% of Austrians.

In **Spain**: 8.4 out of every 100,000 migrant workers died in labour accidents in 2005, as compared to 6.3 for the overall Spanish labour force.

In **Italy**: in the total active population there is one accident at work for every 23 people, instead one accident at work every 16 non-nationals.

Sources: Eurofound 2007 / ILO 2010 / INAIL 2008


New theoretical frameworks could be needed

Workers' Participation  Occupational Health and Safety

P. Guiol et J. Muñoz, 2007, Management, participation et santé des salariés: des médecins et des salariés parlent, RECMA, n. 304.

Workers' Participation  Org. Climate  OHS

Functionings / Capabilities  Safety and Well-being

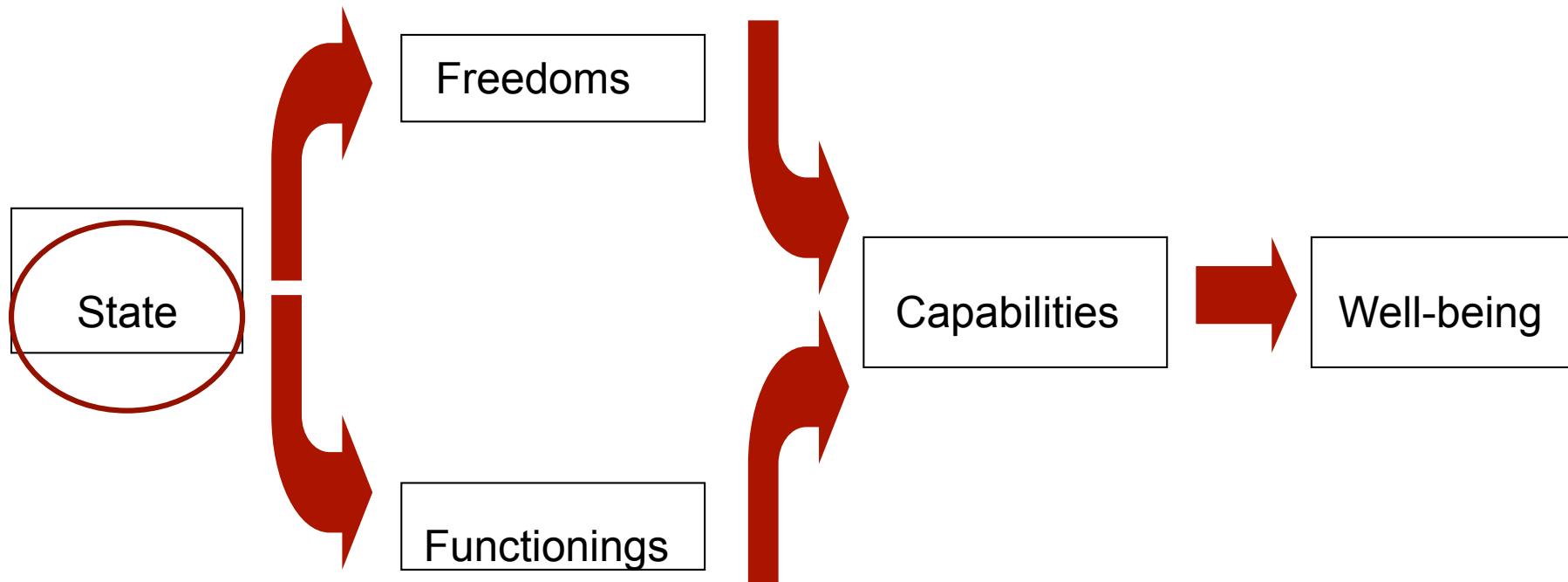
Organisational climate 

Research objectives

- 1) To study this “invisible” vulnerability not connected with traditionally studied issues.**
- 2) To blend the Capabilities Approach and Organisation Theory.**
- 3) To develop and test a scale to study how organisational climate and the contractual status affect OHS behaviours.**

Capabilities Approach, at a regional level

(Human Development)



CAPABILITIES: “Capabilities are notions of freedom: what real opportunities you have regarding the life you may lead”.
(Nussbaum: *Life, Bodily Health, Bodily Integrity, Senses, Imagination, and Thought, Emotions, Practical Reason, Affiliation, Control over one's Environment, Political, Material.*)

FUNCTIONINGS: “Valuable beings and doings”

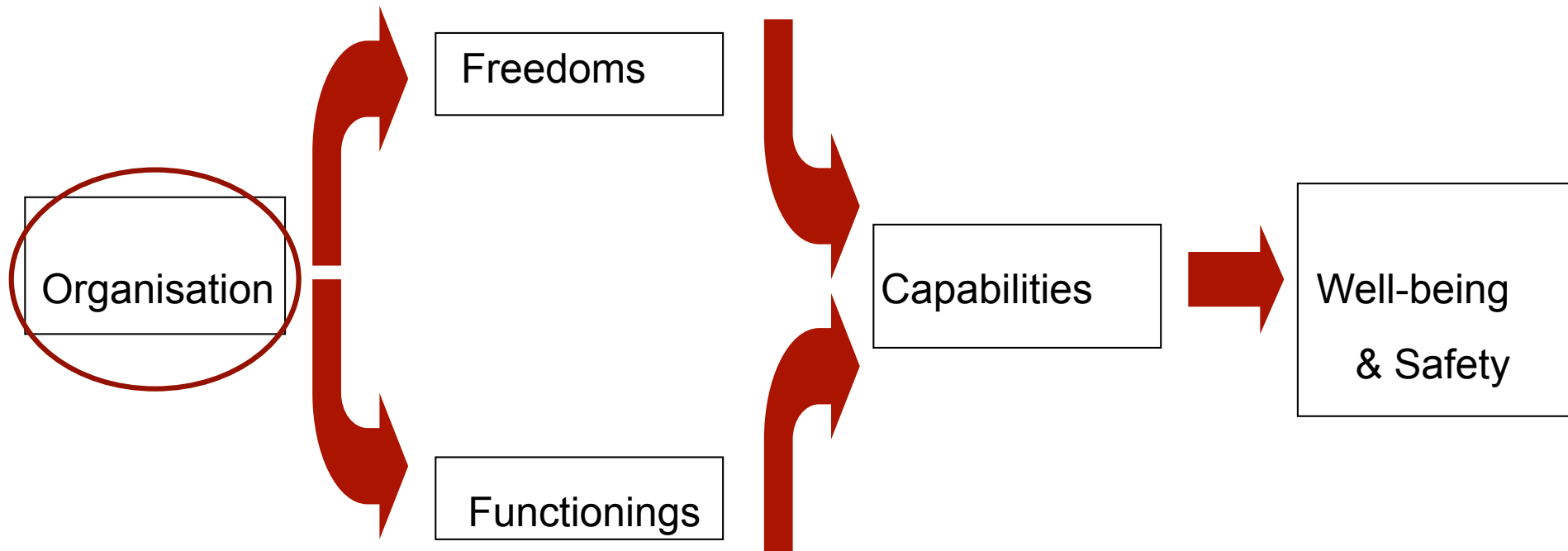
HUMAN DEVELOPMENT: (UNDP) Education, Health, Safety, Wellbeing ≠ Income or Per capita Resources or Utility

EQUALITY: Equal capacity to pursue wellbeing ≠ Equal access to resources, primary goods (Rawls, Dworkin).

Amartya Sen: Initially argued for: Equality / Freedom / Development; The importance of real freedoms in the assessment of a person's advantage; Individual differences in the ability to transform resources into valuable activities; The centrality of the *distribution* of welfare within society; The multi-variate nature of activities that give rise to happiness; Against excessive materialism in the evaluation of human welfare.

CAPABILITY APPROACH, at the organisational level

(Organisational Development)



SAFETY CAPABILITY: A complex ability to take care personally and with consciousness of risk and well-being. Taking advantage of rights, safety tools or procedures. Being an active part of the safety and well-being assurance system.

FUNCTIONINGS / FREEDOMS: Safety training, proper climate, safety culture, equity...

ORGANISATIONAL DEVELOPMENT

= Training, organisational Well-being, Safety, developing workers capabilities, Motivation

≠ Salary or Per capita Resources, Utility of Safety tools

Empirical study

- 1 To define through the literature a “safety capability”
- 2 To elaborate a pilot questionnaire
- 3 To develop a scale
- 4 To test scale and questionnaire with a field study (15 organisations, 260 respondents, 21 questions)
- 5 To build macro items of functionings with exploratory factor analysis
- 6 To test the correlation between functionings and safety capability with a correlation

The model

Safety Capability (Y) : Dependent variable

A complex ability to take care personally and with consciousness of risk and well-being. Taking advantage of rights, safety tools or procedures. Being an active part of the safety and well-being assurance system.

Functionings (X): Independent variables

Organisational and individual conditions necessary to develop a safety capability.

Factor analysis among independent variables to build macro items

Functionings have been measured through 16 items then grouped in 4 macro items.

Multivariate regression to check the relationship between Functionings (X) and Safety Capability (Y)

Coefficients shows that the 4 predictors taken into consideration are affecting directly the safety capability.

Items after exploratory factor analysis

X_{qualità} Functioning “perceived quality of work”

Perception of equity and extent to which profit is not considered beyond well-being.

- “My salary is fair”.
- “My job is stressful”.
- “There is too much attention towards profit at any costs”.
- “Organisational HRM policies are fair”.

X_{risp-reg} Functioning “general respect for rules”

Workers’ freedom: operational autonomy, capability to exercise rights, moral safety enabling expression of own opinions and advancing suggestions about the jobs.

- “Not everybody has the same rights”.
- “Members can effectively contribute in decisions making at assemblies”.
- “We are encouraged to take decisions with autonomy”.
- “Everybody has enough freedom to express opinions and address working practices”.

X_{sicur} Functioning “safety climate”

Perception of safety and respect for rules in general.

- “In co-operatives there are better safety and well-being conditions, compared to workers in other firms.”
- “I feel safe at my working place”.
- “My colleagues often violate organisational rules”.
- “I don’t feel protected by the firm”.
- “In co-operatives workers’ safety is regarded more than in other firms”.
- “I perceive a strong sense of respect for law in general”.

X_{stab-lav} Functioning “job stability”.

Condition of flexibility and precariousness comparing owns firm and others.

- “There is less labour flexibility among co-operatives”.
- “Job precariousness is less a problem among co-operative firms”.

Factor Analysis

Matrice dei componenti <u>ruotata</u> ^a				
	Componente ¹⁰⁴			
	1	2	3	4
13. La retribuzione che percepisco è adeguata al lavoro che svolgo	0,260	0,508	-0,452	0,061
17. Non tutti i soci hanno gli stessi diritti *	-0,092	0,240	0,698	0,275
19. In cooperativa le condizioni di sicurezza e benessere per i lavoratori sono migliori che nelle altre imprese	0,787	0,064	-0,146	0,216
20. Il socio lavoratore può orientare le scelte della cooperativa in assemblea	0,389	0,441	0,126	-0,150
22. Mi sento sicuro sul mio luogo di lavoro	0,540	0,341	0,205	-0,146
28. La flessibilità del lavoro è minore nelle imprese cooperative	-0,123	-0,139	-0,019	0,762
30. Il lavoro è una fonte di stress *	0,099	0,676	-0,002	0,043
32. La precarietà del lavoro è minore nelle imprese cooperative	0,407	0,039	0,004	0,633
37. Si dedica troppo interesse al profitto a tutti i costi *	0,345	0,355	0,341	0,075
39. I miei colleghi spesso violano le norme organizzative *	-0,126	0,596	0,234	-0,107
41. Siamo incoraggiati a prendere decisioni autonome	0,185	0,677	0,029	-0,144
49. Ciascuno ha sufficiente libertà di esprimere opinioni e di influenzare il lavoro	0,475	0,478	0,320	-0,136
50. Non mi sento protetto/a dall'azienda *	0,532	0,071	0,324	-0,254
51. Le politiche del personale sono eque	0,481	0,616	0,074	0,152
52. Nelle cooperative la sicurezza dei lavoratori è tenuta maggiormente in considerazione	0,683	0,169	-0,084	0,192
54. Percepisco un forte senso di rispetto per le leggi in generale	0,193	0,030	0,569	-0,226
Metodo estrazione: analisi componenti principali. Metodo rotazione: <u>Varimax</u> con normalizzazione di Kaiser.				

Dependent variable

5 question to measure **safety capability**

In search for 5 conditions of worker:

- Knowledge of rules,
 - Understanding of their usefulness,
 - Awareness of his personal active responsibility in prevention,
 - Freedom to ask for norms to be implemented and respected,
 - Awareness of importance of OHS.
-
- “I don’t know safety rules and procedures”.
 - “Safety rules are useless, just a formal bureaucratic requisite”.
 - “Safety is not my business, it’s my firm business”.
 - “I don’t have the courage to force safety rules to be respected”.
 - “Safety rules and procedures’ respect is important”.

Safety Capability is therefore for us: the worker’s attitude to protect him through the understanding of safety procedures, the proper assessment of the objective risk and the freedom to ask the organization to respect the law and to implement safe work processes fitting the environmental and technological context.

Capability and functionings

$$Y_{\text{capability}} = \alpha + \beta_{\text{sicur}} X_{\text{sicur}} + \beta_{\text{risp-reg}} X_{\text{risp-reg}} + \beta_{\text{qualità}} X_{\text{qualità}} - \beta_{\text{stab-lav}} X_{\text{stab-lav}} + \varepsilon$$

Y = capability = dependent variable

α = constant

ε = error

β = standardized regression coefficient

X = *Functionings* = independent variables

(stab-lav) = “work safety/co-op difference”

(sicur) = “safety climate”

(risp-reg) = “respect for rules and procedures”

(qualità) = “job quality”

Behaviour, Climate and Capability

$$B = f(E, P, I, C)$$

B = behaviour is function (f) of person (P), environment (E), interactions (I) culture (C)

$$B_{\text{safety}} = f(P, E, I, C, Y_{\text{capability}})$$

$$B_{\text{safety}} = f[P, E, I, C, (X_{\text{stab-lav}} + X_{\text{sicur}} + X_{\text{risp-reg}} + X_{\text{qualità}})]$$

$$Y_{\text{capability1}} = \alpha + \beta_{\text{safety}} X_{\text{safety1}} + \beta_{\text{att_to_rules}} X_{\text{att_to_rules1}} + \beta_{\text{quality}} X_{\text{quality1}} - \beta_{\text{job_stability}} X_{\text{job_stability1}} + \varepsilon$$

CONCLUSIONS

There is a growing concern about migrant workers' and atypical workers' safety and well-being.

- It is not enough to provide rules and equipments if workers cannot understand their usefulness.
 - It is not enough to have and to be aware of rights being incapable of using them.
 - It is not enough to plan safety procedure if individual workers or groups promote risky behaviours.
-
- A free and empowered worker is more likely to address organisational wrongdoings.
 - A worker enjoying freedom, a safe climate, education and training is more likely to assume safe attitudes toward risk.
 - Safety and risk related behaviour (C_{safety}) is affected by employment stability, safety climate, respect for rules and procedures, job quality)
-
- Capability Approach could join traditional disciplines such as Ergonomics, Labour Law, Industrial Medicine and Sociology to study vulnerable workers looking at climate, freedoms, education, attitudes, employment conditions, equity.**

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Thanks for your attention

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