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## Navigating corporate responsibility in global supply chains using codes of conduct

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### Citation

Vandenbroucke, S. E. M. (2025, February 25). *Navigating corporate responsibility in global supply chains using codes of conduct*. Meijers-reeks. Retrieved from <https://hdl.handle.net/1887/4196396>

Version: Publisher's Version

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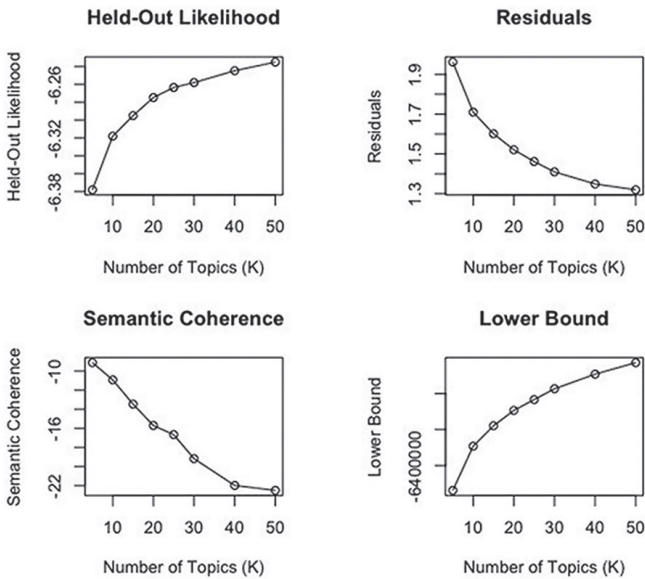
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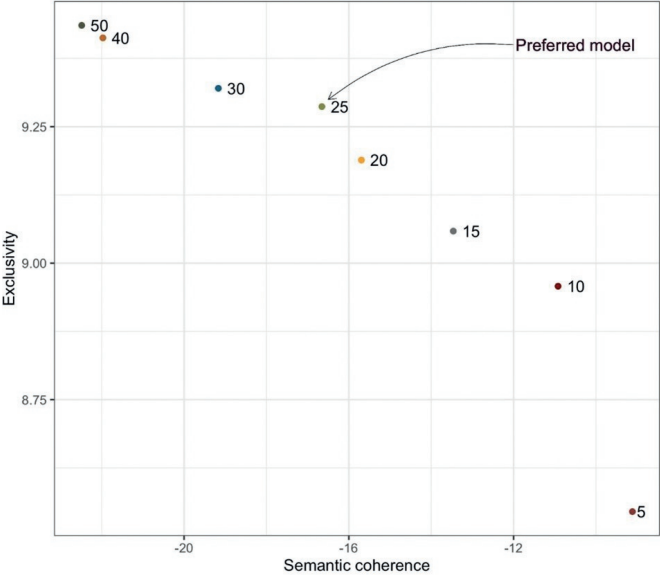
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APPENDIX 1: Justification for 25 topic model

The figures below justify the choice of 25 topics identified in the Structural Topic Modelling method. The graphs show that the optimal number of topics was 25, based on the trade-off between the linguistic coherence of topics and exclusivity.

*Diagnostic Values by Number of Topics*





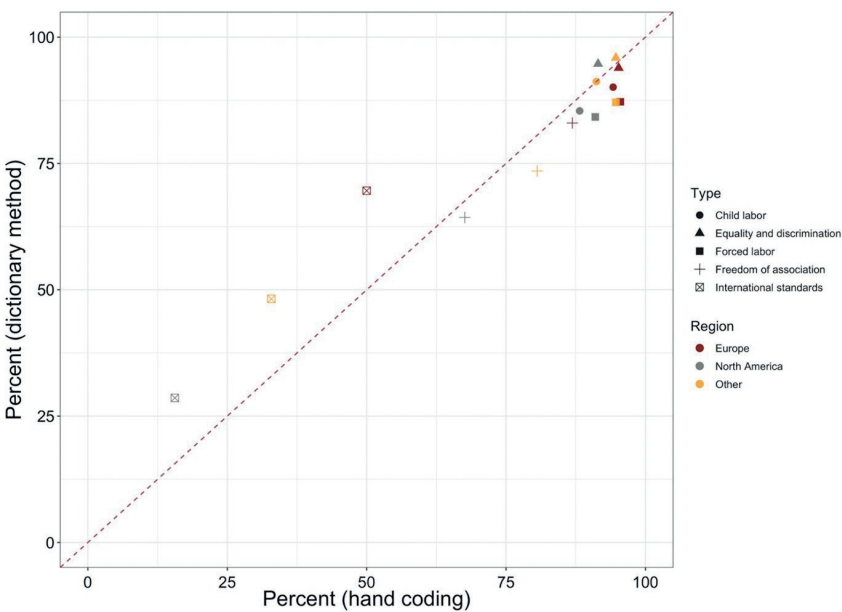
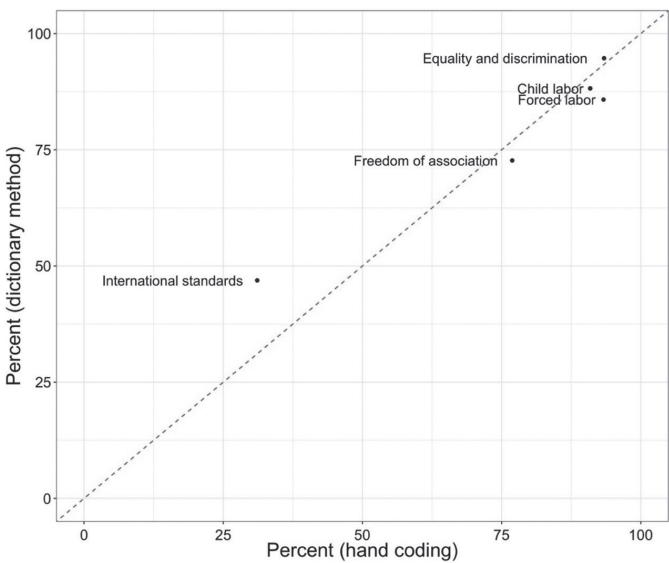
APPENDIX 2: Classifier for the dictionary-based method

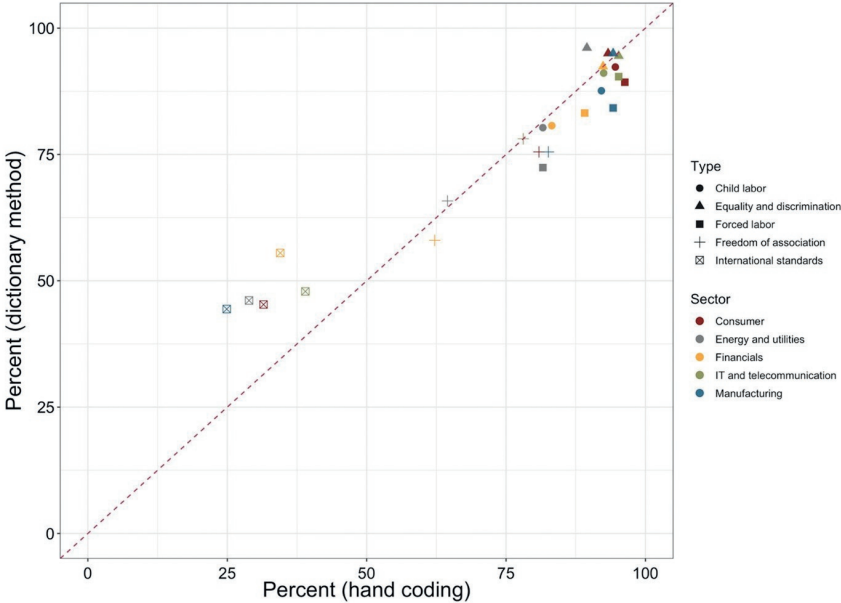
The table below lists the keywords included in the dictionary-based method for the identification of each variable.

Category	Keywords
FORCED LABOR	Forced labo(u)r Compulsory labo(u)r Involuntary labo(u)r Bonded lab(o)ur Slavery Freely chosen employment
CHILD LABOR	Child Underage Minimum age
DISCRIMINATION	Discrimination Harassment Equal opportunity
FREEDOM OF ASSOCIATION	Freedom of Association Collective Bargaining Collectively bargain Bargain collectively Trade Union(s) Labo(u)r union(s) Associate freely Freely associate Worker(s) representation
HEALTH AND SAFETY	Health and Safety Safety and Health Occupational hazard
WAGES AND COMPENSATION	Remuneration Benefit(s) Compensation Wage(s)
WORKING HOURS	Working hours Hours of work Working time Overtime
INTERNATIONAL STANDARDS	ILO Declaration on Fundamental Principles and Rights at Work ILO Declaration 1998 ILO Conventions (UN) Universal Declaration of Human Rights UN Guiding Principles on Business and Human Rights (UN) Global Compact OECD Guidelines for Multinational Enterprises

APPENDIX 3: Scattered plot

The scattered plot below visually presents the result gap between the dictionary method and the hand coding. The closer the points are to the diagonal axis, the more similar results were for the hand coding and the dictionary method.

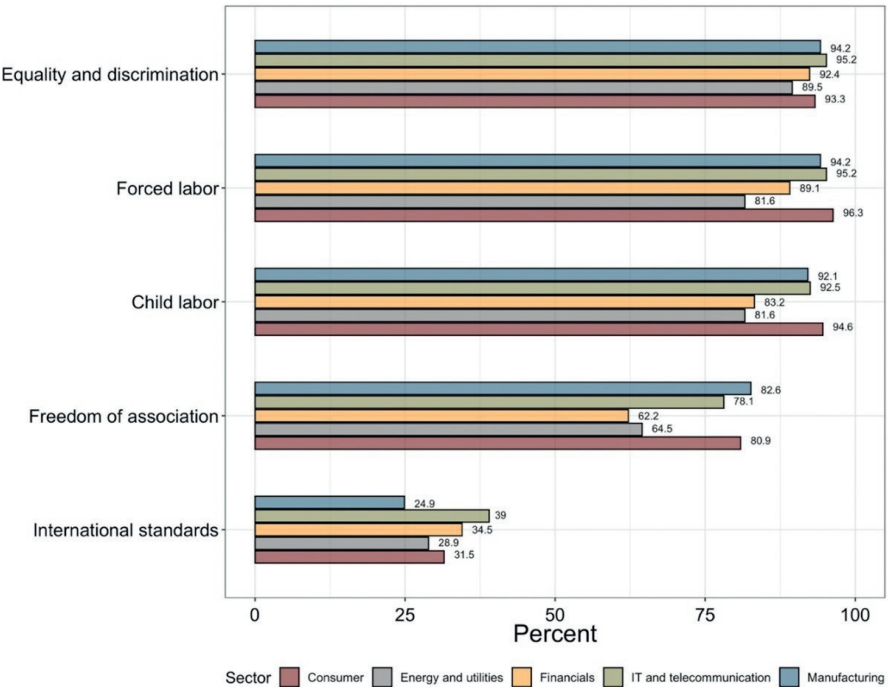




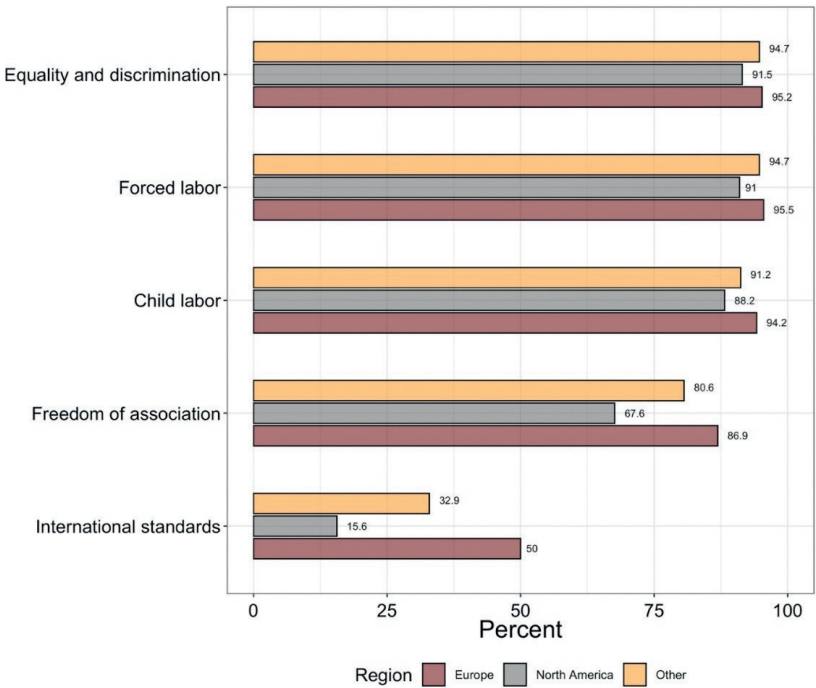
APPENDIX 4: Sector clustering

Clustering	Consumer	Energy and utilities	Financial	Manufacturing	IT and telecommu- nication
GICS sectors	Consumer Staples (72) Consumer Discretionary (109) Health Care (80) Real Estate (37)	Utilities (50) Energy (26)	Financials (119)	Industrials (147) Materials (94)	Information Technology (101) Communication (45)

APPENDIX 5: Variation of labor-related provisions across sector groups according to the manual coding



APPENDIX 6: Variation of labor-related provisions across geographical locations according to the manual coding





## Appendix 7 : Labelling of the topics identified by the STM approach

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
1	worker	grievanc	recruit	migrant	land	mechan	fee	sourc	mandatori	solut	young	agenc
2	gift	entertain	improp	intellectu	proprietary	offici	export	appear	behalf	accur	govern	anyth
3	human	declar	principl	nation	guid	global	fundament	intern	univers	unit	freedom	recogn
4	compani	director	offic	capit	one	corpor	depart	approv	violat	member	board	disclosur
5	vendor	patient	health	anti-corrupt	commerci	complianc	program	feder	state	forth	hotlin	permit
6	convent	ilo	undertak	labour	legisl	particular	attend	remuner	measur	defin	bank	refer
7	group	januari	subject	compact	site	guarante	kind	indirect	copi	met	page	local
8	shall	articl	contractor	order	purchas	entitl	least	notic	independ	upon	relev	establish
9	profession	ethic	transpar	therefor	channel	situat	market	research	interest	collabor	launder	peopl
10	sustain	charter	procur	reduc	develop	water	consumpt	carbon	csr	environment	strategi	purchas
11	allianc	particip	student	rba	hazard	ill	mainten	discharg	injuri	conform	worker	facil
12	partner	data	must	conflict	competit	code	agre	technolog	confidenti	sanction	export	abid
13	factori	audit	home	appendix	copi	site	food	store	print	critic	team	number
14	board	director	life	invest	committe	bank	june	stakehold	sharehold	coven	annual	societi
15	csr	etc	procur	region	societi	chemic	substanc	green	reduct	guidelin	establish	exampl
16	supplier	miner	conflict	code	gold	applic	complianc	must	briberi	reserv	expect	regul
17	personnel	credit	access	drug	premis	network	alcohol	possess	contact	softwar	email	media
18	anim	minim	hazard	welfar	releas	join	wast	emiss	scientif	treatment	labor	medic
19	parti	third	behalf	third-parti	public	industri	entertain	advantag	one	client	gift	agreement
20	workplac	violenc	water	incid	low	harass	safeti	wast	communiti	indigen	risk	injuri
21	divers	energi	inclus	expect	firm	valu	communiti	workforc	help	brand	opportun	reflect
22	deliveri	qualiti	product	manual	compon	packag	tool	materi	date	chang	purchas	section
23	never	speak	care	supervisor	alway	team	know	question	can	help	media	ask
24	facil	hour	overtim	wage	age	employ	week	compens	minimum	allow	child	whichev
25	modern	slaveri	recognis	organis	labour	breach	relev	behaviour	minimis	rais	authoris	chain

	V13	V14	V15	V16	V17	V18	V19	V20	LABEL
1	regular	deduct	leav	train	overtim	accommod	clear	next	Worker protection
2	payment	properti	prohibit	antitrust	other	trade	violat	trademark	Relationship with supplier
3	compact	labor	organ	bargain	convent	forc	child	form	International texts and standards
4	interest	committe	outsid	famili	financi	execut	subsidiari	appli	Unclear
5	code	target	subcontractor	anti-briberi	labor	agent	violat	must	Unclear
6	carri	iso	occup	corrupt	especi	guarante	contract	organis	International labour legislation
7	per	translat	entiti	hous	norm	engag	plc	print	Unclear
8	period	duti	provis	appoint	amend	deliveri	specifi	section	Unclear
9	money	public	privat	object	reput	guidelin	observ	principl	Unclear
10	approach	effici	climat	energi	recycl	improv	chain	solut	Environmental standards and sustainability
11	identifi	electron	recogn	emerg	character	control	mother	releas	Unclear
12	extern	applic	market	interest	step	restrict	expect	complianc	Unclear
13	visit	document	ltd	produc	day	page	find	auditor	Auditing procedure
14	execut	member	risk	approach	amount	various	reinforc	enhanc	Unclear
15	disast	accid	effort	qualiti	contribut	activ	consider	request	Unclear
16	request	minimum	adher	anti-corrupt	traffick	environment	upon	integr	Unclear
17	regulatori	data	oblig	electron	supplier	comput	properti	background	Unclear
18	wastewat	young	freeli	reus	live	emerg	treat	system	Limiting environmental impact and risks
19	life	data	offici	perceiv	given	improp	deal	proprietary	Unclear
20	manag	transport	physic	hazard	identifi	environ	greenhous	health	Prevention against risks and occupational hazards
21	commit	share	live	believ	highest	goal	equal	integr	Corporate ethical values
22	specif	manufactur	process	cost	label	part	point	traceabl	Product quality
23	insid	competitor	make	colleagu	sure	thing	feel	even	Unclear
24	disciplinari	labor	regular	exceed	higher	least	bond	prison	Labor rights and minimum working conditions
25	suppli	whistleblow	polic	tax	contractor	evas	claus	plc	Unclear

## 9.2 CHAPTER 5

## ANNEX 1

## Results of study 1 broken down per sector and geographic location

*Crosstabulation expert assessment with geographic location*

	No code	No provision	Recommendations to suppliers	Obligations to suppliers	Obligations to companies	Corrective Action Plans	Total
Asia	108	31	6	43	12	0	200
Europe	72	28	28	155	54	11	348
Latin America	30	2	5	2	1	0	40
North America	209	36	36	264	33	10	588
Oceania	12	4	6	28	11	4	65
Total	431	101	81	492	111	25	1241

*Crosstabulation expert assessment with sectors*

	No code	No provision	Recommendations to suppliers	Obligations to suppliers	Obligations to companies	Corrective Action Plans	Total
Communication	30	5	3	24	7	0	69
Consumer Discretionary	49	10	8	55	18	5	145
Consumer Staples	16	5	6	44	12	5	88
Energy	36	7	0	11	2	0	56
Financials	86	20	18	54	20	1	199
Health Care	36	8	5	59	2	2	112
Industrials	61	19	15	79	22	4	200
Information Technology	37	7	7	71	8	1	131
Materials	27	5	8	55	10	4	109
Real Estate	25	9	4	17	5	1	61
Utilities	28	6	7	23	5	2	71
Total	431	101	81	492	111	25	1241

Crosstabulation number of management systems geographic location

	No code	0 category	1 category	2 categories	3 categories	4 categories	5 categories	Total
Asia	108	42	15	7	11	7	10	200
Europe	72	50	57	84	55	23	7	348
Latin America	30	4	2	1	1	2	0	40
North America	209	71	80	102	66	31	29	588
Oceania	12	12	14	13	8	6	0	65
Total	431	179	168	207	141	69	46	1241

Crosstabulation number of management systems with sectors

	No code	0 category	1 category	2 categories	3 categories	4 categories	5 categories	Total
Communi- cation	30	12	9	11	6	0	1	69
Consumer Discretionary	49	16	23	17	29	8	3	145
Consumer Staples	16	9	20	18	12	11	2	88
Energy	36	6	8	4	1	1	0	56
Financials	86	31	27	37	9	8	1	199
Health Care	36	14	11	18	24	7	2	112
Industrials	61	40	19	43	19	15	3	200
Information Technology	37	13	12	13	13	11	32	131
Materials	27	16	16	29	14	5	2	109
Real Estate	25	15	8	6	6	1	0	61
Utilities	28	7	15	11	8	2	0	71
Total	431	179	168	207	141	69	46	1241

## ANNEX 2

## Full correlation matrix for study 2

	KTC Global score	KTC Management and accountability	KTC Training	KTC Stakeholder engagement	KTC Traceability	KTC Risk Assessment	KTC Purchasing practices	KTC Worker Engagement	KTC Freedom of association
KTC Global score	1								
KTC Management and accountability	.690**	1							
KTC Training	.841**	.670**	1						
KTC Stakeholder engagement	.816**	.557**	.734**	1					
KTC Traceability	.673**	.389**	.459**	.559**	1				
KTC Risk assessment	.820**	.626**	.681**	.725**	.514**	1			
KTC Purchasing practices	.745**	.536**	.581**	.673**	.511**	.587**	1		
KTC Worker Engagement	.764**	.379**	.593**	.643**	.475**	.622**	.580**	1	
KTC Freedom of association	.545**	.189	.311**	.382**	.222*	.445**	.606**	.616**	1
KTC Grievance mechanisms	.786**	.564**	.628**	.672**	.465**	.623**	.605**	.617**	.485**
KTC Monitoring	.914**	.602**	.786**	.673**	.542**	.710**	.604**	.696**	.454**
KTC Corrective action plans	.842**	.684**	.734**	.624**	.510**	.698**	.559**	.556**	.342**
KTC Remedy	.883**	.691**	.757**	.678**	.568**	.710**	.594**	.556**	.348**
Implementation keywords: Number of categories referred to	.119	.149	.033	.155	.189	.107	.111	.081	-.087
Frequency of 'Transparency' keywords	.098	-.029	-.010	.101	.241*	-.058	.090	.068	-.100
Frequency of 'Risk assessment' keywords	.022	.039	-.002	.150	-.082	.023	-.033	.003	-.079
Frequency of 'Training' keywords	.214	.108	.012	.166	.306**	.206	.054	.165	-.092
Frequency of 'Corrective action process' keywords	-.052	.060	-.047	.063	-.013	-.040	-.111	-.049	-.175
Frequency of 'Reporting procedures' keywords	.245*	.203	.184	.117	.237*	.209	-.018	.187	.057
Expert assessment	.109	.195	.047	.134	.075	.173	.136	.099	.037

KTC Grievance mechanisms	KTC Monitoring	KTC Corrective action plans	KTC Remedy	Implementation keywords: Number of categories present	Frequency of 'Transparency' keywords	Frequency of 'Risk assessment' keywords	Frequency of 'Training' keywords	Frequency of 'Corrective action process' keywords	Frequency of 'Reporting procedures' keywords	Expert assessment
1										
.659**	1									
.604**	.809**	1								
.664**	.820**	.935**	1							
.092	.043	.110	.137	1						
-.010	.097	.085	.101	.579**	1					
.158	-.042	.103	.075	.283**	.150**	1				
.265*	.164	.144	.134	.498**	.366**	.420**	1			
.063	-.147	.025	.055	.470**	.193**	.570**	.252**	1		
.174	.223	.200	.170	.386**	.066	.016	.077*	.075*	1	
.121	.042	.154	.176	.818**	.216**	.276**	.193**	.329**	.185**	1

## 9.3 CHAPTER 6

## Annex 1: Topic list and example questions

**Ice breaker:** Can you introduce yourself, and your position within your company?

## TOPIC 1: Adopting a code of conduct for global supply chains.

- Please describe your global supply chains and the suppliers you work with And the main environmental and human risks arising in your supply chains?
- Why has your company adopted a supplier code of conduct?
- Were you involved in the process? Who is in charge of adopting the code?  
And with whom?
- What standards are important to you / your company, in the codes of conduct and in practice?
- Which (national/international) incentives influence your CSR business practices (if any)? (Factors of influence)

## TOPIC 2: Implementing supplier codes of conduct.

- Who oversees the code implementation within your organization?
- How is the SCC integrated in supplier contracts?
- What is your company currently doing to implement your codes of conduct?
- What challenges encountered in the implementation of your SCC in global supply chains? What solutions brought forward?
- To what extent have you noticed a change of practices in the past few years?

## TOPIC 3: Assessing the effect of due diligence laws.

- Are you familiar with the due diligence EU Directive proposal?
- How do you expect the Directive to affect your business practices?  
What are the organizational changes to be expected in the way CSR is dealt with in your enterprise?
- How do you expect the Directive to affect your supplier codes of conduct and its implementation?
- How do you expect the Directive to affect your relationship / contracts with suppliers?
- What is your opinion on these laws?

Do you have any final remarks? This is your opportunity to discuss anything that was left aside in this conversation but that you wish to touch upon.

Annex 2: Table describing the Atlas.TI code book

Code group	Code name
Development of SCC	Reasons for SCC adoption Time SCC adoption Team adopting SCC Support from public institutions Implementing codes – Who? SCC and Human rights policies Governance: role of SCC Inspiration content SCC content Importance of HR experts UNGP influence SCC in contract
Evolution & restructuring	Team of HR experts Evolution of HR interest New code Public sector support Evolution: Corporate restructuring Evolution: New tool Environment & sustainability before UNGP influence
Implementation challenges	Collaboration with procurement Stakeholder engagement Collaboration with suppliers HR embeddedness in practice Difficulties in measuring SCC compliance Mapping at-risk suppliers Supplier leverage Costs of implementation HR not a priority Cascading down the supply chain Internal gov collaboration
Implementation good practices	Implementation tools Efforts for supplier-buyer relationship Internal awareness raising Internal workshops Supplier monitoring Grievance Whistleblowing E-learning Internal gov collaboration
Legal framework potential impact	Benefits of the laws SMEs difficulties CSDDD: Companies in favour Too much freedom for companies CSDDD: too early CSDDD: Administrative burden Mandatory obligation = action Compliance ticking box CSDDD: Ressources needed CSDDD: HR as a priority CSDDD: Gaps with practice Competition difficulties Deficits of the law CSDDD: Level playing field SCC in contract Importance of HR experts