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A questionnaire survey study of the building industry's attitude towards social sustainability in Sweden and China

Master's Thesis of Science
in the Master's Program Design and Construction Project Management

Jingxuan Zhang

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JINGXUAN ZHANG

Department of Technology Management and Economics

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Göteborg, Sweden 2017

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Department of Technology Management and Economics

Division of Service Management and Logistics

CHALMERS UNIVERSITY OF TECHNOLOGY

SE-412 96 Göteborg

Sweden

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ABSTRACT

In today's construction industry, there are much research and studies on environmental and economic sustainability, but the topic of social sustainability often lacks attention. The concept of social sustainability covers a large area, and it is hard to define.

This thesis has studied different frameworks of social sustainability and has provided measurable criteria of social sustainability. The criteria were used to analyse the building industry's current attitude towards social sustainability development in Sweden and China. In other words, this thesis tried to find out social related problems that the construction industry is facing, and the measures that the industry has taken to reduce the impact of social problems.

Since the thesis studied a large-range topic in a large industry, a quantitative method was used in this thesis. Survey questionnaires regarding social sustainability development were sent out to companies in the construction industry in Sweden and China. The companies included architecture firms, consultant companies, contractors and real estate companies. The questionnaires were sent out by Survey Monkey, and the answers were analyzed by using an Excel spreadsheet.

The results showed that in both Sweden and China, companies had personnel that were dealing with social sustainability related issues. However, the Swedish construction industry and the Chinese construction industry perceived that they face different social sustainability related issues. The companies in Sweden and China took different measures to reduce the social impacts.

The results of the thesis can be used as a benchmark for future development of social sustainability in both countries. Because the society of China and Sweden are different, the results from the two nations were not meant to be compared or use one as a benchmark for another one.

Key words: social sustainability, survey study, construction industry

Contents

ABSTRACT	I
CONTENTS	III
PREFACE	VI
1 INTRODUCTION	1
1.1 Aim	2
1.2 Objectives and research questions	2
1.3 Limitations	2
1.4 Thesis structure	3
2 DIFFERENT MEASURES AND FRAMEWORKS OF SOCIAL SUSTAINABILITY	4
2.1 Agenda 21	4
2.2 UNDSO theme	5
2.3 “What” and “how” aspects	6
2.4 Process perspectives	7
2.5 Stakeholder perspective of social sustainable development	10
3 METHODOLOGY	13
3.1 Choice of method	13
3.2 Design of survey questionnaire	13
3.2.1 Design of questionnaire structure	13
3.2.2 Choice of indicators	15
3.2.3 Choice of scales	15
3.3 Data collection and population	15
3.4 Data analysis	18
3.5 Data quality and reflection of choice of methodology	18
4 RESULTS OF THE QUESTIONNAIRE	19
4.1 Results from companies in the Swedish construction industry	19
4.1.1 Cooperative Response: management of social sustainability	19
4.1.2 Companies’ perception of the challenges regarding development of social sustainability	20
4.1.3 Companies’ response and possible effects	23
4.2 Result from companies in the Chinese construction industry	26
4.2.1 Organization and social sustainability personal	26
4.2.2 Companies’ definition of the challenges regarding development of social sustainability	27

4.2.3	Companies' response and possible effects	30
5	ANALYSIS	33
6	DISCUSSION AND CONCLUSION	34
	REFERENCES	36
7	APPENDIX	38
7.1	Appendix 1 Indicators lists	38
7.2	Appendix 2 The questionnaire that sent to the Swedish companies	45
7.3	Appendix 3 The questionnaire that sent to the Chinese companies	54

Preface

This master thesis is a survey project regarding social sustainability in the construction industry in Sweden and China. It is carried out at the Department of Technology Management and Economics, Chalmers University of Technology, Sweden. It started from Feb 2017 to November 2017.

The project has been carried out with support of Pernilla Gluch as supervisor. I appreciate help from Daniella Petersen from Service Management and Logistics, Chalmers University of Technology and Jun Kono from Division of Building Technology, Chalmers University of Technology. I would like to thank the respondents from Swedish and Chinese companies which took part in the survey project. I also would like to thank Chunjuan Li, Luxuan Chen and Yutong Chen for helping me to send out the questionnaire in China. The thesis could not have been finished without their help.

I also would like to thank my classmates Amrita Singh, Elmira Hemmati, Boki Vojvodić, Sebastian Antonsson and Edo Sijarić for their support. I also appreciate support from my friend Haixi Li and Yigeng Zhang.

Göteborg November 2017

Jingxuan Zhang

1 Introduction

The topic of sustainability and sustainable development has become more and more widespread.

When talking about the definition of sustainability, Brundtland (1987) gave a commonly accepted definition: “sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The idea of sustainability influences every industry and the construction industry is not an exception. Other kinds of literature, such as Shaker (2015) states that sustainability can be seen as a goal of balancing humans and ecosystem, sustainable development is a “holistic approach” and “temporal process” to achieve sustainability. In the early 90s, in numerous organizations and agencies, the goals of sustainability were compressed into the triple-bottom-line model (see Figure 1.1). The model describes that economic development, social development, and environmental protection are three pillars that support sustainable development (Wilson, 2015). At the same time in the construction industry, an approach of integrating economic activities, environmental improvements and social elements for urban redevelopment start to be implemented across EU (Colantonio & Dixon, 2011). In 2005, World Assembly suggests balancing environmental, social equity and economic demands to achieve sustainability (United Nations, 2005). In other words, environment, the economy and society are the three dimensions of sustainable development.

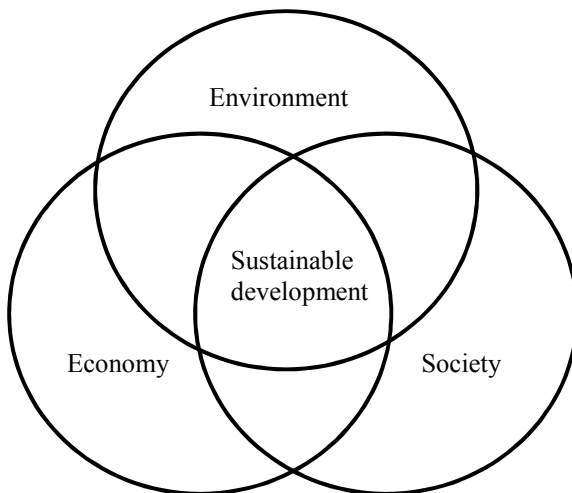


Figure 1.1 The triple-bottom-line model

Even though, recently there are also some researchers who argue that the culture should be the fourth pillar of sustainable development (James, 2015), the triple-bottom-line model is still the widely accepted model for organizations when talking about sustainability.

When it comes to social sustainability, Broström (2012) suggests that it is an open concept with no precise definition of social sustainability. Dempsey et al. (2011) also suggests that social sustainability has a broad range concept with multi-dimensions and the goal of sustainability was not clearly defined.

Because of the dynamic character of the social sustainability concept, it is hard to point out the area of social sustainability. Thus, when it comes to defining the social

sustainability, researchers often point out the measures instead of giving a general definition of social sustainability. However, based on different studies and measures, a definition can be drawn out that social sustainability is a process of creating sustainable places that promote well-being, by understanding what people need from the places they live and work (Agenda 21, 1992; UNDSO, 2001; Labuschagne & Brent, 2008; etc.). It is often related to the topic such as social equity, health equity, community development, human rights, labor rights, social responsibility, and justice. Detailed study will be stated in Chapter 3.

While environmental sustainability and economic sustainability topics have been popular in research, the social development seemed to be a topic that lacks attention (Broström, 2012). Compared to “lacking attention” situation in the research area, the social sustainability drew attention on a political level. European policy focuses on social cohesion and tries to create “sustainable community” with defined goals and measures (Dempsey et al., 2011). It can be seen that the topic of social sustainability gained more attention from politicians and government instead of researchers in construction industry.

However, the topic of social sustainability is slowly gaining more and more attention. In the construction industry, due to an increase of pressure from governments and environmentalists in the area of society demands, organizations have started to find ways to manage their business to develop social sustainability (Opuku & Ahmed, 2014).

Even though there has been a development of business strategy regarding social sustainability in the construction industry (Zhao et al., 2012), there is still a lack of a holistic picture of the current situation as a benchmark for developing social sustainability.

1.1 Aim

This thesis aims to map the current situation of developing social sustainability in Swedish and Chinese construction related companies. This includes the identification of measurable criteria of social sustainability as well as to provide an overall picture of construction companies’ attitude towards social sustainability.

1.2 Objectives and research questions

This thesis presents different dimensions of social sustainability and indicators (criteria) that can be used to measure social sustainability activities. These criteria are used to investigate:

- Personnel setup and organizational structure to manage social sustainability related activities in Swedish and Chinese construction related companies.
- Perceived social challenges.
- Perceived hindrances and pressures that hinder the development of social sustainability.
- Measures that have been taken to improve social sustainability.
- Possible effects and outcomes after taking measures and actions to manage social sustainability related challenges problems.

1.3 Limitations

This thesis project is a survey study that focuses on drawing out the comprehensive picture of social sustainability in the construction industry in Sweden and China. This

thesis only focuses on presenting results from taken social sustainability actions, not the antecedent that lead to the results.

1.4 Thesis structure

This thesis will firstly present different measures and frameworks, with dimensions and criteria, of social sustainability, followed by describing the research method, the design of survey questionnaire with the list of questions, next the results will be shown, the discussion and conclusion will be in the final section (see Figure 1.2)

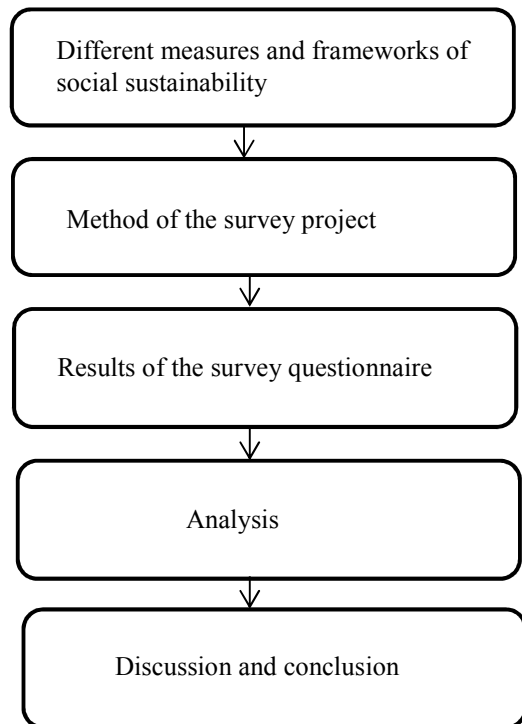


Figure 1.2 The structure of the thesis.

2 Different measures and frameworks of social sustainability

When it comes to organizing social sustainability activities, one fundamental question will be the framework, measures, and goals of social sustainability. Furthermore, application and usability of the framework also need to be considered. There are many studies on sustainability indicators. Ghosh et al. (2006) stated that there was more emphasis on research indicators regarding sustainability than making urban environment sustainable. Indicators make an easy measurement to the goal of sustainable development.

There are different studies on social sustainability frameworks based different perspectives.

2.1 Agenda 21

In 1992, “Agenda 21” was published at the United Nations Conference on Environment and Development. 178 countries voted and adopted this program. This agenda covers sustainable management of economic, social, and natural capital (Ghosh et al. 2006).

In its first section, Agenda 21 includes social and economic dimension, for example, this section covers developing sustainable development related domestic policies, protecting human health conditions, promoting sustainable settlement and integrating environment and development in decision-making (Agenda 21, 1992).

The second section covers sustainable development for resources. For example, protection of oceans and fresh water and management of ecosystem is included in the section.

The third section is related to major groups. It covers equitable development, protecting the rights of children and youth, protecting the rights of workers and tried to build a scientific and technological community (Agenda 21, 1992).

The last section gives means of implementation. The means covered having financial resources, transfer of technology, promoting education, developing a legal instrument and institutional arrangements (Agenda 21, 1992).

Agenda 21 is considered as a blueprint of a list of indicators for sustainable development. Later on, it was improved and tested by governmental and non-governmental organizations. Finally, a list of 134 indicators in the categories of society, economics, environment, and institutions, with methodology sheets for each indicator was adopted by many countries (Ghosh et al. 2006).

According to Ghosh et al. (2006), in the Agenda 21, sub-themes are divided into driving forces, states and response (see Figure 2.1). Giving an example, when analysis the sub-theme combating poverty, the Agenda 21 suggests firstly analysing the “basis for action”, and then defined the “objectives” finally give “means of implementation” (Agenda 21).

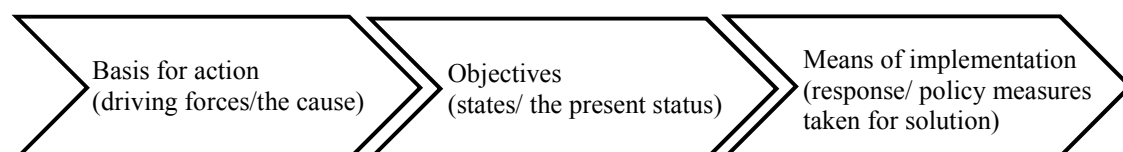


Figure 2.1 Sub-themes of Agenda 21

There are many countries followed this driving force–state–response model to develop their own sustainability indicators. However, this model is rather ambitious. Sometimes the indicators are hard to classify into driving force or state.

Zan et al. (2014) also states that when implementing the Agenda 21, communities often focus on a specific area and neglected other larger areas. Furthermore, the communities should have a proper plan and continuous commitments among the involving parties.

2.2 UNDSO theme

Some social sustainability frameworks are used to support decision making, one of them is the UNDSO theme. It gives an example of classifying social sustainability indicators.

The UNDSO theme was firstly adopted by United Nations Division for Sustainable Development (UNDSO) to measure the process of achievement of Millennium Development Goals. It is functioning through different indicators and focuses on standardization and procedures (Hutchins & Sutherland, 2008). Those indicators cover three levels: global, national and local (Ghosh et al., 2006).

According to Hutchins & Sutherland (2008), UNDSO theme is firstly classified with different dimensions of sustainability according to triple bottom line model (environment, social, economic). There are five major themes regarding social sustainability. The five themes are equity, health, education, housing security, and population. In each theme, there is sub-theme covers poverty, gender equality, nutritional status, mortality, sanitation, drinking water, healthcare delivery, education level, literacy, living conditions, crime and population change (UNDSO, 2001). There must be at least one or as many as three indicators to support the sub-theme. The indicators are taken from Human Development Report Office of UNEP (United Nations Environment Program) in a national level data from many countries (Hutchins & Sutherland, 2008). Take gender equality sub-theme as an example, the indicator for this sub-theme is a ratio of average female wage to male wage (UNDSO, 2001).

The following Table 2.1 provides UNDSO theme.

Since the UNDSO theme is based on national level data and used to help to manage national level problems, it is a rather general framework with a focus on holistic goals (Suopajarvi et al., 2016). Furthermore, it is rather a goal oriented framework than a process oriented frame work.

Table 2.1 UNDS theme of social sustainability, Hutchins & Sutherland (2008), pp 1692

Theme	Sub-theme
Equity	Gender equality
	Poverty
Health	Mortality
	Nutrition statues
	Sanitation
	Drinking water
	Healthcare delivery
	Literacy
Housing security	Living conditions
	Crime
	Education level
Education	Population change
Population	

2.3 “What” and “how” aspects

Instead of providing a new framework and measures for social sustainability, Broström (2012) provides an aspect of classifying social sustainability measures in a “what” and “how” perspective. Broström (2012) argues that the pillar of social sustainability consist of a substantive aspect and a procedural aspect.

Substantive aspect can be seen as the goal of social sustainability. In another word, it contains the meaning of “what should be done” (Broström, 2012). Broström (2012) groups different dimensions in substantive aspects. Those dimensions in substantive aspects contained basic needs of a human (both material and spiritual), justice, equality of rights, access to social infrastructure, opportunity of learning and self-development, security, health of works, customers and communities, social cohesion, cultural diversity and traditions, sense of community attachment, social recognition, attractive housing and public realm and quality of life (see Table 2.2).

Procedural aspect can be seen as a way to achieve goals of social sustainability. It has a “how” meaning to it. “How” aspect is not static and there are some temporary measures (Broström, 2012). The measures contain accessibility to information regarding sustainability projects, accessibility to decision making in different stages of a project, driving communication between stakeholders, empowerment for taking part in the process, participating of defining scope and issues, social monitoring the policy, planning and standard-setting, the last but not the least, measurable governance and management (see Table 2.2).

It is difficult to distinguish the “how” and “what” aspects, since there are often overlapping and support each other that simply cannot be parted from each other (Broström, 2012).

Table 2.2 *Examples of substantive (What) and procedural (How) aspects of social sustainability, Broström (2012), pp6*

Substantive aspects("what" aspects): The goals of social sustainability	Procedural aspects("how" aspects): how to achieve social sustainable development
Basic needs of a human (both material and spiritual)	Accessibility to information regarding sustainability projects
Justice	Accessibility to decision making in different stages of a project
Equality of rights	Driving communication between stakeholders
Access to social infrastructure	Empowerment for taking part in the process
Opportunity of learning and self-development	Participating of defining scope and issues
Security	Monitoring the policy, planning and standard-setting
Health of workers, customers and communities	Measurable governance and management
Social cohesion	
Cultural diversity and traditions	
Sense of community attachment	
Social recognition	
Attractive housing and public realm	
Quality of life	

2.4 Process perspectives

Labuschagne and Brent (2008) focus on the practicability of social sustainability frameworks by studying life cycle management. It suggests three distinct life cycles: project life cycle, asset life cycle, product life cycle. Project life cycle can be considered as a development and implementation of an idea. Asset life cycle can be considered as different phases of design and operation. Product life cycle can be considered as the actual deliverable of approach that generates income for the company. Labuschagne and Brent (2008) suggest that the three life cycles can interact with each other. Among the three life cycles, it is the asset life cycle that has a direct impact on the environment, economy, and society.

Labuschagne and Brent (2008) provide a framework of social sustainability to assessing performance in asset life cycle (see Table 2.3). For example, employment opportunities and employment remuneration are used to measure the performance of employment stability. Employment stability together with employment practices, health and safety and capacity department are used to measure the performance of internal human resources.

Table 2.3 *Framework of social sustainability to assessing performance in assent life cycle, Labuschagne and Brent(2008), pp 255*

Internal Human resources	Employment stability	Employment opportunities
		Employment Remuneration
	Employment practices	Disciplinary and security practices
		Employee contracts
		Equity
		Labour sources
	Health and safety	Health and safety practices
		Health and safety incidents
	Capacity department	Research and development
		Career development
External population	Human capital	Health
		Education
	Productive capital	Housing
		Service infrastructure
		Regulatory and public services
	Community capital	Sensory stimuli
		Security
		Cultural properties
		Economic welfare
		Social pathologies
		Social cohesion
Macro social performance	Socio-economic performance	Economic welfare
		Trading Opportunities
	Social-environmental performance	Monitoring
		Legislation
		Enforcement
Stakeholder participation	Information provision	Collective audience
		Selected audience
	Stakeholder influence	Decision influence potential
		Stakeholder empowerment

There are also other studies on social sustainability from a process perspective. Social life cycle assessment (SLCA) was one of them.

SLCA is adopted from environmental life cycle assessment (LCA). Environmental LCA is commonly used to analyze the environmental impact of a project lifecycle. According to ISO 14040, the life cycle assessment involves the compilation and quantification of inputs and outputs for a given product system throughout its life cycle.

The idea of product life cycle is essential to life cycle assessment. It often starts with an extraction of raw material and ended up with disposal. There are guidelines on SLCA such as Handbook for Product Social Impact Assessment.

Handbook for Product Social Impact Assessment is developed by a list of participating companies based on existed standards at the global level. It is used to measure the social impact of the production of a product. Figure 2.2 shows an

example of impact assessment method in Handbook for Product Social Impact Assessment. As the figure shown, working hours during week days and working hours during weekend are the indicators that used to measure the social topic working hours. Social topic working hours along with other social topics such as wage paid are used to measure the performance of stakeholder groups. By calculating the scores of the performance of all the stakeholder groups will give a total score of the product social impact (Handbook for Product Social Impact Assessment, 2016).

Goal and scope	Data inventory	Referencing	Social topic scores	Weighting (1st level)	Stakeholder groups scores	Weighting (2nd level)	Total score
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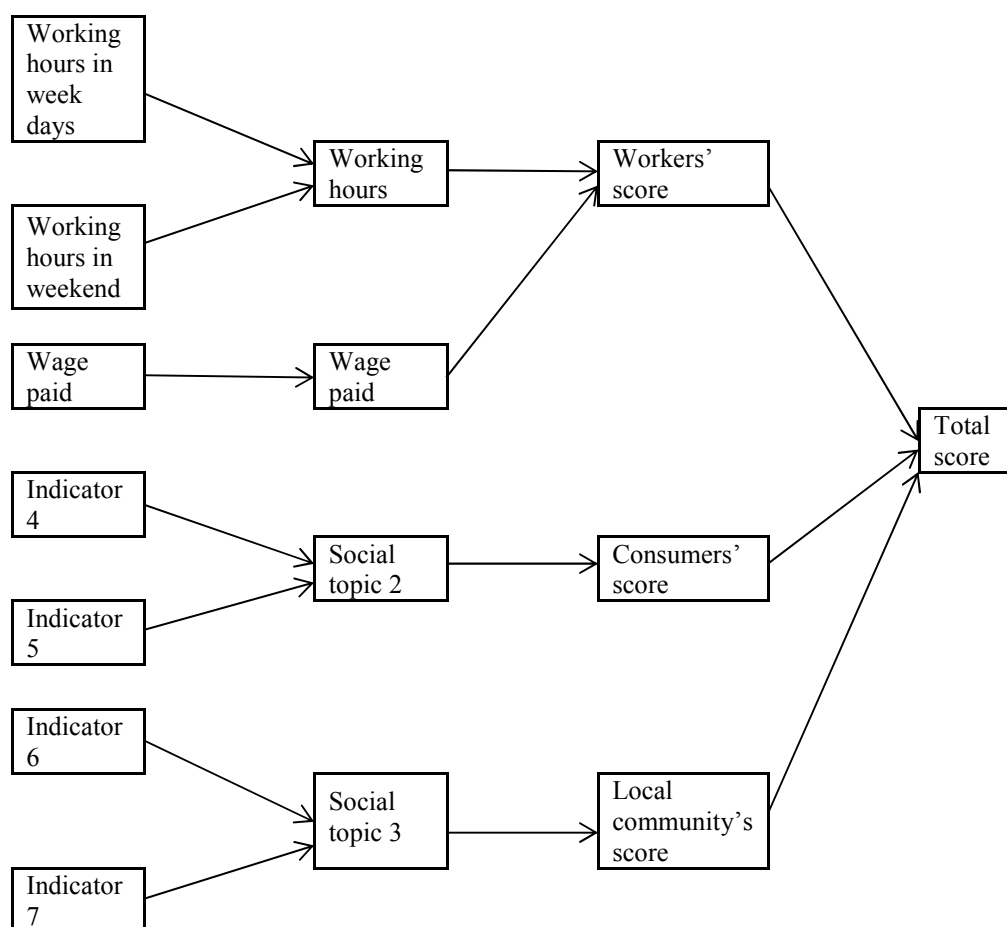


Figure 2.2 Typical data flow within the impact assessment method, Handbook for Product Social Impact Assessment, Figure 3, Page 6

2.5 Stakeholder perspective of social sustainable development

A list of stakeholders that relates to social sustainable development is provided by UNEP theme. UNEP theme is produced by the UNEP/SETAC Life Cycle Initiative at UNEP, CIRAIG, FAQDD and the Belgium Federal Public Planning Service Sustainable Development. It provides a context and tools for stakeholders to analysis the social impacts on project life cycle. The figure 2.3 shows different stakeholders which are mentioned in UNEP theme. The stakeholders in UNEP theme contains value chain actors, workers, local communities, public authorities, society, technology providers, consumers, commerce/trade associations, non-governmental organizations, inter-governmental organizations, labor associations, media, banks, insurance companies, financial analysts and research institutes/ university.

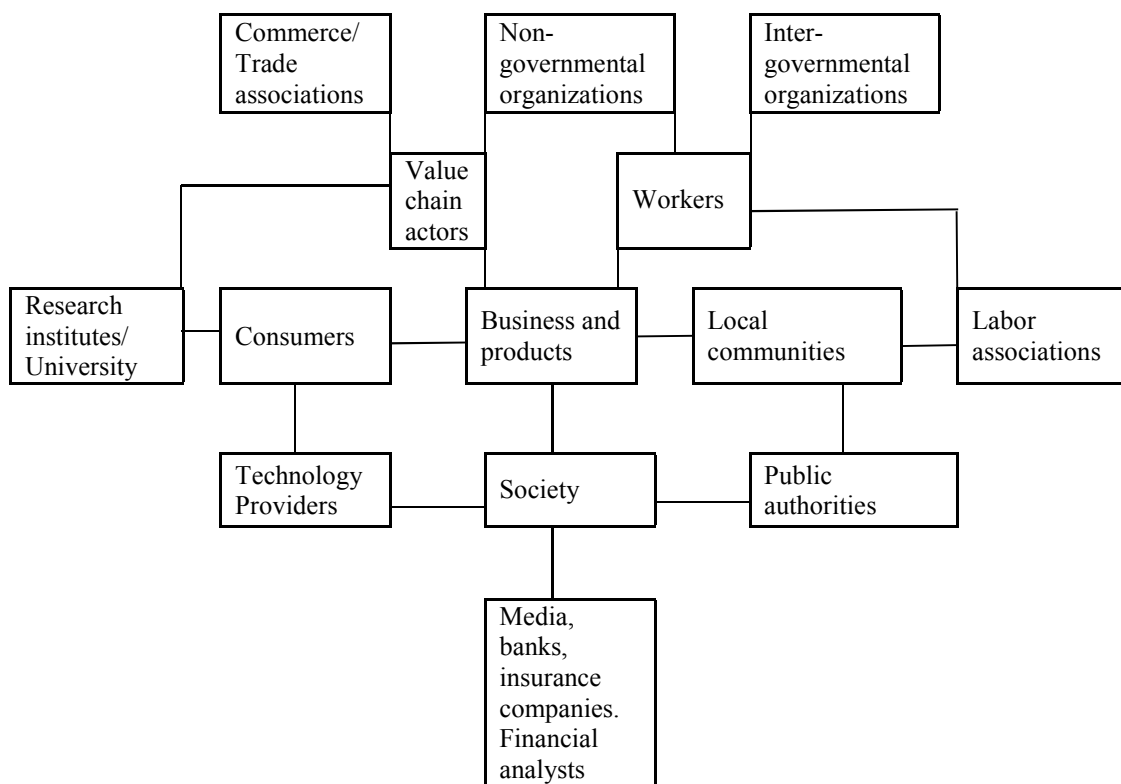


Figure 2.3 Hub and spoke stakeholder diagram, *Guidelines for Social Life Cycle Assessment of Products*, Figure 2, pp 26

Benoît et al. (2010) suggests to group indicators of social sustainable development according to stakeholders to measure the performance of social sustainability. The stakeholders contains “worker,” “customer,” “local community,” “society” and “value chain actors”. There are several indicators under different stakeholder categories (see Table 2.4). For example, indicators such as freedom of association and collective bargaining, child labor, fair salary, working hours, forced labor, equal opportunities/ discrimination, health, safety and social benefits/ social security are grouped under the stakeholder “worker”.

Table 2.4 Stakeholder categories, Benoit et al. (2010), pp 160

Stakeholder "worker"	Freedom of association and collective bargaining
	Child labor
	Fair salary
	working hours
	Forced labor
	Equal opportunities/discrimination
	Health and safety
	Social benefits/social security
Stakeholder "consumer"	Health and safety
	Feedback mechanism
	Consumer privacy
	Transparency
	End of life responsibility
Stakeholder "local community"	Access to material resources
	Access to immaterial resources
	Delocalization and migration
	culture heritage
	safe and healthy living conditions
	Respect of indigenous rights
	Community engagement
	Local employment
	Secure living conditions
Stakeholder "society"	Public commitments to sustainability issues
	Contribution to economic development
	Prevention and mitigation of armed conflicts
	Technology development
	Corruption
Value chain actors* (not including consumers)	Fair competition
	Promoting social responsibility
	Supplier relationships
	Respect of intellectual rights

The Handbook for Product Social Impact Assessment also provides a stakeholder list that relate to social sustainability. It grouped stakeholders in workers, consumers and local communities and addressed them followed different life cycle stages (see Table 2.5). For example, the stakeholder “workers” is associated with life cycle stage “supply chain”. The stakeholder “local communities” is associated with all the life cycle stages.

Table 2.5 Stakeholder groups included in the assessment, Handbook for Product Social Impact Assessment, Figure 1, pp 2

Stakeholders Addressed	Life cycle stages		
	Supply chain	Consumption	End of life
	Workers	Consumer	Workers
	Local communities		

3 Methodology

In this study, a quantitative study with a deductive approach was chosen as a research method. Survey questionnaires were sent to employees in Chinese and Swedish companies in the construction industry to find out their attitude towards social sustainability. The design of the questionnaire will be described in this section.

3.1 Choice of method

The goal of the thesis is to find out the Chinese and Swedish companies' attitude towards social sustainability in the construction industry. In other words, the goal is to find out an objective reality. Furthermore, this study is also a study that looks into the connection between the theory and practice.

According to Bryman (2012), a deductive approach (see Figure 3.1) is a method that helps to study the relationship between theory and social research. A deductive research is often linked with a quantitative study. The quantitative study is a research strategy that focuses on a quantification of data collection and analysis. It is typically used to find out an external and objective reality. It is also used to find out the relationship between theory and practice.

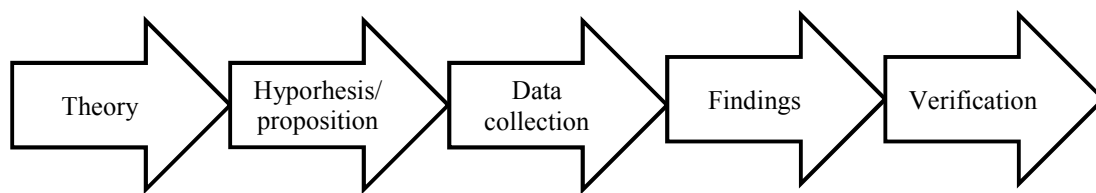


Figure 3.1 Deductive approach, Bryman (2012), pp 24

3.2 Design of survey questionnaire

This section describes how the questionnaire was designed. The choice of indicators and the choice of scales will be clarified. The actual questionnaire will be presented in the Appendix 2 (Swedish version) and Appendix 3 (Chinese version).

3.2.1 Design of questionnaire structure

This thesis is based on survey study. A list of survey question was formulated based on literature review and sent to companies in the construction industry in Sweden and China.

The structure of survey is based on a previous study focusing on environmental attitudes, measurement and effects in the construction industry (Gluch et al., 2010), see Figure 3.2. It is divided into three sections.

The first section covers corporative response: management of social sustainability. It contains questions about how social sustainability management activities are organized in the company.

The following three questions were asked in the first section:

1. Does your company have personnel that regularly manage issues related to the development of social sustainability?
2. Name of this function/group/ department?
3. Have you implemented a social sustainability standard/system in your company?

The goal of this section is to study construction related companies' corporative response to the development of social sustainability and find out the company's arrangement of personnel to manage social sustainability related activities.

The second section covers the companies' perception of challenges of social sustainability development. It contains questions regarding social sustainable development challenges, hindrances, and stakeholder pressure that the company may face in business.

The following three questions were asked in the second section:

1. What social sustainability related challenges that the company experienced and to what extent that the company perceived these challenges.
2. What types of hindrances are affecting the company's social sustainability work and to what extent does the company perceives these hindrances?
3. Which stakeholders have the influence on a company's development of social sustainability and to what extent does the company perceives the pressure of stakeholders?

The goal of this section is to find out the companies' perception of the social related challenges and hindrances that thwart the development of social sustainability, then to draw out a comprehensive picture of challenges of developing social sustainability.

The third section covers companies' response and possible effects. It contains questions regarding social sustainability measures and effects.

The following two questions were asked in the third section:

1. What measures that a company carried out in order to develop social sustainability and to what extent does the company carried out these measures?
2. What effects that a company perceived after taken the measures to develop social sustainability?

The goal of this section is to find out the measures that a company took to improve the work on social sustainability and the possible effects after taken the measures.

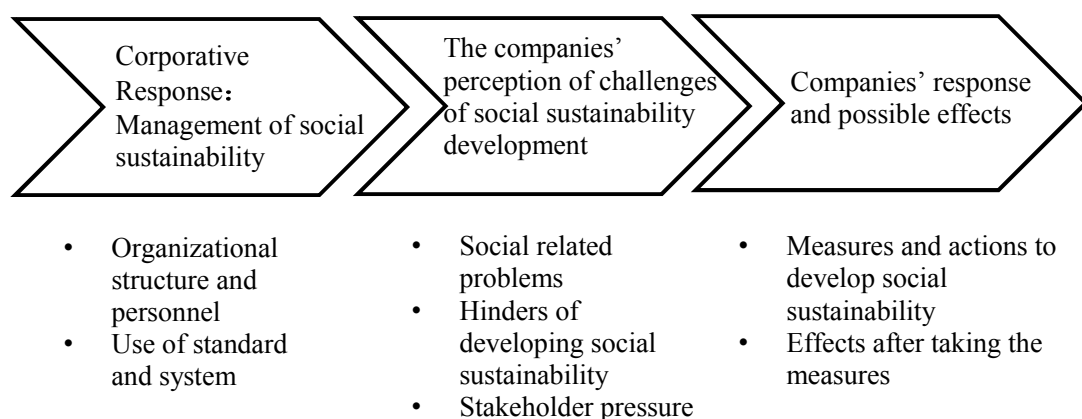


Figure 3.2 The structure of the questionnaire

3.2.2 Choice of indicators

Indicators were used in section 2 (the companies' perception of challenges of social sustainability development) and section 3 (companies' response and possible effects) to measure companies attitude towards social sustainability.

Twenty-two indicators were used to measure a company's perceived challenges related to social sustainability. Fifteen indicators were used to measure the perceived hindrances of developing social sustainability. Thirteen different stakeholders were used as indicators for a company to mark the extent of stakeholder pressure. Twenty-four indicators were used to measure actions taken to improve social sustainability. Twenty-four indicators were used to identify the effects from actions taken to improve social sustainability.

The indicators used in the questionnaire were based on the categories and measures mentioned in theory section. Take the indicator *gender equality* as an example. Gender equality was mentioned in Agenda 21. It is a sub-theme in the UNDS theme. It also fell into the area of equality of rights in the framework provided by Broström (2012). It also could be seen as an indicator that influenced internal stakeholder from the framework provided by Labuschagne and Brent (2006). It was also mentioned in UNEP theme and Handbook for Product Social Impact Assessment. It also fell into sub categories in stakeholder "workers" of the framework provided by Benoît et al. (2010).

A full list of indicators is presented in Appendix 1.

3.2.3 Choice of scales

When asking companies about challenges related to social sustainability development, hindrances of developing social sustainability, stakeholder pressure and the measure and actions to develop social sustainability, five scales were used to measure the extent of perception. There were "not at all", "to a small extent", "to some extent", "to a moderate extent", "to a large extent".

When asking companies about effects after taking the measures, only "yes" and "no" answers were applied.

Furthermore a "non-relevant" and a "not that I am aware of" options are added to all the questions in section 2 and section 3 of the questionnaire since there were indicators that only applies to certain companies in the supply chain.

3.3 Data collection and population

The survey was initially formulated in English and then translated into a Swedish and a Chinese version. It was sent out to 48 persons from Swedish companies and 31 persons from Chinese companies. Those companies include real estate companies, contractors, consultants and architecture firms. The survey questionnaires were sent to human resources managers, chief executive officers, sustainability managers and people with knowledge of social sustainability.

The contact information, including emails, phone numbers was collected from companies' web site. It was harder to find Chinese companies due to missing contact information posted on company websites. There were also trust related issues and culture related issues that made finding Chinese companies very difficult. In order to get good response rate, questionnaires to Chinese companies were sent out through contact persons working in construction and real estate sectors.

The questionnaires were entered in a survey platform called SurveyMonkey and were sent out through the SurveyMonkey.

There were fifteen respondents from Swedish companies, corresponding to a response rate of 31%. Twelve of respondents completed the whole questionnaire. Three of the respondents answered some of the questions.

Of the fifteen respondents who answered the questions, there were four consultant companies, eight contractors and three real estate companies. Unfortunately, no respondents from architecture firms answered the survey (see Figure 3.3).

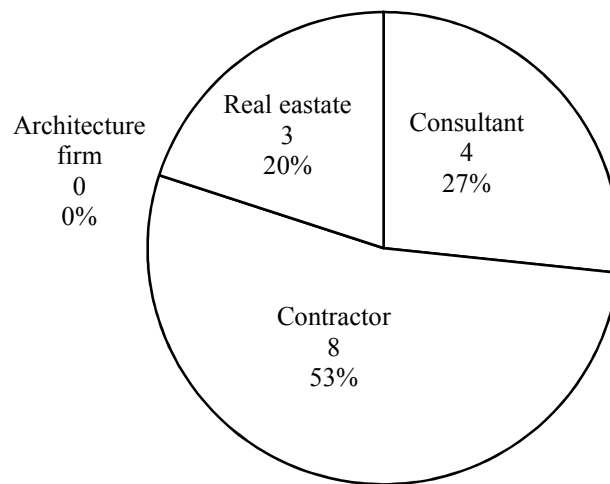


Figure 3.3 Swedish companies' main business area

There were seven female and eight male respondents from Swedish companies who answered the survey (see Table 3.1). Among them, one person was under 30 years old, seven persons were in the age of 31-45 years old, five of them were in 46-60 years old, and two persons were over 60 years old (see Table 3.2). Two persons out of 14 had the highest education level of senior high school, 12 persons had bachelor/ master degree and one person had doctor degree (see Table 3.3).

Table 3.1 Gender distribution of respondents from Swedish companies

Gender	Response Percent	Response Count
Male	53.0%	8
Female	47.0%	7
<i>Total</i>		15

Table 3.2 Age distribution of respondents from Swedish companies

Age	Response Percent	Response Count
Under 30 years old	7.0%	1
31-45 years old	47.0%	7
46-60 years old	33.0%	5
Over 60 years old	13.0%	2
<i>Total</i>		15

Table 3.3 Distribution of highest education of the respondents from Swedish companies

Highest education	Response Percent	Response Count
Senior high school	13.0%	2
Bachelor/Master degree	80.0%	12
Doctor degree	7.0%	1
<i>Total</i>		15

There were twenty-three respondents from Chinese companies, corresponding to a response rate of 74%. Fifteen of respondents completed the whole questionnaire. Eight of the respondents answered some of the questions.

Of the twenty-three respondents who answered the survey, there were ten people from architecture firms, three from consultant companies, six from contractors and four from real estate companies (see Figure 3.4).

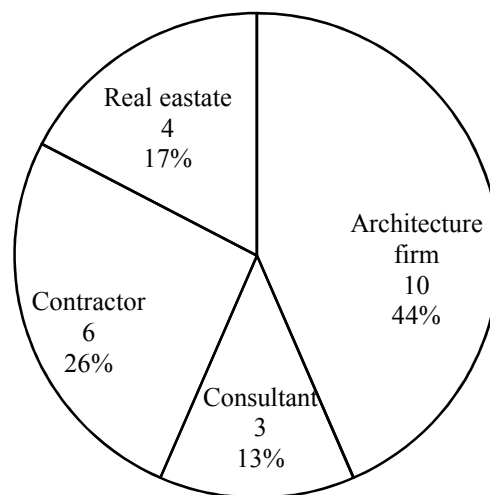


Figure 3.4 Chinese companies' main business area

There were ten female and thirteen male respondents from Swedish companies who answered the survey (see Table 3.4). Among them, twelve persons were under 30 years old, ten persons were in the age of 31-45 years old, two of them were in 46-60 years old, and no person was over 60 years old (see Table 3.5). Twenty-two persons out of twenty-three had the highest education level of bachelor/ master degree and one person had doctor degree (see Table 3.6).

Table 3.4 Gender distribution of respondents from Chinese companies

Gender	Response Percent	Response Count
Male	57.0%	13
Female	43.0%	10
<i>Total</i>		23

Table 3.5 Age distribution of respondents from Chinese companies

Age	Response Percent	Response Count
Under 30 years old	50.0%	12
31-45 years old	42.0%	10
46-60 years old	8.0%	2
Over 60 years old	0.0%	0
<i>Total</i>		23

Table 3.6 Distribution of highest education of the respondents from Chinese companies

Highest education	Response Percent	Response Count
Senior high school	0.0%	0
Bachelor/Master degree	96.0%	22
Doctor degree	4.0%	1
<i>Total</i>		23

3.4 Data analysis

The results were analyzed using the survey monkey platform and Excel.

The results will be presented in tables, pie charts and bar charts. The result of the survey is shown in chapter 4.

3.5 Data quality and reflection of choice of methodology

As mentioned in the previous text, a quantitative study with a deductive approach was used in this research. Since this study focuses on objective reality, the methodology was suitable for finding out current situation of developing social sustainability in Swedish and Chinese construction related companies.

However, there are some difficulties in this study. Since there are not many quantitative studies in the area of companies' attitude towards social sustainability, it was difficult to structure a questionnaire.

The completion of a survey study heavily relies on response rate. Getting a good number of respondents in a short period was crucial. It was also difficult to control the quality of responses.

As stated before, for Swedish companies, the contacts (such as CEO and HR) were collected from companies' web site. It can be sure that the questionnaires were sent to the right person. However, the person who was filling the questionnaire could not be controlled.

As for Chinese companies, since the questionnaires were sent out through contact persons. It was hard to know if it was the right person that was answering the survey. Furthermore, since some of the questions in the survey might be sensitive to some companies, due to company privacy and company image, it was hard to control if responses were answering the questions honestly.

Due to the limited amount of survey response in Sweden and China, the result of this study may not be comprehensive. Thus, this research only provides a brief view of social sustainability in the construction industry in Sweden and China.

4 Results of the questionnaire

This section contains the results of the survey. The result from the Swedish companies will be described first, and then follows the result from the Chinese companies.

4.1 Results from companies in the Swedish construction industry

In this section, the Cooperative Response: management of social sustainability will be presented, then following with the companies' perception of the challenges regarding the development of social sustainability. Finally, companies' response and possible effects will be presented.

4.1.1 Cooperative Response: management of social sustainability

Figure 4.1 shows a bar chart that shows if a company has a personnel or setup for dealing with social sustainability issue.

According to the results, 40% of the respondents (6 people) said that their companies had a network of people formed around social sustainability related issues. 27% of respondents (4 people) said that their companies had a specific function dedicated to the issue. 13% of respondents said that their companies did not have personnel setup that working with the issue. 13% of respondents (2 people) said their companies had other personnel setups that managing social sustainability related issue which is not listed in the questionnaire. 7% of respondents (1 person) reported that their companies had a special department to manage social sustainability related issue

The 13% of the respondents (2 people) that answered their companies had other personnel setup. Their companies had both a network of people and some special people working with the social sustainability related issue.

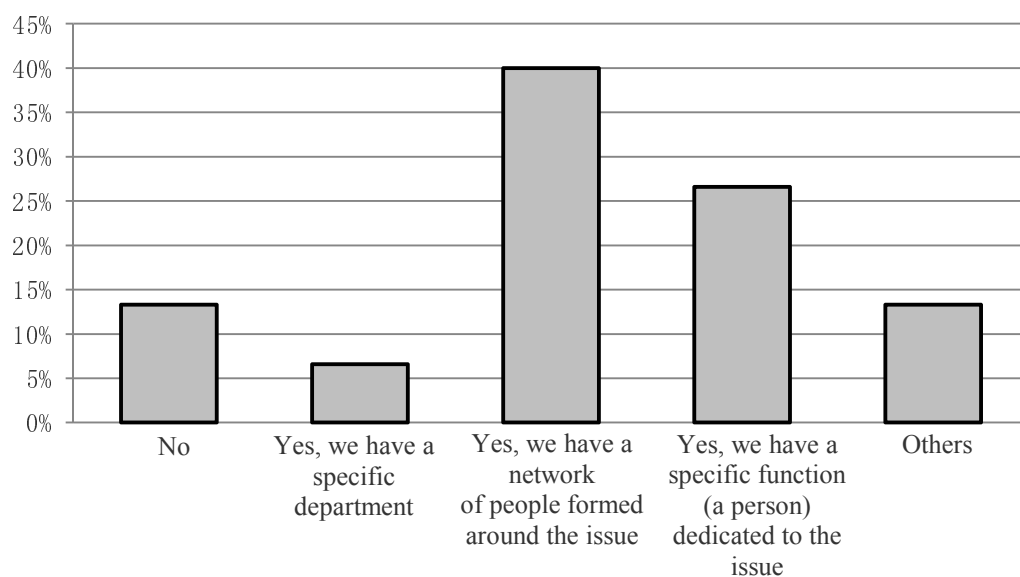


Figure 4.1 Swedish companies' personnel and structure setup to manage social sustainability related issues

According to the respondents, the titles of the departments or the persons who work with social sustainability problems are department of development, HR department, Sustainability Manager, the group of social sustainability in sustainable business development, relationship Management (Relationsförvaltning) and CSR expert. According to the survey, some of the companies already implemented social sustainability standard, some are not. Figure 4.2 shows if a company implemented social sustainability related standards.

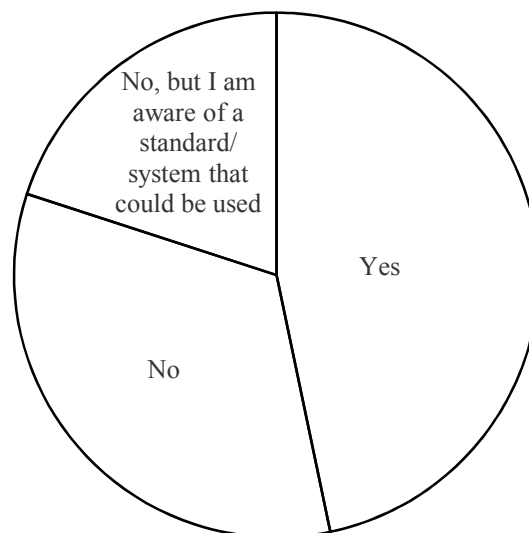


Figure 4.2 Swedish companies' implementation of social sustainability related standards

The pie chart shows that 47% of the respondents (7 people) said that their companies implemented social sustainability standards, 33% of the respondents (5 people) answered no. 20% of the respondents (3 people) said that their companies had not implemented any standards but they were aware of some standards that could be used.

4.1.2 Companies' perception of the challenges regarding development of social sustainability

This section talks about companies' perceived challenges regarding the development of social sustainability.

Figure 4.3 shows companies' perceived extent of social related challenges. The most of the respondents (up to 65%) stated that equality and employee's health were the largest social related challenges. Nearly 60% of the respondents stated that employee's safety was the largest social related challenge. 50% of the respondents reported that discrimination, reasonable working hours and good working environment (physically and psychologically) were the largest social related challenges. 50% of respondents received moderate extent of social related challenges on employment of inexperienced young people and complaints from neighboring communities. Another fact that is worth to mention is that more than 80% of the respondents reported that their companies experienced large extent and moderate extent of challenges on employment of foreign labor. Around 10% of respondents stated that their companies did not experience challenges on equality, fair salary, discrimination, accessibility to the work place and employment of long-term unemployed people.

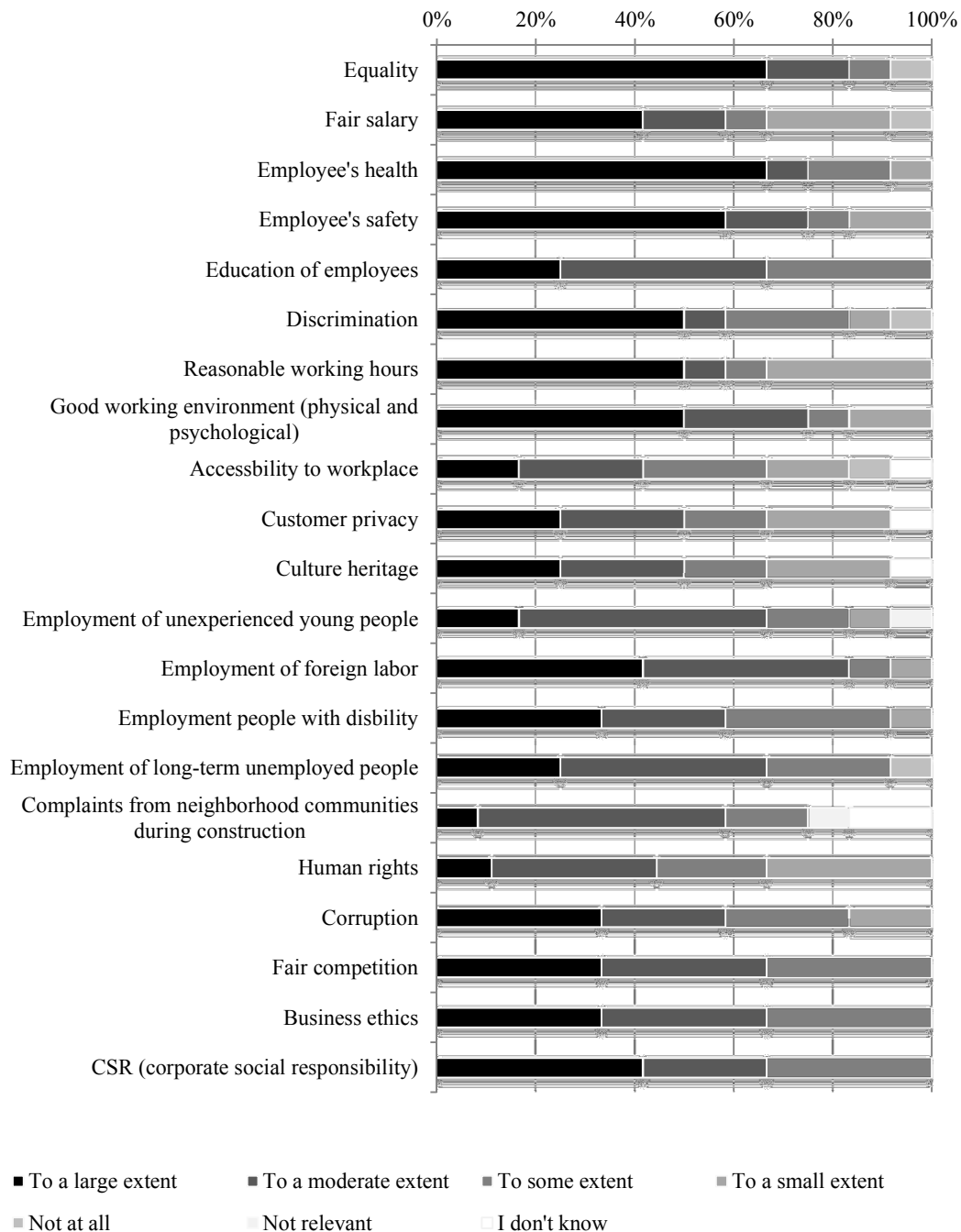


Figure 4.3 Swedish companies perceived extent of social related challenges

Figure 4.4 shows respondents perceived extent of different aspects that affect promoting social sustainable development activities. More than 30% of the respondents reported that their companies had a large problem on lacking cooperation in the supply chain when promoting activities related to the development of social sustainability. Around 20% of the respondents reported that their companies had a large problem on lacking market demands on social sustainability and competitive advantages. More than 70% of respondents said that their companies had some to large extent of the problem on lacking marketing demands on social sustainability and lacking knowledge transfer between construction projects. More than 30% of the respondents stated that their companies had not faced challenges on lacking

cooperation within the company. Insufficient management support was not a challenge for nearly 30% of the companies.

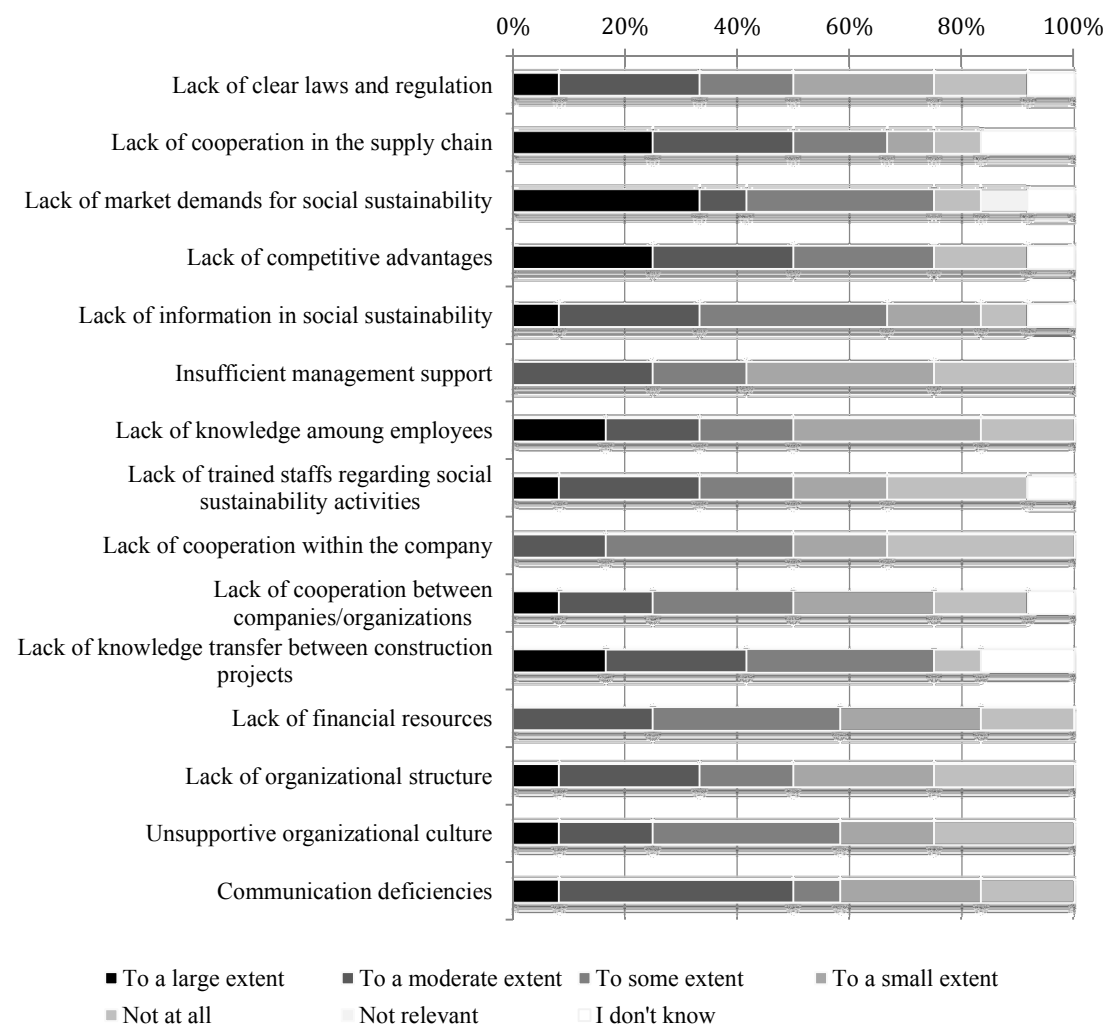


Figure 4.4 Swedish companies' perceived extent of aspects that affect promoting social sustainability activities

Figure 4.5 shows the extent of different stakeholders' influence on companies' social sustainability activities. More than 80% of respondents stated that their companies received large influence from the managers when organizing the activities that related to the development of social sustainability. More than 65% of respondents reported that their companies received large influence from clients when organizing social sustainability related activities. Employees, managers, and clients had moderate to large extent of influence for more than 90% of companies. Around 25% of companies have not received influence on financial institutes (banks, insurance companies, etc.) and employment agency.

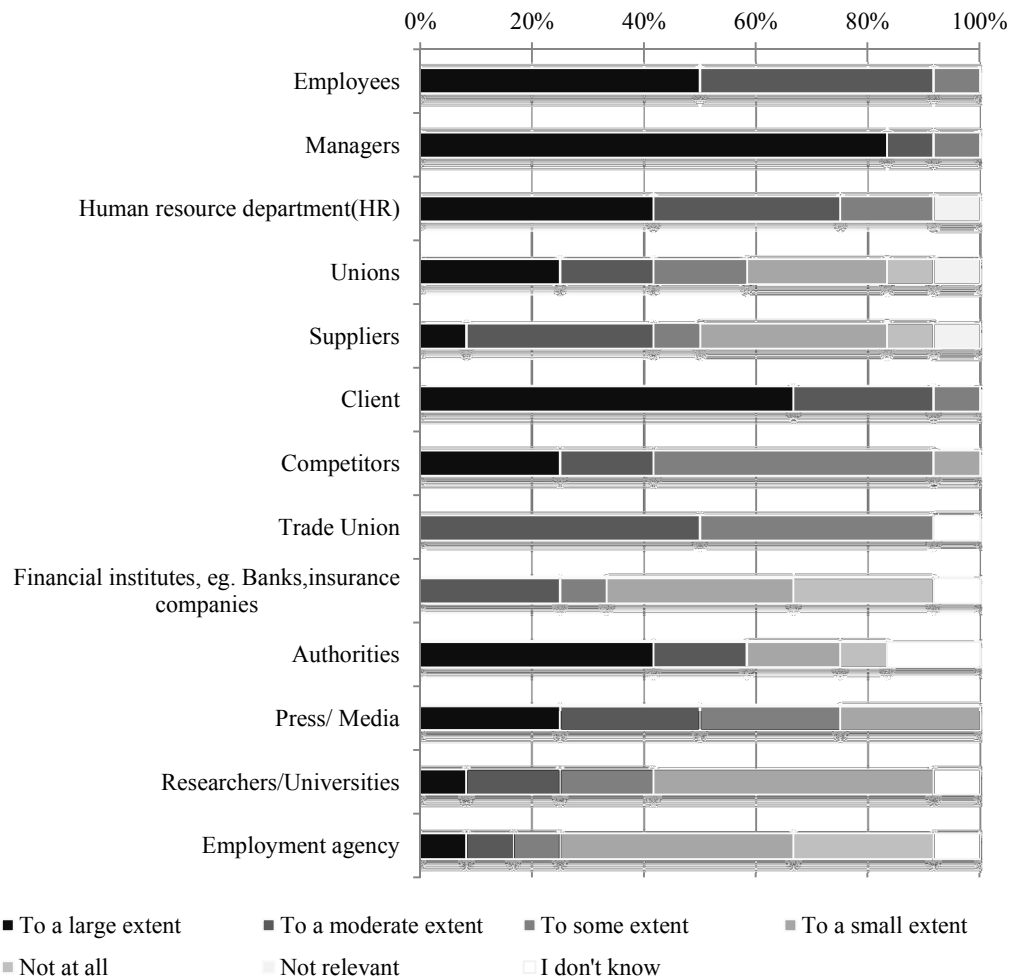


Figure 4.5 The extent of different stakeholders' influence on Swedish companies' social sustainability activities

4.1.3 Companies' response and possible effects

This section is about the measures and actions that companies have taken in order to reduce social sustainability related impact. Also, the effects and possible outcome after companies take those measures and actions.

Figure 4.6 shows the measure that the companies carried out in order to improve the work on social sustainability. More than 90% of the companies focused on offering health and wellness support for employees and carried it out to a large extent. Around 85% of the companies worked to a large extent on adopting a non-discrimination policy and provided a safe working environment. Around 75% of companies focused on adopting a code of conduct and carried it out to a large extent. All the companies worked from moderate extent to large extent on offering health and wellness support for employees and providing a well-equipped working environment. 25% of companies did not include social sustainable development goals in the contract. Nearly 60% of companies did not or only worked to a small extent on employment of disabled people.

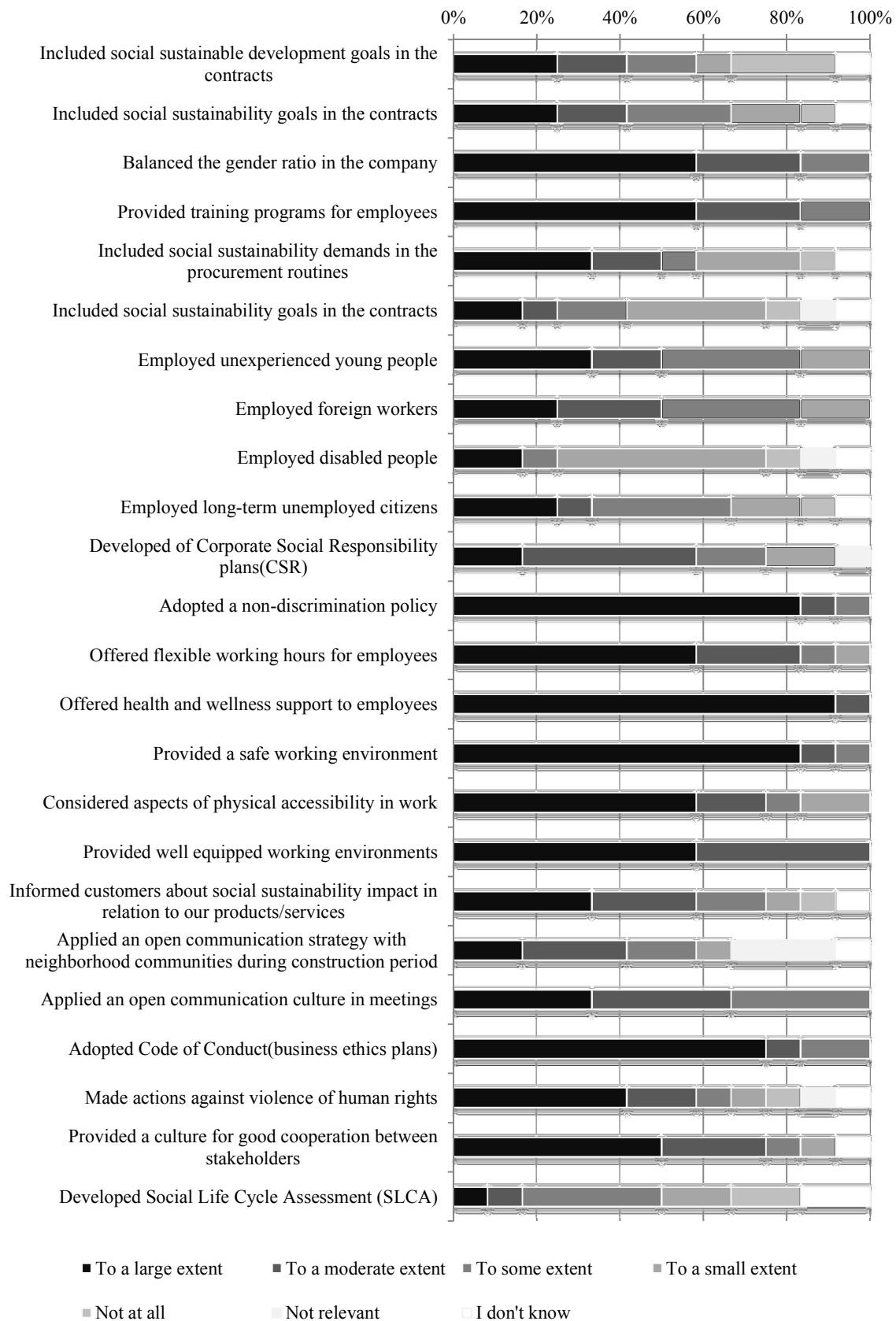


Figure 4.6 *The measures that the Swedish companies carried out in order to improve the work on social sustainability*

Figure 4.7 shows the effects after taking social sustainability development related measures. More than 90% of the respondents stated that their companies could improve company images after taking social sustainability development related measures. More than 85% of the respondents reported that taking those measures could help with creating a more harmonious society. 40% of the respondents did not think that their companies could improve short-term profits after taking those measures. 65% of the respondents did not know if their companies would receive less industry related complaints. There were no respondents that thought their companies could get better insurance terms after taking social sustainability development related measures.

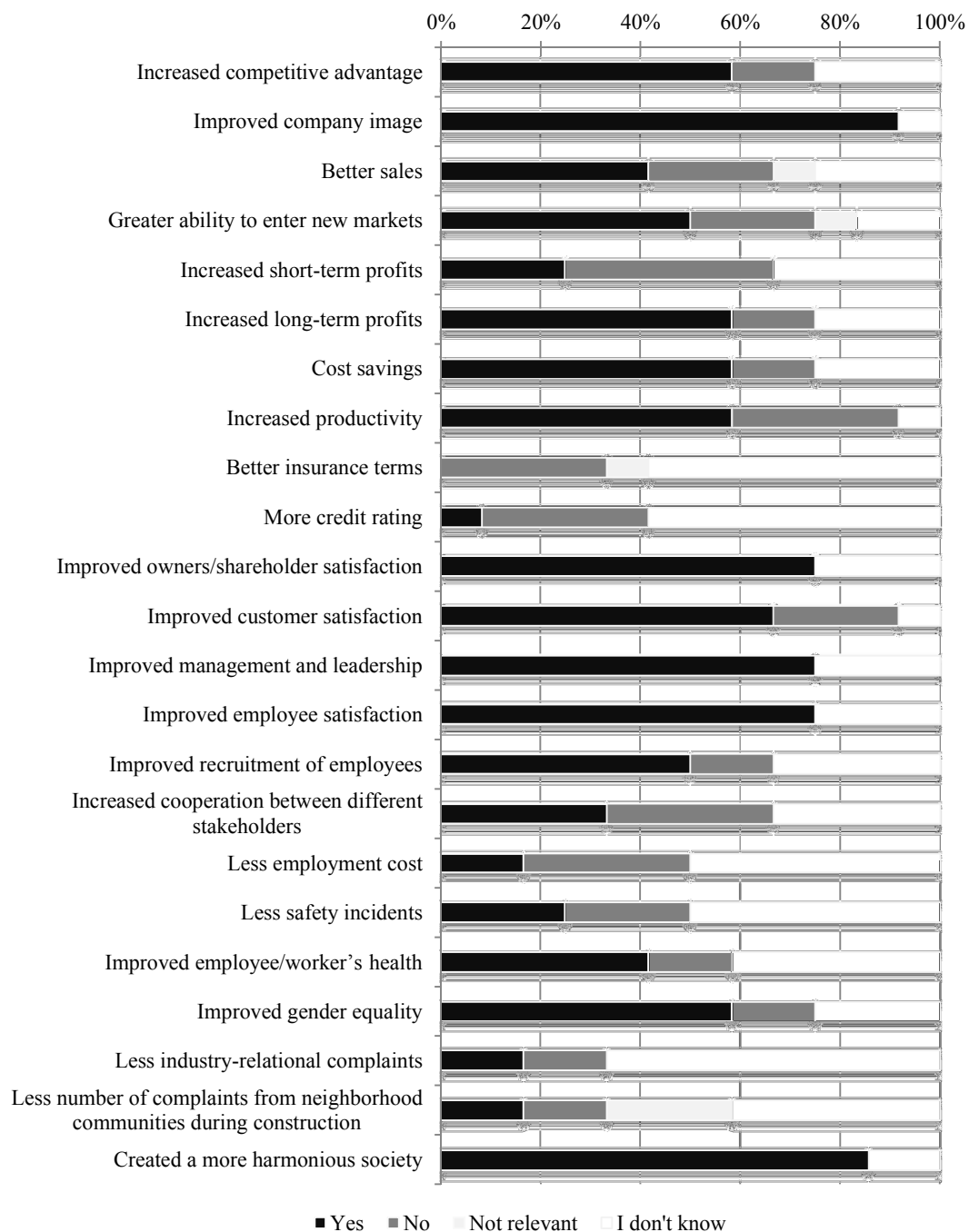


Figure 4.7 The effects after taking social sustainability related measures in Swedish companies

4.2 Result from companies in the Chinese construction industry

In this section, the Cooperative Response: management of social sustainability will be presented at the first, then following with the companies' perception of the challenges regarding the development of social sustainability. Finally, companies' response and possible effects will be presented.

4.2.1 Organization and social sustainability personal

This section covers corporative response management of social sustainability.

Figure 4.8 shows a bar chart that if a company has a personnel or setup for dealing with social sustainability issue.

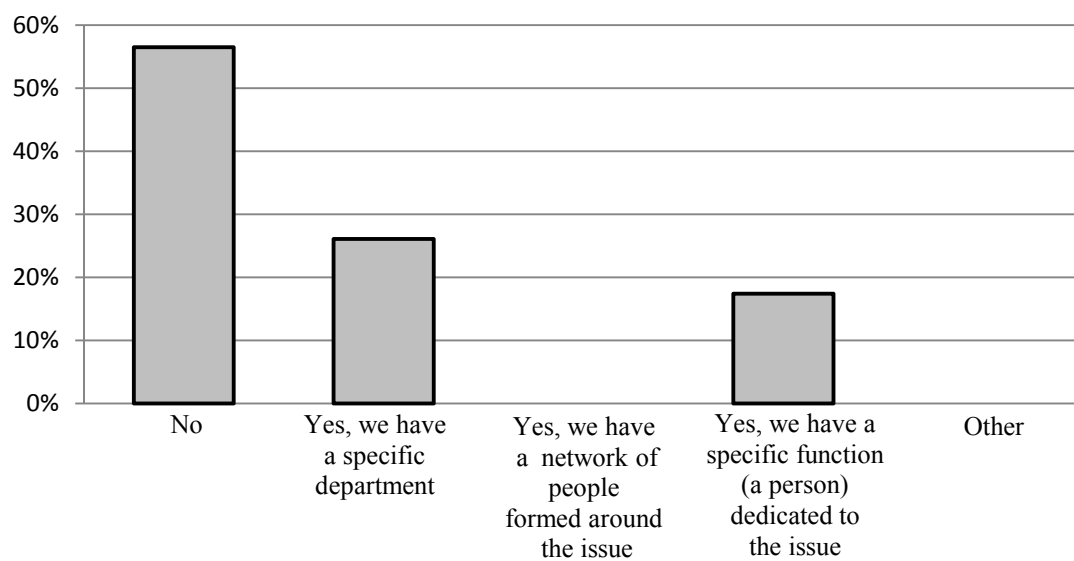


Figure 4.8 Chinese companies' personnel and structure setup to manage social sustainability related issues

57% of the respondents (13 people) said that their companies did not have personnel setup that working with the issue. 26% of the respondents (6 people) reported that their companies had a special department to manage the social sustainability related issue. 17% of the respondents (4 people) said that their companies have a specific function dedicated to the issue. There was no company that had a network of people formed around social sustainability related issues.

According to the answer of the survey, in the companies, the titles of the departments or the persons who worked with social sustainability problems were head comprehensive management department, department of green building, department of development and environmental management department.

When talking about social sustainability standard, Figure 4.9 shows if a company implemented social sustainability related standards.

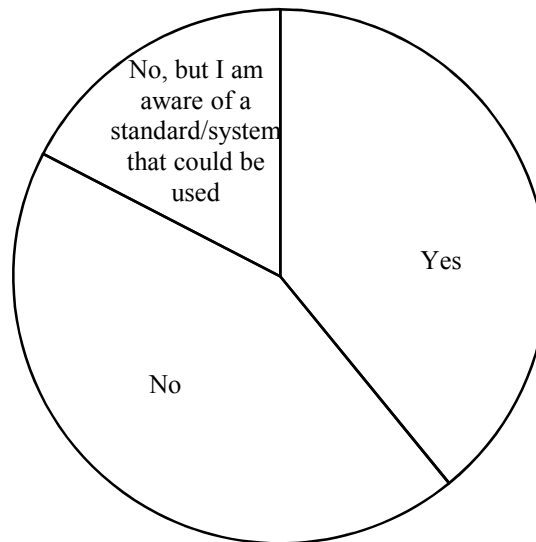


Figure 4.9 Chinese companies' implementation of social sustainability related standards

39% of the respondents (9 people) said that their companies implemented social sustainability standards, 44% of the respondents (10 people) answered no. 17% of the respondents (4 people) said that their companies had not implemented any standards but they were aware of some standards that could be used.

4.2.2 Companies' definition of the challenges regarding development of social sustainability

This section talks about companies perceived challenges regarding the development of social sustainability.

Figure 4.10 shows companies perceived the extent of social related challenges. Most of the respondents did not think the listed indicators were challenges to their companies. Giving some examples, more than 85% of the companies did not receive challenges on business ethics. More than 80% of the companies did not perceive employees/ workers' safety as a challenge. However, less than 5% of respondents stated that working hours and corruption could be large problems for their companies.

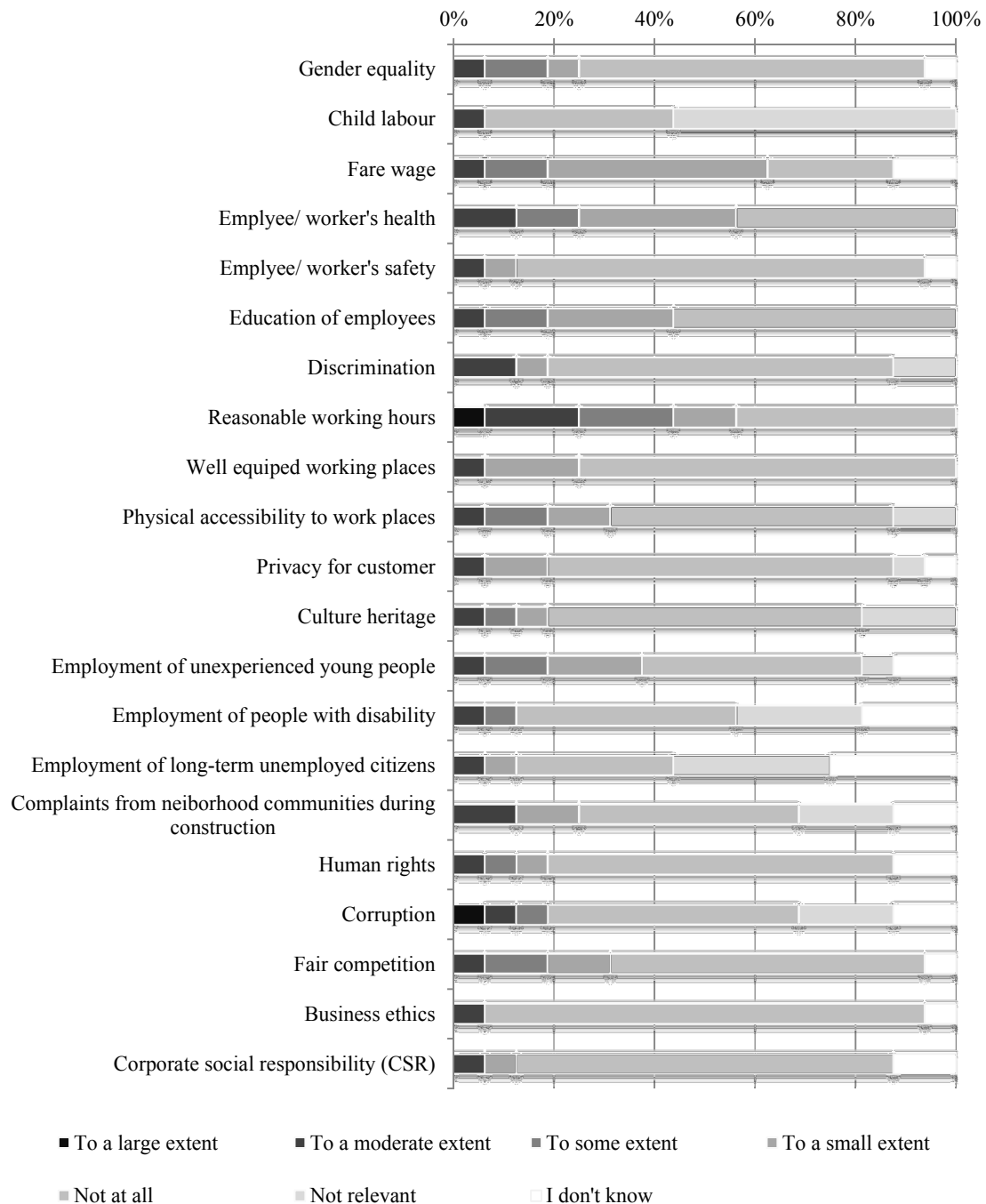


Figure 4.10 Chinese companies perceived extent of social related challenges

Figure 4.11 shows companies perceived extent of different aspects that affect promoting social sustainability development activities. Around 30% of the respondents reported that their companies had a large problem on lacking clear laws and regulation when promoting activities related to the development of social sustainability. The same number of respondents also stated that their companies had large problems because of insufficient management support. Nearly 80% of respondents said that their companies were facing a moderate to a large extent of challenges on lacking financial resources when promoting activities related to social sustainability development. More than 60% of respondents stated that lacking clear laws and regulations could be moderate to a large problem. More than 20% of the

respondents reported that they did not think that lacking competitive advantages could be a problem when promoting activities that related to social sustainability.

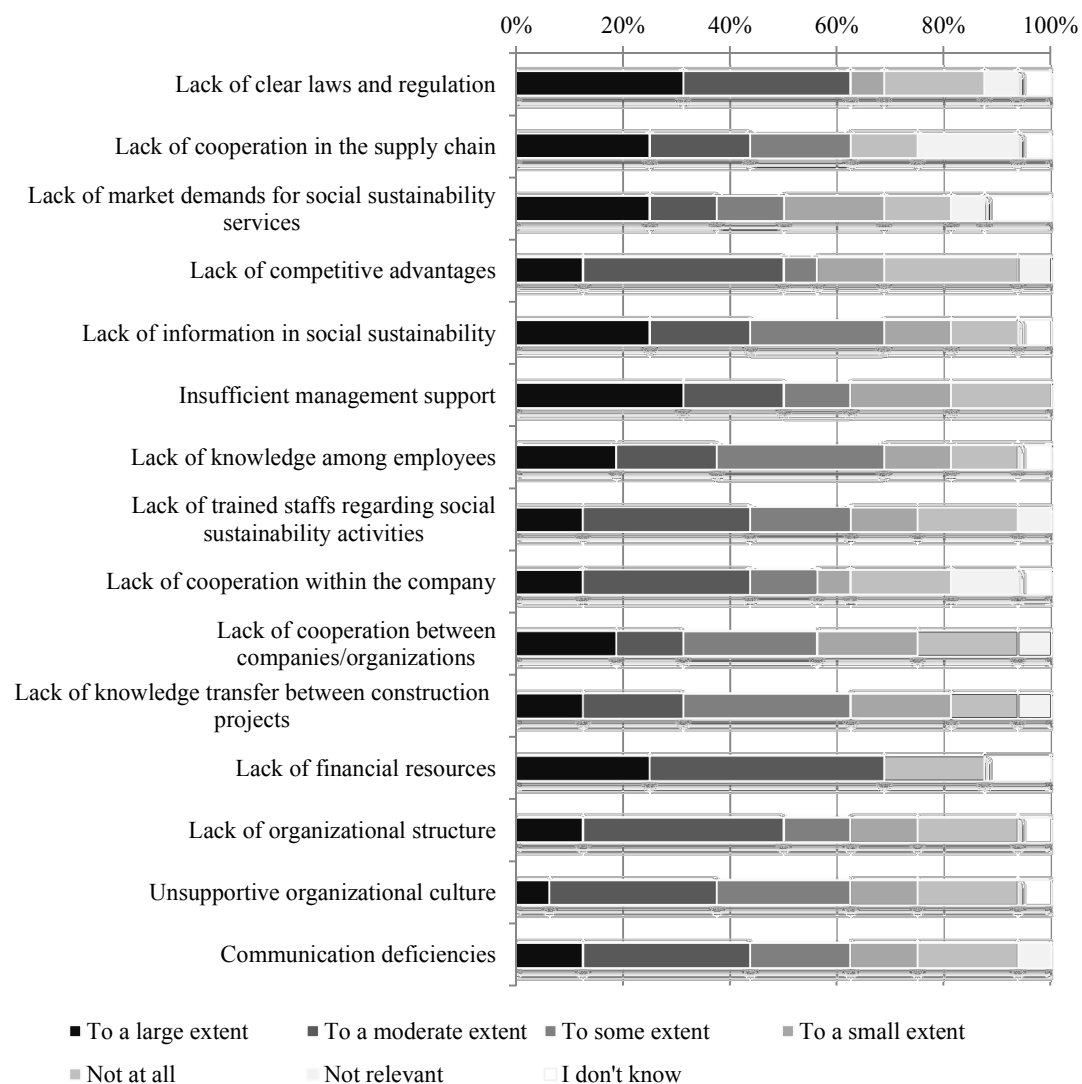


Figure 4.11 Chinese companies perceived extent of aspects that affecting promoting social sustainable development activity

Figure 4.12 shows the extent of different stakeholders' influence on companies' social sustainability activities. Around 25% of respondents stated that their companies received large influence from the authorities (government, etc.) when organizing the activities that related to the development of social sustainability. Around 20% of respondents reported that their companies received large influence from managers and their clients when organizing social sustainable development related activities. 55% of the respondents stated that their companies received some influence from employees on activities that related with social sustainability. 20% of the respondents reported that their companies did not receive influence from the industry associations/communities and financial institutes (banks, insurance companies, etc.).

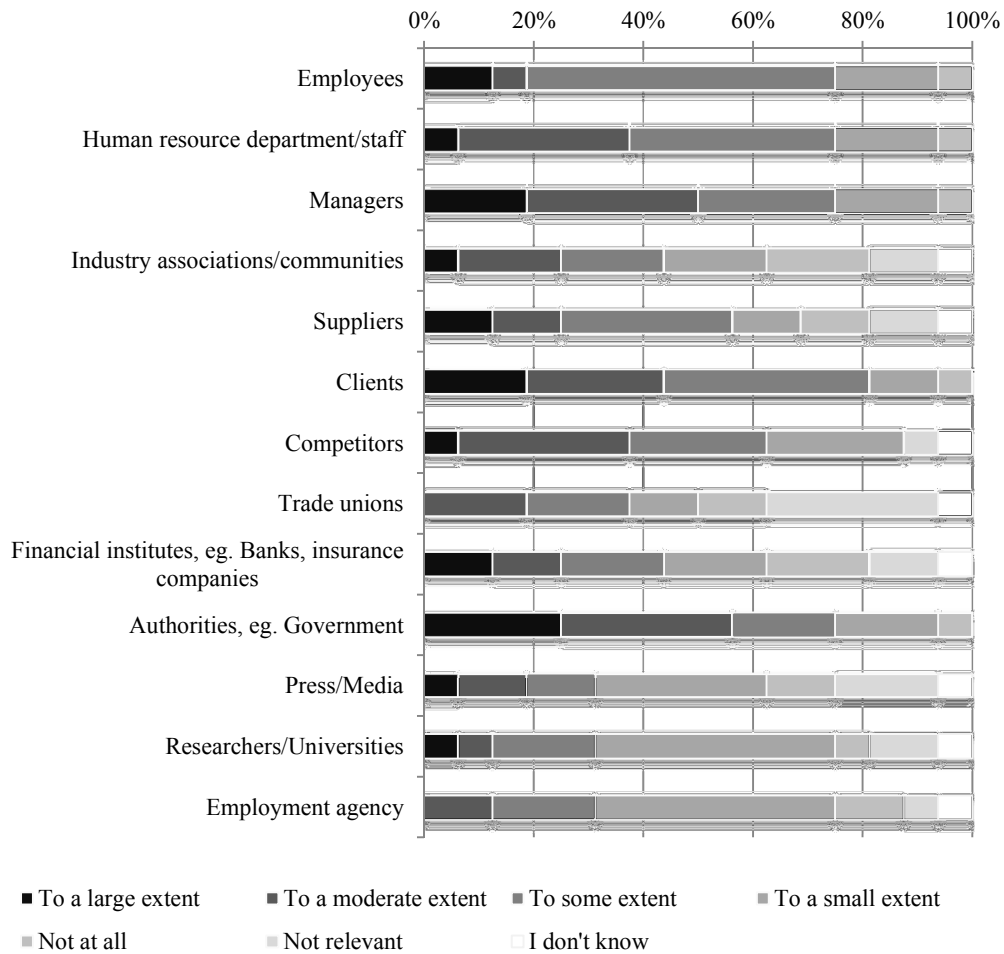


Figure 4.12 The extent of different stakeholders' influences on Chinese companies' social sustainable development activities

4.2.3 Companies' response and possible effects

This section is about the measures and actions that companies have taken in order to reduce social sustainability related impact. Also, the effects and possible outcome after companies take those measures and actions.

Figure 4.13 shows the measure that the companies carried out in order to improve the work on social sustainability. Most of the companies worked a small to a moderate extent of the listed measures. More than 25% of the companies focused on providing training programs for the employees and carried it out to a large extent. Around 20% of the companies worked to a large extent on employment of inexperienced young people. Above 10% of companies focused on offering health and wellness support to employees, providing a safe working environment and providing well-equipped working environment. The companies carried those measures out to a large extent. Around 65% of companies worked from moderate extent to large extent on providing training programs for the employees and providing a safe working environment. 40% of the companies did not work with employment of long-term unemployed citizens. 30% of the companies did not work with adopting a non-discrimination policy.

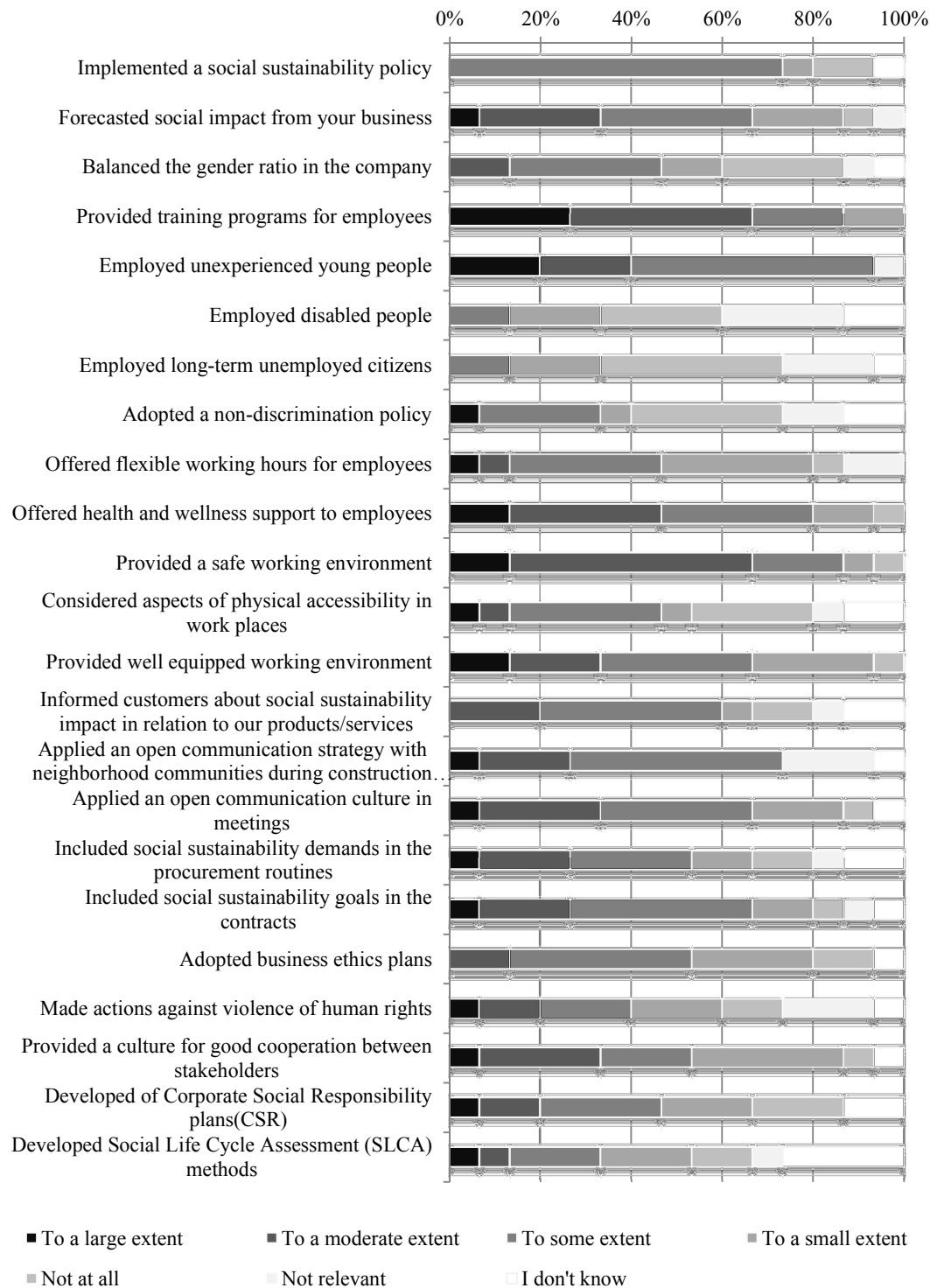


Figure 4.13 The measures that the Chinese companies carried out in order to improve the work on social sustainability

Figure 4.14 shows the effects after taking social sustainability development related measures. Most of the respondents stated that their companies could receive the listed effects after taking measures to reduce social related impacts. All the respondents reported that their companies could improve company images. Furthermore, their companies could improve management and leaderships. There are more than 30% of the respondents did not think that their companies could improve short-term profits

after taking measures. 20% of the respondents did not know if their companies would receive less industry related complaints. There was no respondents thought that their companies could improve their short-term profits.

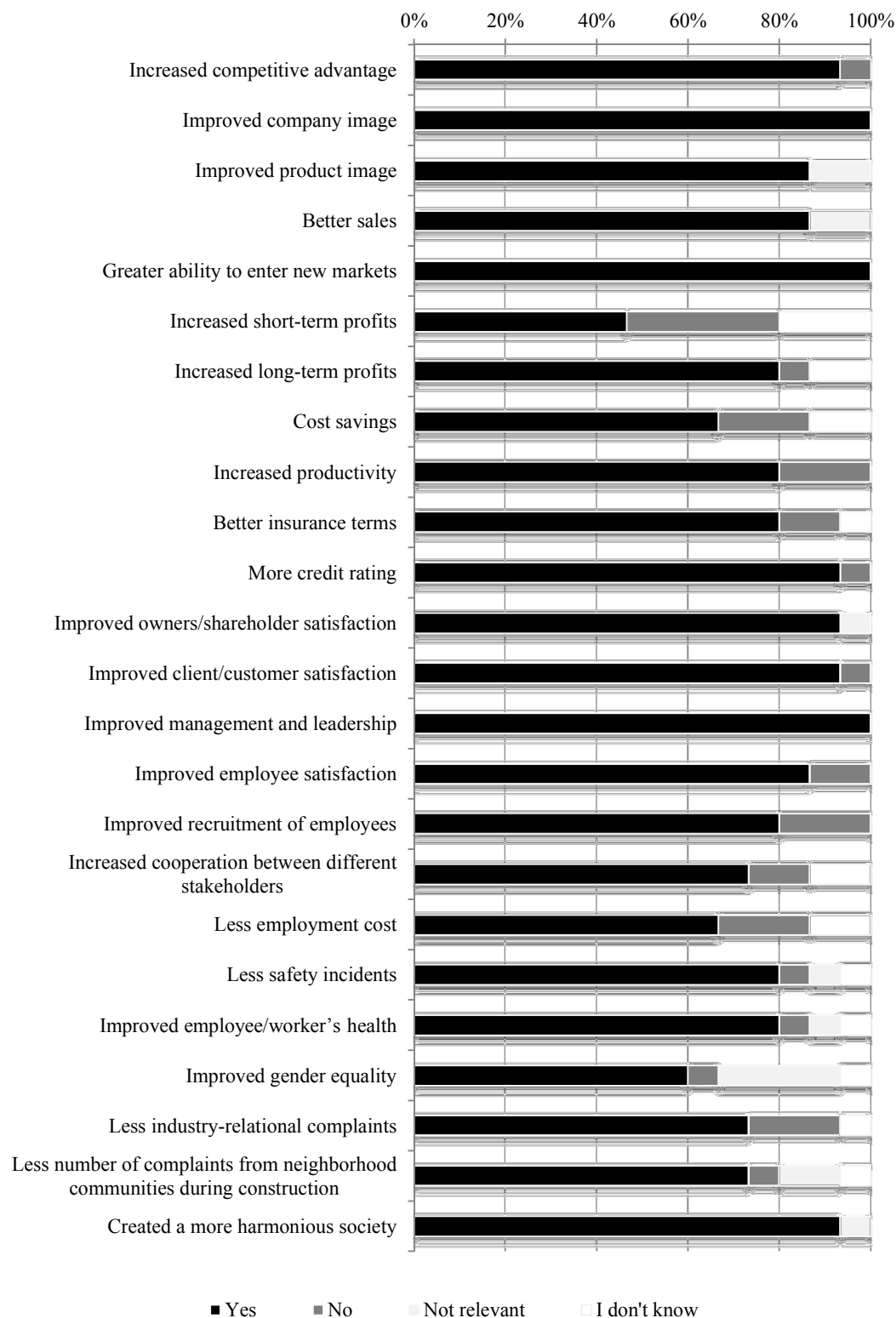


Figure 4.14 The effects after Chinese companies taking social sustainability related measures

5 Analysis

The results from the Swedish construction related companies show that most of the companies had personnel setup to manage social sustainability development related activities. Nearly half of the Swedish companies have implemented social sustainability standards. Most of the Swedish construction related companies perceived that they have achieved social challenges on equity, employees' health and safety and working environment. They found that lacking cooperation in supply chain and lacking market demands are the main hindrances to stimulate social sustainability related activities. Swedish companies also perceived a high level of pressure regarding social sustainability from managers, employees, and clients. Companies have focused on providing safety and health supports for their employees and developed a code of conduct, they have not made any major efforts to include social sustainability development goals in the contracts. Companies reported that they could improve their company's image and create a harmonious society after taking further measures to develop social sustainability.

It can be seen from the results that Swedish companies have realized the importance of developing social sustainability. However, their social sustainability activities mainly focus on company employees. In other words, Swedish construction related companies mainly focus on the internal stakeholders. Lacking participation in the whole supply chain is the main weakness in Swedish construction industry approach when it comes to further development of social sustainability.

As for the results from the Chinese construction related companies, it can be seen that more than half of the companies did not have personnel setups to manage social related activities. More than half of the companies did not implement social sustainability standards. The companies perceived some social sustainability related challenges pressure from social impacts, however they did not think those social sustainability related challenges were huge problems. There were only a few companies that reported that unreasonable working hours and corruption can be a large problem for their companies. Lacking financial resources was the main cause that hinders companies to promote social sustainability activities. Lacking clear laws and regulations were another big problem. Chinese construction related companies mainly perceived pressure from employees when developing social sustainability. The companies focused on proving training programs for employees in order to reduce social impacts. They reported that they could improve their companies' image after taking further activities to develop social sustainability. However, some companies thought they could not increase short term profit as result of increasing social responsibility.

According to the Chinese results, most companies were lacking personnel setup and standards for developing social sustainability. Companies did not experience large social impacts and they lacked financial resources to stimulate further development of social sustainability. However, the companies have high expectation on the possible effects from promoting social sustainability development.

6 Discussion and conclusion

This thesis builds on the foundation that social sustainability is a process of creating sustainable places that promote well-being, by understanding what people need from the places they live and work. It is often related to topics such as social equity, health equity, community development, human rights, labor rights, social responsibility, and justice. The concept of social sustainability is an open concept with multiple dimensions and it is constantly developing (Broström, 2012). Social sustainability is a rather new studying area. The frameworks and areas of social sustainability are mainly provided by government and authorities and now also slowly gains attention within construction research (Opuku and Ahmed, 2014). This involves studies on implementing social sustainability standards from different perspectives, such as goal oriented perspectives and process oriented perspectives.

This thesis has surveyed Swedish and Chinese construction industry's current attitude towards social sustainability. The results have given an overall view of the current situation of organizing social sustainable development activities in a developed country and in a developing country. Like the theory suggested, when it comes to the development of social sustainability, construction industry related companies in both Sweden and China focus mainly on their employees. In other words, the companies' work of social sustainability mainly covers "internal human resources" (Labuschagne and Brent, 2006) or "stakeholder workers" (Benoît et al. 2010). However, working with sustainable development in supply chain like Agenda 21, Broström (2012) Labuschagne & Brent (2006) and Benoît et al. (2010) suggested seems like a weak point in companies' social sustainability focus.

UNEP theme mentioned commerce/trade associations as stakeholders have influences on companies' social sustainable development. The respondents in the construction related companies in both Sweden and China did not think that their companies perceived large impact from commerce/trade associates such as trade union. For Sweden, this result is a bit peculiar since trade unions are a powerful actor when it comes to employment policies, fair wages and safe and healthy work environments. However, the results might point at that the concept of social sustainability is not directly associated with the trade unions work. More, the respondents in the construction related companies in Sweden did not think their companies perceive large influence from financial institutes such as banks and insurance companies either. From a "What" and "how" perspective, increasing short-term profits and productivities fall into substantive aspects. Most of the respondents from the construction related companies in both Sweden and China thought that carrying out the measures to improve social sustainability work did not help with increasing the short term profits and productivity, or they did not know about if their companies increased short-term profits and productivities.

According to the results, most of the construction related companies in Sweden had personnel setups for development of social sustainability. Employees' safety and health were the biggest challenges for the most of the Swedish companies. Lacking the cooperation on supply chain was the main problem. Swedish companies perceived high pressure from employees and managers regarding social sustainability activities. Most of the companies focused on providing a safe and healthy environment for the employees. They thought they could improve companies' images after taking the measures to reduce social impact.

According to the theoretical frameworks, to develop social sustainability, Swedish construction related companies can focus on increasing the cooperation within the supply chain. Organize social sustainability development meetings in the industry, including social sustainability related goals in the contracts, could be the way to go.

As for the results from the construct related companies from China, more than half of the Chinese companies did not have personnel setups and did not implement social sustainability standards. Most of the Chinese companies perceived some social impacts however they did not feel this were huge problems. Lacking financial resources and clear laws and regulations to promote the social sustainability development activities were the large problems for the companies. The companies perceived pressure from employees when developing social sustainability. They focused on proving training programs for employees to reduce the social impacts. They thought that they could improve their companies' images after taking activities to improve social sustainability.

In order to develop social sustainability, it is important for the Chinese construction related companies to understand the importance of social sustainability. Having personnel setups to recognize and manage the social impacts is crucial to the Chinese construction related companies.

The results provided a brief view of the current situation of social sustainability development of the construction related companies in a developed country and a developing country. According to results from Swedish construction related companies and Chinese construction related companies, it can be seen that the construction industry in both Sweden and China have their problems when promoting the development of social sustainability. However, comparing the results from both countries can be faulty. It is due to the differences in the sample size and quality of data. It is also not comparable since the societies are different in Sweden and China. Nevertheless, the results from this study can be used as a benchmark for developing social sustainability in both Sweden and China.

The study fulfilled the aim and objectives of the thesis; to map the current situation of developing social sustainability in Swedish and Chinese construction companies by identifying measurable criteria of social sustainability as well as providing a picture of construction companies' attitude towards social sustainability.

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7 Appendix

7.1 Appendix 1 Indicators lists

Indicators	Frameworks						
	Agenda 21	UNSD theme	Broström (2012)	Labuschagne & Brent (2006)	Handbook for Product Social Impact Assessment (2016)	Benoît et al. (2010)	UNEP theme
Gender equality	✓	✓	✓	✓		✓	
Child labour	✓		✓	✓		✓	
Fare wage	✓	✓	✓	✓	✓	✓	
Employee/ workers' health	✓	✓	✓	✓	✓	✓	
Employee/ workers' safety	✓	✓	✓	✓	✓	✓	
Education of employees	✓		✓	✓	✓	✓	
Discrimination	✓	✓	✓	✓	✓	✓	
Reasonable working hours	✓	✓	✓	✓	✓	✓	
Well-equipped working places	✓		✓	✓		✓	
Physically accessibility to work places			✓	✓	✓		
Privacy for customer			✓	✓	✓		
Cultural heritage			✓	✓		✓	
Employment of unexperienced young people	✓	✓	✓	✓	✓		
Employment of foreign workers	✓	✓	✓	✓	✓	✓	
Employment of people with disabilities	✓	✓	✓	✓	✓	✓	
Employment of long-term unemployed citizens	✓	✓	✓	✓	✓	✓	

Complaints from neighborhood communities during construction	✓		✓	✓	✓	✓	
Human rights			✓	✓	✓	✓	
Corruption	✓		✓	✓		✓	
Fair competition	✓			✓		✓	
Business ethics	✓			✓		✓	
Corporate social responsibility	✓		✓	✓		✓	
Lack of clear laws and regulation	✓						
Lack of cooperation in the supply chain	✓		✓	✓		✓	
Lack of market demands for social sustainability services	✓		✓	✓		✓	
Lack of competitive advantages			✓	✓			
Lack of information in social sustainability	✓			✓		✓	
Insufficient management support	✓		✓	✓			
Lack of knowledge among employees	✓		✓	✓			
Lack of trained staff	✓		✓	✓			
Lack of cooperation within the company	✓		✓	✓			
Lack of cooperation between companies/organizations	✓		✓	✓			
Lack of knowledge transfer	✓		✓	✓		✓	

between construction projects							
Lack of financial resources	✓		✓	✓			
Lack of organizational structure	✓			✓		✓	
Unsupportive organizational culture	✓		✓	✓			
Communication deficiencies	✓		✓	✓			
Employees					✓	✓	✓
Human resource department/staff					✓	✓	✓
Managers					✓	✓	✓
Trade unions						✓	✓
Suppliers					✓	✓	✓
Clients					✓	✓	✓
Competitors						✓	
Industry associations/communities						✓	✓
Financial institutes, eg. banks						✓	✓
Authorities, eg. EU, government, municipality						✓	✓
Press/Media						✓	✓
Researchers/Universities						✓	✓
Employment agency						✓	✓
Implemented a social sustainability policy	✓		✓	✓			
Forecasted social impact from your business	✓		✓	✓			
Balanced the gender ratio in the company	✓	✓	✓	✓	✓		

Provided training programs for employees, such as social sustainable education programs and safety related education programs.	✓	✓	✓	✓	✓		
Employed unexperienced young people	✓	✓	✓	✓	✓		
Employed foreign workers	✓	✓		✓	✓		
Employed disabled people	✓	✓	✓	✓	✓		
Employed long-term unemployed citizens	✓	✓	✓	✓	✓		
Developed of Corporate Social Responsibility plans			✓	✓			
Adopted a non-discrimination policy	✓	✓	✓	✓	✓		
Offered flexible working hours for employees	✓		✓	✓	✓		
Offered health and wellness support to employees	✓		✓	✓	✓		
Considered aspects of physical accessibility in work places			✓	✓	✓		
Provided well equipped working environments	✓		✓	✓	✓		
Provided a safe working	✓		✓	✓	✓		

environment							
Informed clients/customers about social sustainability impact in relation to our products/services	✓		✓	✓	✓		
Applied an open communication strategy with neighborhood communities during construction period.	✓		✓	✓	✓		
Applied an open communication culture in meetings.	✓		✓	✓			
Included social sustainability demands in the procurement routines	✓		✓	✓			
Included social sustainability goals in the construction contracts	✓		✓	✓			
Adopted business ethics plans, such as anti-corruption plans, code of conduct	✓		✓	✓			
Made actions against violence of human rights	✓		✓	✓			
Provided a culture for good cooperation between stakeholders	✓		✓	✓			
Developed Social Life			✓	✓			

Cycle Assessment (SLCA) methods							
Increased competitive advantage	✓		✓	✓			
Improved company image			✓	✓			
Improved product image			✓	✓			
Better sales			✓	✓			
Greater ability to enter new markets			✓	✓			
Increased short-term profits	✓		✓	✓			
Increased long-term profits	✓		✓	✓			
Cost savings	✓		✓	✓			
Increased productivity	✓		✓	✓			
Better insurance terms			✓	✓			
More credit rating			✓	✓			
Improved owners/share holder satisfaction			✓	✓			
Improved client/customer satisfaction			✓	✓			
Improved management and leadership			✓	✓			
Improved employee satisfaction	✓		✓	✓			
Improved recruitment of employees			✓	✓			
Increased cooperation between different stakeholders	✓		✓	✓			
Less employment cost	✓		✓	✓			

Less safety incidents	✓		✓	✓			
Improved employee/worker's health	✓		✓	✓			
Improved gender equality	✓		✓	✓			
Less industry-relational complaints	✓		✓	✓			
Less number of complaints from neighborhood communities during construction	✓		✓	✓			
Created a more harmonious society	✓		✓	✓			

7.2 Appendix 2 The questionnaire that sent to the Swedish companies

**Social hållbarhet i bygg och fastighetssektorn 2017**

Introduktion

Tack för att du valt att svara på vår enkät!

Det är mycket enkelt att navigera i formuläret: klicka bara på det svarsalternativ eller de svarsalternativ som passar och klicka på Nästa för att gå vidare. Om du vill ändra ett svar klicka på Bakåt tills du når önskad fråga. Du kan när som helst gå in och svara och/eller ändra dina svar via detta e-mailutskick. Glöm dock inte att trycka på knappen Spara/Klar längst ner i formuläret för att spara det du matat in.

1. Ditt namn:

* 2. Jag är:

☐ Man

☐ Kvinna

☐ Föredrar att inte svara

* 3. Din ålder:

☐ under 30 år

☐ 31-45 år

☐ 46-60 år

☐ över 60 år

☐ Föredrar att inte svara

* 4. Din högsta utbildningsnivå:

☐ Gymnasium

☐ Högskole/universitetsexamen

☐ Doktorsexamen

☐ Inget av alternativen



Bakgrund och organisation

5. Namn på ditt företag:

* 6. Har ditt företag personal som regelbundet hanterar frågor som rör social hållbarhet?

- ☐ Nej
- ☐ Ja, vi har en särskild avdelning
- ☐ Ja, vi har en särskild grupp/nätverk som bildats kring frågan
- ☐ Ja, vi har en specifik funktion (en person) som ägnar sig åt frågan
- ☐ Ja, annat arrangemang, specificera:

7. Vad heter denna funktion/grupp/avdelning?

* 8. Har ni implementerat en social hållbarhetsstandard/system i erat företag?

- ☐ Ja
- ☐ Nej
- ☐ Nej, men jag är medveten om en standard/system som kan användas

Sociala hållbarhetsutmaningar och hinder

* 9. Nedan följer en lista över sociala hållbarhetsutmaningar som företag står inför. I vilken utsträckning anser du att dessa utmaningar stämmer för ditt företag?

	Ej relevant	Inte alls	I liten utsträckning	I viss mån	I måttlig grad	I stor utsträckning	Vet ej
Jämställdhet	☐	☐	☐	☐	☐	☐	☐
Rättvis lön	☐	☐	☐	☐	☐	☐	☐
Anställdas hälsa	☐	☐	☐	☐	☐	☐	☐
Anställdas säkerhet	☐	☐	☐	☐	☐	☐	☐
Utbildning för anställda	☐	☐	☐	☐	☐	☐	☐
Diskriminering	☐	☐	☐	☐	☐	☐	☐
Rimliga arbetstider	☐	☐	☐	☐	☐	☐	☐
God arbetsmiljö (fysisk och psykosocial)	☐	☐	☐	☐	☐	☐	☐
Tillgänglighet till arbetsplatser	☐	☐	☐	☐	☐	☐	☐
Kundsekretess	☐	☐	☐	☐	☐	☐	☐
Bevarande av kulturarv	☐	☐	☐	☐	☐	☐	☐
Anställning av ungdomar	☐	☐	☐	☐	☐	☐	☐
Anställning av utländsk arbetskraft	☐	☐	☐	☐	☐	☐	☐
Anställning av personer med funktionshinder	☐	☐	☐	☐	☐	☐	☐
Anställning av långtidsarbetslösa	☐	☐	☐	☐	☐	☐	☐
Klagomål från grannar (tredje part) under byggtiden	☐	☐	☐	☐	☐	☐	☐
Mänskliga rättigheter	☐	☐	☐	☐	☐	☐	☐
Korruption	☐	☐	☐	☐	☐	☐	☐
Konkurrens på lika villkor	☐	☐	☐	☐	☐	☐	☐
Affärsetik	☐	☐	☐	☐	☐	☐	☐
CSR (corporate social responsibility)	☐	☐	☐	☐	☐	☐	☐

Övriga, ange vilka:

* 10. Ange i vilken utsträckning du uppfattar att följande aspekter påverkar ditt företags sociala hållbarhetsarbete.

	Ej relevant	Inte alls	I liten utsträckning	I viss mån	I måttlig grad	I stor utsträckning	Vet ej
Brist på tydliga lagar och förordningar	☐	☐	☐	☐	☐	☐	☐
Bristande samarbete i leveranskedjan	☐	☐	☐	☐	☐	☐	☐
Ingen marknad för sociala hållbarhetstjänster	☐	☐	☐	☐	☐	☐	☐
Inga konkurrensfördelar	☐	☐	☐	☐	☐	☐	☐
Brist på information om social hållbarhet	☐	☐	☐	☐	☐	☐	☐
Otillräckligt ledningsstöd	☐	☐	☐	☐	☐	☐	☐
Brist på kunskap bland medarbetarna	☐	☐	☐	☐	☐	☐	☐
Brist på utbildad personal inom social hållbarhet	☐	☐	☐	☐	☐	☐	☐
Bristande samarbete inom företaget	☐	☐	☐	☐	☐	☐	☐
Bristande samarbete mellan företag/organisationer	☐	☐	☐	☐	☐	☐	☐
Bristande kunskapsöverföring mellan byggnadsprojekt	☐	☐	☐	☐	☐	☐	☐
Brist på ekonomiska resurser	☐	☐	☐	☐	☐	☐	☐
Bristande organisationsstruktur	☐	☐	☐	☐	☐	☐	☐
Ickefrämjande organisationskultur	☐	☐	☐	☐	☐	☐	☐
Kommunikationsbrister	☐	☐	☐	☐	☐	☐	☐

Övriga, ange vilka:

* 11. I vilken utsträckning påverkar följande intressenter företagets sociala hållbarhetsarbete ?

	Ej relevant	Inte alls	I liten utsträckning	I viss mån	I måttlig grad	I stor utsträckning	Vet ej
Anställda	☐	☐	☐	☐	☐	☐	☐
Chefer	☐	☐	☐	☐	☐	☐	☐
Personalavdelningen (HR)	☐	☐	☐	☐	☐	☐	☐
Fackföreningar	☐	☐	☐	☐	☐	☐	☐
Leverantörer	☐	☐	☐	☐	☐	☐	☐
Kunder	☐	☐	☐	☐	☐	☐	☐
Konkurrenter	☐	☐	☐	☐	☐	☐	☐
Branchorganisationer	☐	☐	☐	☐	☐	☐	☐
Finansiella institut (t ex banker, försäkringsbolag)	☐	☐	☐	☐	☐	☐	☐
Myndigheter	☐	☐	☐	☐	☐	☐	☐
Tidningar och media	☐	☐	☐	☐	☐	☐	☐
Forskare/universitet	☐	☐	☐	☐	☐	☐	☐
Arbetsförmedlingen	☐	☐	☐	☐	☐	☐	☐

Övriga, ange vilka:

Åtgärder och effekter av sociala hållbarhet

* 12. I vilken utsträckning har företaget genomfört följande åtgärder för att förbättra social hållbarhet?

	Ej relevant	Inte alls	I liten utsträckning	I viss mån	I måttlig grad	I stor utsträckning	Vet ej
Infört en social hållbarhetspolicy	☐	☐	☐	☐	☐	☐	☐
Kartlagt framtida sociala konsekvenser från företagets verksamhet	☐	☐	☐	☐	☐	☐	☐
Verkat för jämställdhet	☐	☐	☐	☐	☐	☐	☐
Erbjudit vidareutbildning för anställda	☐	☐	☐	☐	☐	☐	☐
Inkluderat sociala hållbarhetskrav i upphandlingsrutiner	☐	☐	☐	☐	☐	☐	☐
Inkluderat sociala hållbarhetsmål i entreprenadavtal	☐	☐	☐	☐	☐	☐	☐
Anställt ungdomar	☐	☐	☐	☐	☐	☐	☐
Anställt utländska arbetare	☐	☐	☐	☐	☐	☐	☐
Anställt funktionshindrade	☐	☐	☐	☐	☐	☐	☐
Anställt långtidsarbetslösa	☐	☐	☐	☐	☐	☐	☐
Utvecklat en övergripande CSR (Corporate Social Responsibility) plan	☐	☐	☐	☐	☐	☐	☐
Antagit en policy om icke-diskriminering	☐	☐	☐	☐	☐	☐	☐
Erbjudit flexibla arbetstider för anställda	☐	☐	☐	☐	☐	☐	☐
Erbjudit hälso- och välbefinnandestöd till de anställda	☐	☐	☐	☐	☐	☐	☐
Genomfört säkerhetsrutiner på arbetsplatserna	☐	☐	☐	☐	☐	☐	☐

	Ej relevant	Inte alls	I liten utsträckning	I viss mån	I måttlig grad	I stor utsträckning	Vet ej
Vidtagit åtgärder kring fysisk tillgänglighet på arbetsplatser	☐	☐	☐	☐	☐	☐	☐
Säkerställt en god arbetsmiljö	☐	☐	☐	☐	☐	☐	☐
Informerat kunder om sociala hållbarhet i relation till företagets produkter/tjänster	☐	☐	☐	☐	☐	☐	☐
Tillämpat en öppen kommunikationsstrategi med grannar (tredje part) under byggtiden.	☐	☐	☐	☐	☐	☐	☐
Tillämpat en öppen samtalskultur i möten.	☐	☐	☐	☐	☐	☐	☐
Etablerat en uppförandekod (affärsetik)	☐	☐	☐	☐	☐	☐	☐
Utfört handlingar som motverkar brott mot mänskliga rättigheter	☐	☐	☐	☐	☐	☐	☐
Skapat en kultur för gott samarbete mellan intressenter	☐	☐	☐	☐	☐	☐	☐
Använt sociala livscykelanalysmetoder (SLCA)	☐	☐	☐	☐	☐	☐	☐
Övriga, ange vilka:							

* 13. Vilka effekter som åtgärder för social hållbarhet inom företaget har lett till?

	Ej relevant	Ja	Nej	Vet ej
Ökad konkurrensfördel	☐	☐	☐	☐
Förbättrad företagsimage	☐	☐	☐	☐
Ökad försäljning	☐	☐	☐	☐
Ökad förmåga att komma in på nya marknader	☐	☐	☐	☐
Ökad kortsiktig vinst	☐	☐	☐	☐
Ökad långsiktig vinst	☐	☐	☐	☐
Kostnadsbesparing	☐	☐	☐	☐
Ökad produktivitet	☐	☐	☐	☐
Bättre försäkringsvillkor	☐	☐	☐	☐
Bättre kreditvärdighet	☐	☐	☐	☐
Nöjda ägare	☐	☐	☐	☐
Förbättrad kundnöjdhet	☐	☐	☐	☐
Förbättrat ledarskap	☐	☐	☐	☐
Nöjdare medarbetare	☐	☐	☐	☐
Förbättrad rekrytering	☐	☐	☐	☐
Ökat samarbete mellan olika aktörer	☐	☐	☐	☐
Minskad personalomsättning	☐	☐	☐	☐
Färre olyckor	☐	☐	☐	☐
Förbättrad hälsa bland anställda	☐	☐	☐	☐
Förbättrad jämställdhet	☐	☐	☐	☐
Färre tvister mellan inblandade företagsparter	☐	☐	☐	☐
Färre antal klagomål från grannar (tredje part) under byggtid	☐	☐	☐	☐
Skapat ett sundare samhälle	☐	☐	☐	☐

Andra, ange vilka:



Kontakt

Tack för att du svarat på vår enkät.

Resultaten från enkäten kommer att sammanställas i ett examensarbete. Om du önskar ta del av resultaten svara ja på frågan nedan.

14. Vill du ta del av sammanlagda resultaten från enkäten?

☐ Ja

☐ Nej

Om, ja, ange e-mailadress du vill att vi skickar den till:

7.3 Appendix 3 The questionnaire that sent to the Chinese companies



建筑行业社会可持续发展调查
Social sustainability survey in construction sectors and real estate companies

简介与背景

建筑和房地产行业社会可持续发展问卷调查的目的是了解行业内对社会可持续发展观念的态度，以及围绕社会可持续发展开展的工作和结果。

社会可持续发展是通过了解人们的工作生活所需，实现社会的和谐与可持续发展。通常，社会可持续发展包括了工作环境的安全卫生，社区发展，人权，劳工权利，社会责任与公平公正等方面。这项课题研究是由瑞典查尔姆斯理工大学设计与施工项目管理专业负责。这项研究是将调查问卷发送给可能在建筑和房地产公司中处理社会可持续发展问题的管理人员，分析建筑行业社会可持续发展的现状。

我们真诚地希望您能参与填写这份调查。您参与对我们来说非常宝贵。为了得到有效的数据，我们希望通过这份问卷的是公司负责处理社会可持续发展相关问题的人员，例如HR或者CEO。如果您不是负责这方面的人员，请您将这份问卷发给符合描述的人员。

问卷结果将做匿名处理。此问卷调查不会作商业用途。
这份问卷的操作非常简单，你只需要填写或选择一个答案之后，点击后页便可进行。如果您想更改，请点击后页。完成问卷大概需要15-20分钟。这项调查截止日期为2017年5月1日。您可以在问卷到期前修改。您可以在填写途中暂停保存，等有时间后继续填写。

如果您有任何问题或者希望获得我们的研究论文，请联系瑞典查尔姆斯理工大学设计与施工项目管理专业研究生张婧璇
电子邮箱：jingxuan@student.chalmers.se

1. 填写者姓名：

* 2. 您的性别：

☐ 男

☐ 女

☐ 保密

* 3. 您的年龄：

☐ 30岁以及30岁以下

☐ 31-45岁

☐ 46-60岁

☐ 60岁以上

☐ 保密

* 4. 您的最高学历：

- ☐ 高中及以下
- ☐ 大专/本科
- ☐ 硕士
- ☐ 博士
- ☐ 其他



建筑行业社会可持续发展调查
Social sustainability survey in construction sectors and real estate companies

公司背景

* 5. 公司名称：

* 6. 您的公司主要的业务范围是？

- ☐ 建筑设计
- ☐ 咨询相关（包括管理咨询，技术咨询等各类咨询）
- ☐ 承建施工
- ☐ 原材料供应
- ☐ 房地产
- ☐ 其他，请填写

* 7. 贵公司是否有负责处理社会可持续发展问题的人事

- ☐ 无
- ☐ 有，我们有一个特定的部门
- ☐ 有，我们有为处理这个问题专门成立的小组
- ☐ 有，我们有特定的员工处理这个问题
- ☐ 有，其他设置，请陈述：

8. 这个部门/小组/特定员工的职位称呼？

* 9. 贵公司是否采用了社会可持续发展的标准或系统？

- ☐ 有
- ☐ 无
- ☐ 无，但我知道类似的标准或系统



建筑行业可持续发展调查 Social sustainability survey in construction sectors and real estate companies

促进社会可持续发展所面临的问题

* 10. 以下是贵公司在实现社会可持续发展的过程中可能面临的问题。请标出您认为各类问题的严重程度。

	与我的公司不 相关	没有问题	有少许问题	有一部分问题	问题比较严重	问题非常严重	我不了解情况
性别平等	☐	☐	☐	☐	☐	☐	☐
童工	☐	☐	☐	☐	☐	☐	☐
薪水均衡	☐	☐	☐	☐	☐	☐	☐
员工健康	☐	☐	☐	☐	☐	☐	☐
员工安全	☐	☐	☐	☐	☐	☐	☐
员工教育	☐	☐	☐	☐	☐	☐	☐
歧视	☐	☐	☐	☐	☐	☐	☐
工作时间合理	☐	☐	☐	☐	☐	☐	☐
工作地点设施齐全	☐	☐	☐	☐	☐	☐	☐
工作地点可供残障人士 出入	☐	☐	☐	☐	☐	☐	☐
保护客户隐私	☐	☐	☐	☐	☐	☐	☐
保护文化遗产	☐	☐	☐	☐	☐	☐	☐
雇佣没有工作经验的年 轻人	☐	☐	☐	☐	☐	☐	☐
雇佣残疾人	☐	☐	☐	☐	☐	☐	☐
雇佣长期失业者	☐	☐	☐	☐	☐	☐	☐
施工期间收到周边邻居 投诉	☐	☐	☐	☐	☐	☐	☐
人权	☐	☐	☐	☐	☐	☐	☐
贪污腐败	☐	☐	☐	☐	☐	☐	☐
企业之间公平竞争	☐	☐	☐	☐	☐	☐	☐
企业道德	☐	☐	☐	☐	☐	☐	☐
企业社会责任 (CSR)	☐	☐	☐	☐	☐	☐	☐

其他，请填写：

* 11. 您认为以下这些项目对贵公司实现社会可持续发展有什么程度的影响。

	与我的公司不 相关	没有影响	有少许影响	有一些影响	影响比较严重	影响非常严重	我不了解情况
没有规章制度和法规	☐	☐	☐	☐	☐	☐	☐
没有供应链上其他企业的合作	☐	☐	☐	☐	☐	☐	☐
市场上没有社会可持续发展的服务需求	☐	☐	☐	☐	☐	☐	☐
没有竞争优势	☐	☐	☐	☐	☐	☐	☐
没有社会可持续发展相关信息	☐	☐	☐	☐	☐	☐	☐
没有公司管理层的支持	☐	☐	☐	☐	☐	☐	☐
员工之间缺乏知识	☐	☐	☐	☐	☐	☐	☐
没有受过这方面教育的员工	☐	☐	☐	☐	☐	☐	☐
没有公司内部的支持	☐	☐	☐	☐	☐	☐	☐
没有公司之间的合作	☐	☐	☐	☐	☐	☐	☐
工程项目之间没有信息交流	☐	☐	☐	☐	☐	☐	☐
没有资金	☐	☐	☐	☐	☐	☐	☐
没有组织结构	☐	☐	☐	☐	☐	☐	☐
公司没有社会可持续发展的文化	☐	☐	☐	☐	☐	☐	☐
交流有问题	☐	☐	☐	☐	☐	☐	☐

其他，请指出：

* 12. 请标注一下利益相关者如何影响贵公司实现社会可持续发展

	与我的公司不 相关	没有影响	有少许影响	有一些影响	影响比较严重	影响非常严重	我不了解情况
雇员	☐	☐	☐	☐	☐	☐	☐
人事部门	☐	☐	☐	☐	☐	☐	☐
管理人员	☐	☐	☐	☐	☐	☐	☐
工会	☐	☐	☐	☐	☐	☐	☐
供应商	☐	☐	☐	☐	☐	☐	☐
客户	☐	☐	☐	☐	☐	☐	☐
竞争对手	☐	☐	☐	☐	☐	☐	☐
商会	☐	☐	☐	☐	☐	☐	☐
金融相关机构，比如银行	☐	☐	☐	☐	☐	☐	☐
政府机构	☐	☐	☐	☐	☐	☐	☐
媒体	☐	☐	☐	☐	☐	☐	☐
研究员/各大高校	☐	☐	☐	☐	☐	☐	☐
猎头公司	☐	☐	☐	☐	☐	☐	☐

其他，请陈述：



实现社会可持续发展的措施

* 13. 请问贵公司在促进社会可持续发展方面采取了什么程度的措施

	与我的公司不 相关	没有采取措施	有少量措施	有一些措施	比较多措施	非常多措施	我不了解情况
采用社会可持续发展的 规章制度	☐	☐	☐	☐	☐	☐	☐
预测工程的中会产生的 社会问题	☐	☐	☐	☐	☐	☐	☐
平衡男女比例	☐	☐	☐	☐	☐	☐	☐
为员工提供职业培训	☐	☐	☐	☐	☐	☐	☐
为无工作经验的年轻人 提供工作岗位	☐	☐	☐	☐	☐	☐	☐
为非本国员工提供工作 岗位	☐	☐	☐	☐	☐	☐	☐
为残障人士提供工作岗 位	☐	☐	☐	☐	☐	☐	☐
为长期失业人群提供工 作岗位	☐	☐	☐	☐	☐	☐	☐
颁布执行反对歧视的规 章制度	☐	☐	☐	☐	☐	☐	☐
提供灵活的工作时间	☐	☐	☐	☐	☐	☐	☐
提供为员工提供健康服 务	☐	☐	☐	☐	☐	☐	☐
为员工提供安全的工作 环境	☐	☐	☐	☐	☐	☐	☐
为残疾人士提供安全进 出通道	☐	☐	☐	☐	☐	☐	☐
为员工提供优质的工作 环境	☐	☐	☐	☐	☐	☐	☐
告知客户所提供的服务 会产生的社会影响	☐	☐	☐	☐	☐	☐	☐
施工期与周边邻居进行 沟通和交流	☐	☐	☐	☐	☐	☐	☐
在企业内部会议中广开 言路	☐	☐	☐	☐	☐	☐	☐
将社会可持续发展相关 要求写进采购合同	☐	☐	☐	☐	☐	☐	☐

	与我的公司不 相关	没有采取措施	有少量措施	有一些措施	比较多措施	非常多措施	我不了解情况
将社会可持续发展相关要求写进施工合同	☐	☐	☐	☐	☐	☐	☐
采用商业道德规划	☐	☐	☐	☐	☐	☐	☐
采取行动打击人权暴力	☐	☐	☐	☐	☐	☐	☐
为利益相关者之间的良好合作提供了企业文化基础	☐	☐	☐	☐	☐	☐	☐
制定企业社会责任计划(CSR)	☐	☐	☐	☐	☐	☐	☐
采用社会生活周期评估(SLCA)方法	☐	☐	☐	☐	☐	☐	☐
其他，请指出：							

* 14. 您认为采取促进社会可持续发展措施会对贵公司发展有何影响？

	与我的公司不相关	有影响	无影响	我不了解情况
提高竞争优势	☐	☐	☐	☐
改善公司形象	☐	☐	☐	☐
改进产品形象	☐	☐	☐	☐
促进销售	☐	☐	☐	☐
进入新市场时有更强的竞争力	☐	☐	☐	☐
增加短期利润	☐	☐	☐	☐
增加长期利润	☐	☐	☐	☐
节省成本	☐	☐	☐	☐
提高生产力	☐	☐	☐	☐
能得到更好的保险条款	☐	☐	☐	☐
更好的信用评价	☐	☐	☐	☐
改善业主/股东的满意度	☐	☐	☐	☐
提高客户/客户满意度	☐	☐	☐	☐
改善管理质量	☐	☐	☐	☐
提高员工满意度	☐	☐	☐	☐
改善招聘方面的问题	☐	☐	☐	☐
加强不同利益相关者之间的合作	☐	☐	☐	☐
减少员工流动成本	☐	☐	☐	☐
减少安全事故	☐	☐	☐	☐
改善员工的健康状况	☐	☐	☐	☐
改善性别平等相关问题	☐	☐	☐	☐
减少行业相关的投诉	☐	☐	☐	☐
减少施工期间邻里社区的投诉	☐	☐	☐	☐
创造一个更加和谐的社会	☐	☐	☐	☐

其他，请陈述：



联系方式

感谢您的参与。

这份调查会被使用在论文中。如果您希望浏览调查结果，请点击是，并且留下电子邮箱地址。

15. 你是否想要浏览调查结果

☐ 是

☐ 否

☐ 电子邮箱地址：