

Plugging the leaky pipeline through the Aqaba-Amman Water Desalination and Conveyance Project

A system analysis to assess how impact investors can increase equity, diversity and inclusion for women in the professional construction roles.

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Plugging the leaky pipeline through the Aqaba-Amman Water Desalination and Conveyance Project

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"For too long we have positioned women as a deviation from standard humanity and this is why they have been allowed to become invisible. It's time for a change in perspective. It's time for women to be seen."

Caroline Criado Perez

Preface

Seven years ago, when I started my bachelor of civil engineering, I would have never expected that I would be graduating on the topic of gender. But here it is. My interest in the topic has been growing over the past couple of years. Therefore, when Invest International offered me the opportunity to work with them on this topic, I was more than happy. Even though I was already passionate about the subject prior to conducting this research, after reading the relevant studies and speaking with numerous professionals and experts, my enthusiasm became a motivation to actually effect change and begin motivating others to do the same.

Of course I could not have gone through the journey of writing this thesis by myself. Especially when considering some of the set backs that I had to go through in this process. A special thanks therefore goes out to Ellen Minkman, who was always right behind me and always made me feel supported. I really appreciate the fact that she always asked me the right questions to improve my reflection on the topic and that she always had a critical eye for how my work could be made better. Also, I would like to thank Jenny Lieu and Victor Scholten for joining my thesis half-way and still being involved in the process and willing to provide me with feedback when I needed it. A special thank you to Merve Birgul for our weekly meetings and the time she made available to me despite her busy schedule that included working and pursuing her own second master's degree. She has taught me a lot, and I am looking forward to continue working with her on this subject.

In addition to my graduation committee, I also want to thank the other people who helped me learn a lot about the subject. Therefore, a special thanks to Shivani Moenesar who not only explained to me why focusing on such a topic is very important, but she also showed me that that it is very doable for investment parties to integrate gender in their policies. I also would like to thank all the women that participated to this study and put time and effort into the interviews that I conducted which led to very valuable insights. I really hope to meet them one day in Amman to make up for the time spent in online interviews. Additionally, I would like to thank Katriena Koedam-Wiersma who used to work in Amman. Since I couldn't travel to Jordan myself, she really helped me consider my positionality and gave me the information I needed to better understand the country.

Finally, I want to express my gratitude to everyone who indirectly contributed to this project by making my life more enjoyable and occasionally diverting my attention from my thesis. Therefore a big thanks to my parents for always being available and welcoming, to my sister and my friends who supported me and kept checking on me when I locked myself up again to write on this project. Finally, a big thanks to Laurens for the daily support (without him I wouldn't have eaten hot meals everyday) and for taking my mind off this thesis every once in a while.

If you are not convinced of the importance of this topic, I hope this thesis will make you more aware of the challenges women face in the workplace and other aspects of daily life. To all readers: Enjoy and know that I will always be open to discussing this matter with anyone who is curious.

Anniek van Veldhuizen
The Hague, October 2022

Executive Summary

Impact investors can play a major role in fighting inequalities regarding gender and increasing Equity, Diversity, and Inclusion (EDI) for women. This is important as societies that value women and men as equal are safer, healthier and have better economic prosperity. Nonetheless, impact investors face many challenges to be effective and research into the topic is still lacking. To assess how impact investors can be effective in increasing EDI, this thesis will perform a case study of which the subject will be the Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP). The AAWDCP is a large infrastructure project in Jordan that aims to address Jordan's water scarcity. Furthermore, it will provide many people with jobs during the construction phase. Considering that women in Jordan make up a large part of graduates in higher education, yet a small part of the labor force, there are many opportunities to increase the participation of women in this project. As the AAWDCP is a large infrastructure project, this research will mainly focus on EDI for women in the Jordanian construction workforce, which is a topic that is lacking in academic literature. More specifically, the research will focus on women in the professional construction roles. The research question that is formulated is therefore defined as follows:

How can impact investors increase equity, diversity and inclusion for women in the professional construction roles of the AAWDCP, while considering the local context and needs?

A system diagram was utilized in this research for a qualitative analysis of the effects of means developed by impact investors on relevant criteria for the AAWDCP. In order to create the system diagram shown in Figure 3.1, data was collected from different sources, which included scientific literature, project reports, interviews with experts in the field of gender-related investments, and interviews with professional Jordanian.

This methodology led to the identification of several criteria that can be utilized as Key Performance Indicators (KPIs) for this particular project, but could also serve as a starting point for the development of a standardized set of measurements for multiple projects. Furthermore, the findings showed that indeed women in Jordan face numerous challenges to participate in the (construction) workforce, which need to be tackled. The analysis of the system diagram led to a preferred policy that showed improvement of EDI in different scenarios of this project. To be more certain of an actual increasing effect on EDI this preferred policy can be complemented by other means, depending on the specific scenario.

The findings also led to more general recommendations for impact investors: if they want to enhance EDI in their projects, they must consistently work with local organizations and put the needs of the impacted community ahead of their own KPIs. Furthermore, in order to be able to achieve increased EDI in the projects they finance, impact investors must first increase EDI within their own investment teams.

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List of Abbreviations

AAWDCP	Aqaba-Amman Water Desalination and Conveyance Project
CLD	Causal Loop Diagram
CSR	Corporate Social Responsibility
DFIs	Development Finance Institutions
DoS	Department of Statistics
EDI	Equity, Diversity, and Inclusion
EIB	European Investment Bank
EPA	Engineering and Policy Analysis
ESIA	Environmental and Social Impact Assessment
GBV	Gender Based Violence
GIIN	Global Impact Investing Network
GNI	Gross National Income
GoJ	Government of Jordan
IFIs	International Financial Institutions
IPS	Intake Pump Station
JICA	Japan International Cooperation Agency
KfW	German Credit Bank for Reconstruction
KOICA	Korean Organization for International Cooperation Agency
KPI	Key Performance Indicator
KPIs	Key Performance Indicators
LGBT	Lesbian, gay, bisexual, transgender
LGBTQIA+	Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersex, Asexual, and more
MCM	Million Cubic Meter
MHM	Menstrual Hygiene Management
MWI	Ministry of Water and Irrigation

NGOs Non Governmental Organizations
NGO Non Governmental Organization
SDG Sustainable Development Goal
SDGs Sustainable Development Goals
SEP Stakeholder Engagement Plan
SPL Shared Parental leave
SR Sustainability Reporting
STEM Science, Technology, Engineering, and Mathematics
SFD Stock Flow Diagram
SWRO Sea Water Reverse Osmosis
UKAID United Kingdom Aid Agency
UN United Nations
USAID United States Agency for International Development
WANA West Asia and North Africa

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1

Problem Introduction

"Achieving gender equality and empowering women and girls is the unfinished business of our time, and the greatest human rights challenge in our world."

António Guterres, United Nations Secretary-General (2018).

Data from the World Bank shows that the female labor force participation rate¹ in Jordan in 2021 was 14%. This number is very low compared to 62% for men and a global average female participation rate of 46% in 2021. When comparing to other countries in the Arab League, Jordan has the second lowest labor force participation of women, with only Yemen showing a lower number (Ucal & Günay, 2019). Furthermore, it is noteworthy that only two of the 28 Cabinet Members in Jordanian politics are female (Government of Jordan (GoJ), 2022). When looking at the construction industry, data from the Department of Statistics (DoS) Jordan (2019) shows that in the year 2019, the construction industry in Jordan consisted of 33.532 people of which only 1.259 are female. This comes down to 3,75% being female employees (DoS Jordan, 2019). Considering that the percentage of women in engineering studies was 28% in 2019, a major gap can be observed (UNESCO, 2022). This gap in such an industry can be seen as a wastage of human capital and therefore should be addressed in order to increase GDP, competitiveness, economic growth, and job creation (Kiviniemi, 2015; Koburtay et al., 2020). Impact investors can play a major role in fighting inequalities regarding gender and increasing Equity, Diversity, and Inclusion (EDI) for women in the construction workforce. This is advantageous for the populations that investment policies seek to benefit in terms of health and safety and economic prosperity (EIGE, n.d.). However, also for impact investors themselves, as studies have shown that companies that prioritize social effect may outperform competitors that solely prioritize financial return (Combs, 2014). Nonetheless, research is lacking and major challenges still exist for impact investors to be effective.

¹% of female population ages 15+

1.1 Research focus

As the topic is relatively new in academic literature and very context dependent, a case study will be performed, which allows for an in-depth exploration of which the subject will be the Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP). The AAWDCP is a large infrastructure in Jordan that is currently in the design phase. By means of this case study, an ex-ante evaluation can be made of the effectiveness of impact investors' gender strategies. EDI is about more than just the quantity of women working in the construction industry. Women could for example be active in the sector, but in more traditional roles, like administration. Therefore this research will mainly focus on women in the professional construction roles, e.g. project managers, construction managers, or architects.

1.1.1 Introducing the case

With annual renewable water resources of less than 100 cubic meters per person, Jordan is one of the most water-scarce nations in the world (UNICEF Jordan, 2017). To tackle the challenges regarding water scarcity, Jordan has initiated the AAWDCP. The AAWDCP is a project that will increase Jordan's water supply by 300 Million Cubic Meter (MCM) per year (MWI Jordan, 2021). As can be seen in Figure 1.1, which shows the overall location of the AAWDCP, the infrastructure will start in Aqaba and end in Amman. The infrastructure consists of several technical components, which are (1) an offshore seawater intake system and onshore Intake Pump Station (IPS); (2) Seawater pipeline from IPS to the Sea Water Reverse Osmosis (SWRO) desalination plant; (3) SWRO desalination plant; (4) brine pipeline from the SWRO desalination plant to the IPS and offshore brine outfall system; and (5) pump stations, which regulate the tanks and conveyance pipelines from the SWRO desalination plant to Amman (ESIA Team, 2022b). The AAWDCP requires funding from a number of sources, including impact investors (MWI Jordan, 2021). According to the ESIA Team (2022c) the AAWDCP will create jobs for local communities with varying skill requirements, which is needed due to the impact of COVID-19. According to Ministry of Water and Irrigation (MWI) Jordan (2022) the AAWDCP will directly employ 2700 to 3000 people during the construction phase. Nonetheless, no mention is made of including women in the construction workforce.

1.1.2 Case-specific challenges

Jordan suffers from the West Asia and North Africa (WANA) paradox, meaning that many women participate in higher education but do not transition to the labor force (Assaad et al., 2020; UN Jordan, 2020). Although according to (Odeh et al., 2022), Jordan's population, consists for almost one third of refugees and still many challenges exist with integrating them alongside local and migrant workers (Gordon, 2021), this study will mainly focus on gender. Therefore the use of the term EDI in this work refers to EDI specifically focused on gender. Despite the fact that gender encompasses not just men and women but also queer, transgender, and non-gender identities, (Giliberto & Labadi, 2022), this study will focus on the binary division between cisgender men and women.

1.1.3 Main objective

Considering the information and challenges stated in section 1.1.1 and 1.1.2, this thesis aims to dive into the gender strategies of the most important impact investors of the AAWDCP, and the factors and relations that could influence EDI in the professional construction roles during the construction phase of the AAWDCP. With input from multiple sources, a conceptual model in the form of a system diagram is built to do this. Based on this model a policy advice can be written for impact investors on how to support EDI in the professional construction roles by investing in the AAWDCP, while taking into account the local context and needs of women.

1.2 Report structure

Chapter 2 will continue with a literature review, to identify previous research on the topic of the role of impact investors in supporting EDI in the workforce of large construction projects, resulting in a knowledge gap that leads to the research question of this thesis. Chapter 3 will then split this research question into sub-questions and will argue which research approach is most suitable, followed by a deeper explanation of the methodology for each sub-question. Furthermore, Chapter 3 will elaborate on the quality of the proposed research. Chapter 4 provides a detailed explanation of the context where the AAWDCP takes place and sets out all factors that have an influence on EDI in the project's professional construction roles based on literature. Chapter 5 aims to identify the most important impact investors and their means and criteria towards EDI. Chapter 6 builds upon the previous chapters by analyzing the perspectives of local professional women. After mapping all the information found in Chapter 4, 5, and 6, a system diagram can be built and analyzed, which will be done in Chapter 7. In Chapter 8 the main findings are stated, leading to a final answer on the main question, the societal and scientific contribution of this research. Chapter 8 will conclude with a wider applicable policy advice for impact investors that seek to increase EDI in their projects. Chapter 9 will offer a discussion on the limitations of this research, including limitations of the methods used. Furthermore, recommendations for future research will be stated.

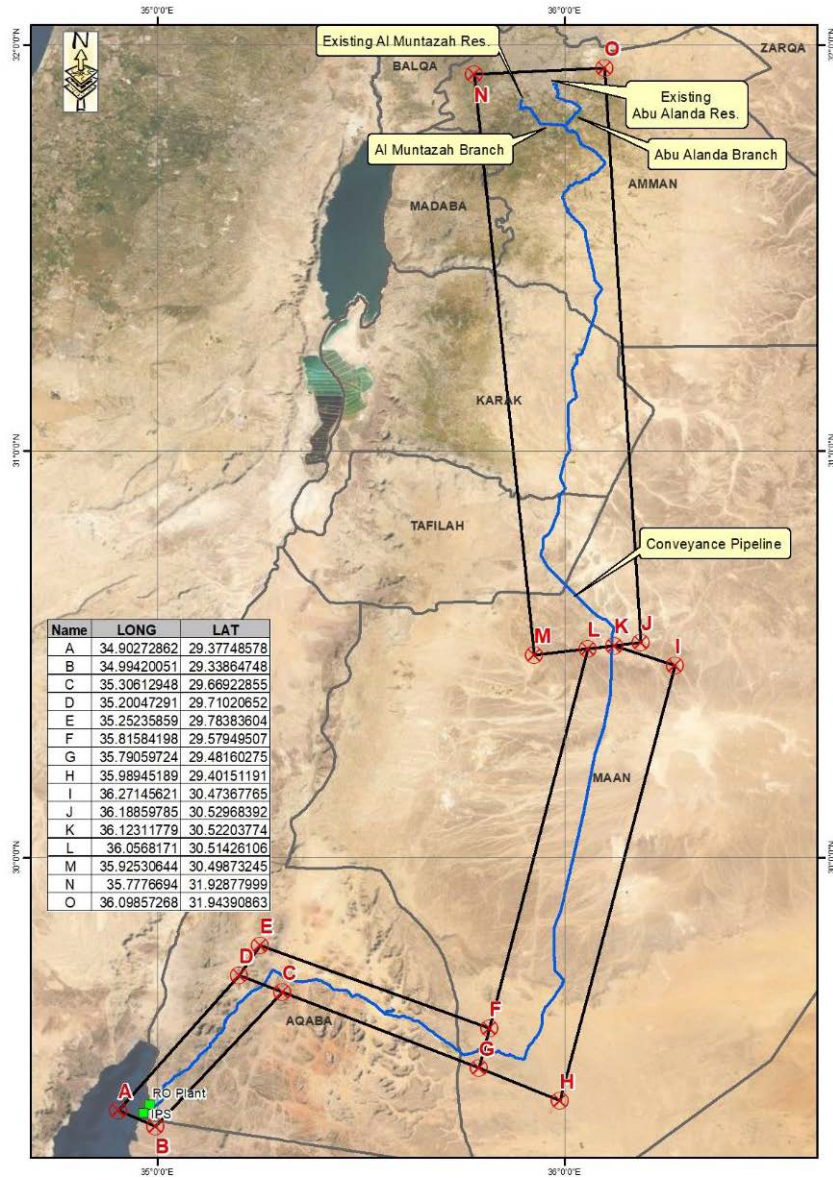


Figure 1.1: The overall location of the AAWDCP (ESIA Team, 2022c)

2

Literature review

A literature review is performed to take notice of already existing knowledge on the topic. By doing this, a gap can be identified, resulting in the main research question. The literature review that follows first examines what has been written about Equity, Diversity, and Inclusion (EDI), then it examines the research that has been done on women's involvement in the Jordanian construction sector specifically. This is followed by an overview of research about impact investing, and challenges for impact investors' effectiveness. Finally, the knowledge gaps are stated and a research question is formulated.

2.1 Equity, Diversity and Inclusion

In terms of both meaning and application, equity, diversity, and inclusion are difficult and frequently debated concepts (Tamtik & Guenter, 2019). Furthermore, literature about EDI mostly is mostly grey literature instead of scientific literature. Therefore, this section will dive into the definition of each concept.

2.1.1 Equality vs. Equity

Much research has been done into what research refers to as equality for women in the workforce and numerous obstacles were found to achieving equality, including culture (Brière & Auclair, 2020; Dziubaniuk et al., 2021; Galea et al., 2018; Koburtay et al., 2020), religion (Koburtay et al., 2020), existing legislation (Koburtay et al., 2020), masculinity of existing norms (Bleijenbergh & Van Engen, 2015), existing gender beliefs among leaders (Humbert et al., 2019), and lack of visibility of women in the form of labor market segregation (Bleijenbergh & Van Engen, 2015; Galea et al., 2018; Kordi et al., 2021; Wright & Conley, 2020). Especially in Arab countries, like Jordan, this gender segregation in the workforce is significant and policy interventions are needed to increase female labor participation and secure productivity and economic growth (Galea et al., 2018; ILO, 2017). Whereas gender equality simply focuses on providing men and women with the same equal opportunities, gender equity works to correct the historical wrongs that have left women behind (Binagwaho, 2020). In contrast to equality, the term "equity" denotes justice and fairness and refers to the understanding that not everyone starts from the same place and that these differences must be acknowledged and

corrected (NACE, n.d.). In an equitable environment, an individual or a group would be given what was needed to give them equal advantage, which would not necessarily be equal to what others were receiving to ensure that everyone has the resources they need to succeed (Pacific University Oregon, 2021). Therefore, for this thesis, the term equity will be used. A simplified explanation of equity versus equality is shown in Figure 2.1.

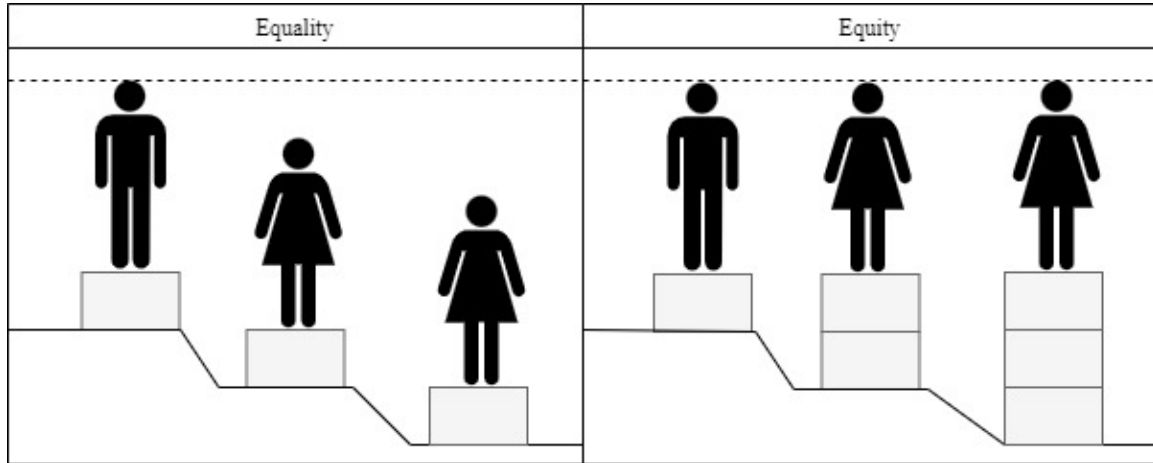


Figure 2.1: Visualization of equality vs. equity. The difference in ground level represents the different starting points of the individuals. Giving these individuals the same means to reach a certain level, does not lead to the same outcome for both.

2.1.2 Diversity

Diversity is understood to be a multifaceted concept that encompasses a variety of identifying elements, including race, ethnicity, gender, and disability (Fuentes et al., 2021). In this thesis, the element determining diversity will be gender. Numerous studies have been conducted on the impact of gender diversity on corporate boards on performance, with varying results (Dezső & Ross, 2012; Kochan et al., 2003; Post & Byron, 2015). Post & Byron (2015) revealed that in countries where gender parity is high, a positive correlation between having more women on boards and a company's financial performance can be found. This effect might be caused by societal gender differences in human capital that may influence investors' evaluations of the future earning potential of firms that have more female directors (Post & Byron, 2015). Furthermore, Bear et al. (2010) showed that the number of women on boards affects firms' Corporate Social Responsibility (CSR) ratings and, in turn, CSR positively influences corporate reputation.

2.1.3 Inclusion

The term "inclusion" refers to the active, deliberate, on-going engagement with diversity in communities (intellectual, social, cultural, and geographical) with which individuals may connect, in ways that increase awareness, subject-matter expertise, cognitive sophistication, and empathic understanding of the complex ways people interact within systems and institutions (Fuentes et al., 2021).

2.2 Literature on women's participation in the Jordanian construction industry

As this research focuses on EDI of women in the professional construction roles of the Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP), it is important to identify existing

literature on women’s participation in the Jordanian construction industry. The term *construction industry* refers to the sector of manufacturing and trade that deals with building, maintaining, and repairing infrastructures (Hussain et al., 2022). Segregation in the construction workforce market is evident, with women holding only 12% of professional construction roles globally (Galea et al., 2018; Kordi et al., 2021). To analyze what research has been done on EDI in the construction industry in general, the following query was used to search the Scopus data base: *TITLE-ABS-KEY (("EDI" OR "DEI" OR "EID" OR "equality" OR "equity" OR "inclusion" OR "diversity") AND ("women" OR "woman" OR "gender") AND ("construction industry" OR "construction role*" OR "engineering" OR "infrastructure"))*. This search led to 3,384 document results, distributed over 106 countries, with 47% of the works being about the United States of America, leaving the other 53% distributed over 105 other countries. When *"Jordan"* was added to the query, the same search led to zero documents, indicating that limited research has been performed into the topic of gender EDI the Jordanian construction industry. When looking to women in Science, Technology, Engineering, and Mathematics (STEM) jobs or education, the search specifically to Jordan led to zero results as well.

2.3 Impact investing and gender

In a 2020 study, the Global Impact Investing Network (GIIN) found that alongside policymakers and philanthropic actors, impact investors play a major role in addressing inequality linked to gender (Bass & Murphy, 2020). According to Espinoza Trujano & Lévesque (2022) impact investors have a great potential to help develop more resilient and gender-equitable economies through their investments. Additionally. Ruiz et al. (2021) states that investors’ influence on Sustainability Reporting (SR) has grown significantly in recent years. Nonetheless, impact investing has received very little academic or empirical attention (Combs, 2014; Hazenberg & Paterson-Young, 2022; Hebb, 2013; McCallum & Viviers, 2020; Ormiston et al., 2015).

2.3.1 Definition of impact investing

Impact investing represents a way of project financing that does not merely aim for economic return on projects, but tends to prioritize social or environmental impact (Hebb, 2013; Magomedova et al., 2020; McCallum & Viviers, 2020). Impact investing has seen a considerable increase in interest and engagement in recent years as corporations, governments, and communities look for innovative ways to enable an equitable and sustainable society in the face of social and environmental concerns (Ormiston et al., 2015). Impact investors are financial institutions that seek opportunities for financial investments that produce, besides economic return, social or environmental benefits, like gender equality (Brest & Born, 2013; Magomedova et al., 2020; McCallum & Viviers, 2020). An example of this are Development Finance Institutions (DFIs) which play a major role in mobilizing private sector investments in developing countries with the goal of promoting initiatives that have both a development impact (e.g. contribution to the Sustainable Development Goals (SDGs)) and a market-based return (Espinoza Trujano & Lévesque, 2022). Therefore they can also be referred to as impact investors (Brest & Born, 2013; Magomedova et al., 2020; McCallum & Viviers, 2020).

2.3.2 Challenges for impact investors

Many challenges exist for impact investors. According to McCallum & Viviers (2020), these challenges refer to the market’s small size and early stage of development, which increases risk and may cause investors to be cautious. Furthermore, challenges exist regarding the wickedness of the problems that impact investors seek to address, accountability, and positionality.

Wickedness of social problems

A wicked problem is a problem that lacks a consistent set of solutions and is unstructured (Enserink et al., 2010). The social issues that impact investors seek to address range from local ones like

child protection, drug and alcohol abuse, urban transportation, disadvantage of indigenous people, and sustainable use of natural resources to global ones like climate change, poverty, and social development in post-conflict societies, or as in the thesis, gender EDI (Ormiston et al., 2015). These problems often call for numerous solutions since they are chaotic, complex, and linked (Eden & Wagstaff, 2021). One of the challenges that impact investors face is the lack of a consistently agreed-upon set of standards for measuring social impact, making reporting more difficult (Hazenberg & Paterson-Young, 2022; Hebb, 2013; McCallum & Viviers, 2020). This lack of tools to measure social impact is a significant barrier for the effectiveness of impact investors (Magomedova et al., 2020). The difficulty of measuring social impact, comes from the fact that it consists of a greater portion of subjective attributes than the economic and environmental dimensions and it is characterized by various social values, which, in turn, are influenced by numerous actors (Almahmoud & Doloi, 2016; Hazenberg & Paterson-Young, 2022). This leads to many different approaches to impact measurement (Hazenberg & Paterson-Young, 2022).

Accountability

Brouwers (2013) points out that assessment studies of impact investors' impact on gender have been preoccupied on the strategy of gender mainstreaming, failing to examine the results for women and gender equality. Furthermore, the gender development policy has not advanced beyond the stage of a theory (Brouwers, 2013). Gender mainstreaming refers to a strategy to facilitate gender integration, that the United Nations (UN) have adopted, about which Mukhopadhyay (2016) mentions two different types of accountability concerns. The first one being that gender mainstreaming as a tool fails to clearly communicate to users what it is that they are in fact accountable for assuring. Secondly, the goal of gender mainstreaming is to make sure that everyone is held accountable for gender equity obligations, leading to nobody being ultimately responsible for getting it done (Mukhopadhyay, 2016). On top of that, the policy of international development organisations to defeat problems that women face has been abstract (Brouwers, 2013). Moreover, due to the reliance on committed gender expertise and the "good will" of colleagues for the integration of gender equality in the work done by DFIs, it is difficult to determine who is responsible for making sure that gender equality issues are taken into account when making decisions and implementing programs (Mukhopadhyay, 2016).

Positionality

Another topic to consider in the effectiveness of impact investors' policies is positionality. Dictionary.com (2021) provides the following definition of positionality:

Positionality is the social and political context that creates your identity in terms of race, class, gender, sexuality, and ability status. Positionality also describes how your identity influences, and potentially biases, your understanding of and outlook on the world.

Alvi (2021) points out that impact investment is often a source of investment from the high-income countries based on Gross National Income (GNI) to the low-to-middle-income countries based on GNI, which could lead to several issues. First of all, while investigating feminist engagements between high-income countries and low-to-middle-income countries, Rajan & Thornhill (2019) found that despite the efforts to address and lessen disparities, unintentionally people from the high-income countries have the tendency to essentialize the culture in the low-to-middle-income countries and maintain paternalistic attitudes toward marginalized communities. According to Rajan & Thornhill (2019) a paternalistic attitude through stereotyping, could even strengthen existing patriarchy.

Furthermore, De Cordier (2010) states that gender concepts as defined by parties from the high-income countries that are not always taken seriously by exactly those whom they seek to benefit. On top of that, social impact measurements are often set with a top-down focus, which dis-empowers the beneficiary groups that should be supported by measurements that are set by financiers (Hazenberg & Paterson-Young, 2022). Crenshaw (2013) calls this top-down focus from those who are concerned with alleviating discrimination *ironic*. The starting point should be to put those who are currently

marginalized in the center in order to resist attempts to compartmentalize experiences and hinder potential collective action (Crenshaw, 2013).

Finally, the outcome of policy adoption in a different context greatly depends on which actors are involved and how they interact (Minkman et al., 2021). Therefore impact investors have to be aware of the local culture and the needs of local actors to avoid post-colonial behavior, resulting in the prioritization of perspectives and egos of the impact investors over those of the local actors (Alvi, 2021; De Cordier, 2010). Hence, more attention should be paid to comprehending the context in which the policies are taking place (Subrahmanian, 2004). When this is not done sufficiently, jumping to solutions could lead to problems being half-solved, worsening, or even being the wrong ones to solve (Van der Lei et al., 2011). Furthermore, when looking at gender integration, ignoring the context-specific nature of gender relations is part of the reason why gender myths are created, leading to that fact that discussing gender has taken a form of popularized and simplistic language and stereotyping women in ways that bring across incorrect notions and misrepresentations (Cornwall et al., 2007).

2.4 Knowledge gaps and research question

Based on the literature review, two knowledge gap have been identified, which are: lacking research into EDI in the Jordanian construction workforce, and the lack of research into how impact investors can be effective in supporting EDI in their projects. Challenges that appeared while assessing the research on impact investors' influence on gender issues showed that due to abstract policies, not only accountability issues arise, but also the risk of dis-empowering the beneficiaries of these policies due to insufficient investigation of the local context. This effect is increased when considering that impact investment streams often come from the high-income countries, flowing into projects the low-to-middle-income countries, leading to the risk of impact investors essentializing the culture and maintain paternalistic attitudes towards marginalized communities. This could lead to an adverse effect of what the impact investors wish to achieve with their policies. This research seeks to address these gaps by modeling the situation of the AAWDCP ex-ante to identify the local context and needs and see what the effect of impact investors' policies would be. Therefore the main research question is defined as follows:

How can impact investors increase equity, diversity and inclusion for women in the professional construction roles of the AAWDCP, while considering the local context and needs?

3

Research approach and Methodology

The research question that this thesis aims to answer is defined as follows:

How can impact investors increase equity, diversity and inclusion for women in the professional construction roles of the AAWDCP, while considering the local context and needs?

To answer the main question, the following sub-questions were formulated:

SQ1: What system factors and external factors influence Equity, Diversity, and Inclusion (EDI) for women in the professional roles in the Jordanian construction workforce?

SQ2: Which stakeholders are expected to be the most important impact investors in the Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP)?

SQ3: What are impact investors' means and criteria for EDI the construction phase of the AAWDCP?

SQ4: What barriers are experienced by professional women in Jordan and how does this affect the criteria?

Before going into the specific methods that will be utilized for answering these sub-questions, this chapter will first introduce the general research approach.

3.1 Research Approach

For exploring and understanding the role of an actor in a social problem, a qualitative research approach is suitable (Creswell, 2009). As this thesis aims to analyze the challenges that educated Jordanian women face when attempting to enter or stay in the construction labor force and to create cooperative, non-exploitative links between these women and foreign impact investors, the approach that is utilized will be a feminist approach. Additionally, the study is intersectional since it examines how gender is shaped and related by factors like globalization and cultural configurations, which may result in shifting relations of power and oppression (Rice et al., 2019). Because of the intersectionality of this research, it is important to reflect on the researcher's position (Creswell, 2013). This is done in section 3.1.4.

3.1.1 The case study approach

The case study approach is suitable in for this research because it allows for an in-depth exploration of a complex issue in its real-life setting (Crowe et al., 2011). Since the topic is still relatively new in academic literature, the explorative character of a case study approach can aid in establishing a preliminary overview of the current problems surrounding impact investors seeking to increase EDI in their projects.

The disadvantage of drawing lessons from a case study is that "there is no one size fits all solution" for the problem that is being investigated (Dembi, 2022). Therefore, it is essential to keep in mind that the findings cannot always be generalized when impact investors or academics wish to apply the findings of this study in various contexts.

3.1.2 Systems analysis

As the AAWDCP is still in its design phase, an ex-ante exploration will be performed for construction phase of the AAWDCP, causing this research to be explorative in nature. EDI in the work force is a wicked problem for which divergent views, no agreed definitions, and large differences in values exist (Eden & Wagstaff, 2021). Furthermore, such wicked problems are ill-structured and characterized by a large number of actors, conflicts of values, and many potential policy alternatives (Enserink et al., 2010; Van der Lei et al., 2011). Exploring and bringing structure to such a wicked problem can be done by means of systems analysis(Enserink et al., 2010).

Constructing a system diagram

To perform systems analysis, a system diagram is constructed, which is a method that is developed by Van der Lei et al. (2011). Figure 3.1, shows a basic system diagram. The first step in this process is to define the system boundaries. The system refers to the part of reality that is of interest to be studied (Enserink et al., 2010). In this case that part of reality is the construction phase of the AAWDCP and the factors that may influence EDI for women in the professional construction roles in the AAWDCP. The system of interest is structured and specified with the help of a causal diagram, which can link the policy of impact investors to the objectives they seek to address regarding EDI (Van der Lei et al., 2011).

The next step is to define impact investors' objectives towards EDI in the AAWDCP. These objectives must be operational, which means that they can be measurable on a unit scale (Enserink et al., 2010). The objectives are placed on the right side of the system diagram. To achieve these objectives impact investors have means through which they seek to influence the system. These means are placed on the left boundary of the system diagram.

Finally, the system can be influenced by external factors over which impact investors have no control (Enserink et al., 2010). These external factors are placed on the upper boundary of the system.

The relations between system factors, external factors, means and criteria are indicated with arrows from one component to another. The arrows are accompanied by either a plus or a minus sign, which indicates an increasing or a decreasing effect respectively.

Analyzing a system diagram

For analyzing the diagram, the steps are followed as explained by Enserink et al. (2010): First, redundant factors should be removed to increase legibility of the diagram. These are factors with only one outgoing arrow. Furthermore, it is important to consider the time frame in which the effects will occur by asking the question, whether the specific relations will already occur during the construction phase of the AAWDCP or whether these relations cause more long-term effects. Next, the system will be checked for loops and the type of feedback mechanisms that these loops may cause. This can be determined by counting the number of minus signs along the path of a loop. Positive feedback means that over time, the effects of changes that affect any of the factors involved in the loop may be amplified and negative means the opposite effect (Enserink et al., 2010). Finally,

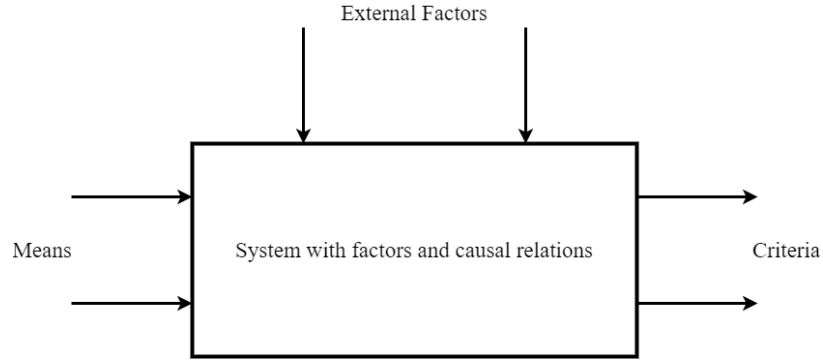


Figure 3.1: The system diagram as explained by Enserink et al. (2010)

the system diagram can be analyzed by building a qualitative consequence table that displays in terms of pluses and minuses of how means affect criteria. It's crucial to note that these pluses and minuses cannot simply be added as the sign just denotes a relationship, not its strength.

Preferred policy selection

After analyzing the effectiveness of means on the criteria, a preferred policy can be chosen. This is done based on the assumption that impact investors are limited in resources to achieve their goals. The preferred policy will be chosen by looking at what combination means seem to be most effective for impact investors to achieve their goals. This can be observed in the qualitative consequence tables that have been constructed during the means-criteria analysis.

Scenario analysis

To assess the robustness and flexibility of the preferred policy, a scenario analysis needs to be performed. Robustness investigates to which extent the policy is affected by changes in external factors while flexibility refers the ability of the policy to accommodate and effectively adjust to changes (Babatunde et al., 2019). Scenarios provide an idea of possible environments of the system by focusing on changes on the context that cannot be influenced by impact investors (Enserink et al., 2010).

3.1.3 In-depth interviews

To identify mechanisms and causal relations as they are being experienced by the beneficiaries, interviews were conducted with professional Jordanian women. According to Guion et al. (2001), in-depth interviews are a useful qualitative data collection technique that can be utilized for a variety of purposes, among which issue identification, which is relevant for this research. As in-depth interviews are open-ended and discovery-oriented, they allow for a comprehensive investigation of the participant's feelings and ideas on a topic, resulting in rich background material that can help frame additional questions about the subject (Guion et al., 2001).

Analysis of interviews

Each interview will be transcribed and analyzed. The analysis is done according to the steps provided by Creswell (2013): The first step was to read each of the transcripts to get familiar with all the details. Secondly, the data is described into codes. By means of coding, the data can be aggregated into smaller categories of information. The next step is to group the codes together into categories, which represent a certain "family" of themes. The software used for this analysis is ATLAS.ti, as this allowed for coding the transcriptions and grouping these codes. Furthermore, it enables easy

retrieval of codes and themes and shows how many times a certain code occurred, which helped the researcher in structuring the analysis.

Next, the codes and themes are interpreted by the researcher. Finally, the representation of the data in this research was done by showing quotes and by visualizing the main themes that were found. Pratt (2008) explains that in qualitative research often two types of quotes are found, which are power quotes and proof quotes. In this research both types quotes are used. When a participant's words are so poetic, precise, or insightful that the researcher could not have expressed the subject more effectively, they will be put into the text as power quotes. Proof quotes are used to show the prevalence of a theme and these will be put in a table to leave room in the text for argumentation (Pratt, 2008). Furthermore, for the in-depth interviews with Jordanian women, visualizations of main themes are shown.

Ethical considerations

Qualitative research, especially in combination with in-depth interviews brings ethical risks to the table. It is therefore crucial to find a balance between benefits and risks for harm (Boeije, 2010). To ensure this balance, each participant will receive elaborate information on the interviewing procedure and is asked to sign an informed consent form where the purpose of the interviews is indicated and the risks of participating are explained. Furthermore, in the informed consent form it is clearly stated that participating in the research is on a voluntary basis and that participants can withdraw from the interviews at any moment without providing a reason for this. On top of that, before the interview starts, the researcher indicates that the participants are in charge of which questions they rather not answer and that they can end the interview at any point in time. Furthermore, a grievance mechanism is provided by giving participants the opportunity to reach out to a contact person for complaints about the interview. To protect participants' privacy, the data that is collected will only be accessible by the researcher and the supervisors. Moreover, recording the interviews is only done with participant's consent and participants are asked if they are ready before the recording is started. Finally, the data will be anonymized to prevent (re-)identification of the participants and sensitive information that might lead to (re-)identification of the participants, such as the companies where they work, is censored.

Additionally, ethical issues must be considered by taking into account how the researcher's position might lead to prejudice and certain interpretations of data based in the researcher's background (Boeije, 2010). This reflection on the researcher's positionality is done in section 3.1.4.

3.1.4 Quality

For intersectional feminist studies, it is important to place the researcher within the study (Creswell, 2013). Therefore, the first part of assessing the quality of this research is a positionality assessment of the researcher. Many other criteria exist for evaluating the quality of qualitative research (Creswell, 2013). For this thesis, besides a reflection on positionality, quality is assessed by reflecting on validity and reliability.

Positionality statement

In Chapter 2, positionality was mentioned for impact investors. It is, however, also important to also assess the researchers' positionality to ensure quality of the research. Positionality can be defined as a methodology that requires researchers to assess their own degrees of privilege in relation to criteria such as race, class, educational attainment, income, ability, gender, and citizenship, among others for the purpose of analyzing and acting from one's social position in an unjust world, (Duarte, 2017).

With regards to positionality, the researcher acknowledges the fact that as a white woman, who grew up in the Netherlands - which is a high-income country based on Gross National Income (GNI) - she is an outsider to the the culture in Jordan, which is a higher-middle-income country. As shown in Chapter 2, interactions between countries that are classified in different groups based on GNI could lead to the risk of the researcher essentializing the culture in Jordan and to maintain a paternalistic attitude through stereotyping (Rajan & Thornhill, 2019). The researcher was aware of

this during the interviews and attempted to make as few assumptions as possible by asking open and non-suggestive questions based on literature and statements that have been made in previous interviews, as well as answers given by the participant.

Before starting this work, the researcher was not aware of cultural issues in Jordan that influence the participation of women in the Jordanian construction industry. Despite the fact that the researcher was raised by her parents with the idea that she can do anything she wants in life, she grew up and went to school in religious environments causing her to recognize and relate with the traditional gender norms that exist in many places in Jordan.

Finally, besides a background in civil engineering, the researcher has no experience in the construction industry and has never experienced any of the challenges that women who work in this sector have to face. Therefore, despite her best efforts, the researcher cannot completely rule out that the circumstances stated above may have had some influence on how the conclusions in this research are understood.

Validity

One strategy to assess validity of qualitative research is triangulation, which is done for this research as the researcher has used multiple and different sources and methods are used to provide evidence (Creswell, 2013). As limited research was available, specifically on increasing gender equality in the Jordanian construction industry, and the evaluation of the project is ex-ante, the research starts quite broad by analyzing the factors that influence female labor force participation in Jordan in general and analyzing by which mechanisms female participation in the construction industry around the world is influenced. By putting this together, an image is created of what would influence female labor force participation in the Jordanian construction workforce. Nonetheless, the research is specifically focused on Jordan and on women in professional construction roles. Therefore, to apply the framework in different regions or for different positions, an analysis should be done of the relevance of identified factors.

Reliability

As the study has been performed by means of in-depth interviews, the outcomes are dependent on the selected participants. Also, as the interviews were semi-structured, it will be more difficult for the research to be replicated by others (Boeije, 2010). Repetition could also be difficult as social situations might change, which would lead to different experiences for women that might be interviewed in the future.

To increase reliability, good quality recordings were made of the interviews. Furthermore, automatic transcription software is used to create the transcriptions, which were then reviewed by the researcher by listening to the recordings again. To ensure that recordings are free of background noise, interviews that weren't conducted online were conducted in a quiet, private setting with only the researcher and participant present.

3.2 Research Methodology

Based on the research approach as explained in section 3.1, this section will elaborate further on the specific steps that were taken to first answer the sub-questions that have been formulated at the start of this chapter, followed by an explanation of how the main question will be answered by means of these sub-questions. A full overview of this research process, along with objectives and methods for each chapter of this thesis is provided in figure 3.3.

3.2.1 Answering the sub-questions

At the start of this chapter, four sub-questions have been formulated. By combining the answers to each sub-question, a system diagram can be built for the AAWDCP and the effectiveness of means

on the criteria can be analyzed. Below, the methodology is explained in further detail for each sub-question.

SQ1: What system factors and external factors influence EDI for women in the professional roles in the Jordanian construction workforce?

As shown in section 3.1.2, the first step of creating a system diagram after the system has been defined is to identify the causal relations that exist within the system. The aim of SQ1 was therefore to examine the context in which the AAWDCP will be constructed and identify which system factors and external factors that might influence EDI in the construction phase of the AAWDCP for women in the professional construction roles. A review of the existing body of literature was done in order to achieve this.

Since the body of literature on this topic was found to be very limited, the literature review was divided into two sections. The first section being a review of literature on educated¹ women's employment in Jordan in general. The second part was to look into literature on EDI in the construction workforce, not specifically focused on Jordan. The causal relations that were found in both parts were then connected to sketch an initial picture of all system components that were expected to influence EDI in the Jordanian construction workforce.

SQ2: Which stakeholders are expected to be the most important impact investors in the AAWDCP?

After having identified the relevant context, SQ2 aims to identify the most important impact investors in the AAWDCP. To do this, an analysis was performed of the AAWDCP's Environmental and Social Impact Assessment (ESIA). As part of this ESIA a Stakeholder Engagement Plan (SEP) was provided in which the key stakeholders were identified. The most important investors were identified by assessing their interest in and influence on the project as stated by the project's SEP. Based on the definition of impact investors provided in Chapter 2, impact investors are selected for further analysis.

SQ3: What are impact investors' means and criteria for EDI the construction phase of the AAWDCP?

After having identified the most important impact investors in SQ2, their gender strategies will be analyzed to identify their objectives regarding EDI in their projects. As explained in section 3.1.2, the objectives should be operational and measurable on a unit scale to be defined as useful criteria. Criteria function as indicators, which are a valuable tool to monitor progress for a certain objective and to detect problems that are associated with the performance on the relevant objective (Alotabi et al., 2019).

If it appears that investors' objectives as stated in their gender strategies are not measurable on a unit scale, Sustainable Development Goal (SDG) indicators that match these criteria are looked for by comparing key words and themes from the strategies with those in the Sustainable Development Goals (SDGs). Figure 3.2 shows the process of how criteria will be specified.

To translate the SDG indicators to criteria for the AAWDCP, first the progress for each SDG in Jordan will be analyzed to see whether still challenges exist to achieve the goal or whether the goal has been achieved and therefore needs less attention. The status for the goals will be determined by means of the Sustainable Development Report written by Sachs et al. (2022). If the goal appears to be relevant in Jordan, the goal will be analyzed for relevance for the AAWDCP and potentially specified as a criterion.

For each specified criterion, means were identified by an additional analysis of investors' gender strategies complemented with in-depth interviews with two knowledge-based experts in the field of gender-related investments. An overview of features of the experts that were interviewed is provided in Table 3.1.

¹Education refers to post-secondary education

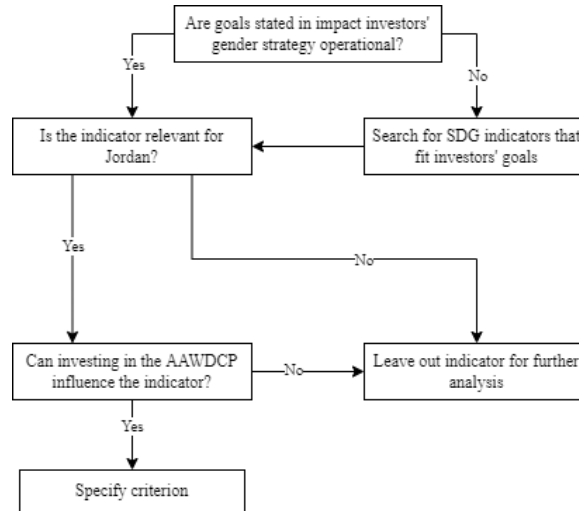


Figure 3.2: Flow diagram of the process of the specification of criteria

Table 3.1: Overview of experts that were interviewed for identifying impact investors' means

	Experience with impact investing	Experience with gender-related investments	Working for an NGO	Working for an impact investor
Expert 1	X	X		X
Expert 2	X	X	X	

SQ4: What barriers are experienced by professional women in Jordan and how does this affect the criteria?

The literature review in chapter 2 showed the importance of considering local needs. Therefore, section 3.1.3 argues for the value of in-depth interviews with professional Jordanian women. How the interviews were prepared and conducted is described in this section.

Identification of the sample group

The sample group consisted of educated, English-speaking Jordanian women that are working or have worked in the construction industry or have experience with supporting women in the Jordanian labor market.

Getting in touch with the sample group

Since the researcher had to create a whole new network of contacts, reaching out to the sample group was challenging. Although there were various ways to contact the sample group—through staff at the Dutch embassy in Amman, for example—this seemed insufficient, and a LinkedIn premium account was required to get in touch with women for interviews. Through connecting with people from the Dutch embassy in Amman on LinkedIn, the researcher was able to find professional Jordanian women with mutual connections. During this search 45 women were approached, of which 18 women responded, which eventually led to 3 interviews. To find women working in construction, searches for "construction manager", "project manager", "construction engineer". "construction industry" were performed on LinkedIn with location filters on Jordan. 20 women were sent a message after this approach, 7 women responded, of which 1 was eventually interviewed. None of the women told the researcher a reason for not doing the interview. All of the women that were approached but did not cooperate, stopped responding to the researcher's requests.

Finally, snowball sampling during the interviews led to two more interviews with women in

professional construction roles and three more interviews with women that had experience with empowering women in the Jordanian workforce.

Table 3.2 shows an overview of the participants along with their socio-demographic features. Interviewees 6, 8, and 9 were able to provide specific insights into the construction sector based on their personal experiences. The other participants were able to provide broader contextual elements that were pertinent to paint a fuller picture of the context.

Table 3.2: Overview of socio-demographic features of the participants

Interviewee	Living in Amman	STEM education	Working in construction	Management position
Interviewee 1	X	X		X
Interviewee 2	X	X		X
Interviewee 3	X	X		
Interviewee 4	X			
Interviewee 5	X			X
Interviewee 6	X	X	X	
Interviewee 7	X			X
Interviewee 8	X	X	X	X
Interviewee 9	X	X	X	X

Interview format

The interviews consisted of open-ended questions that sought to determine which of the mechanisms found in the literature were experienced by the working women and whether different mechanisms exist. They also sought to learn about women’s perceptions of impact investors who are looking to increase EDI in the workforce as well as how women believe impact investors can assist in doing so. In this way, mechanisms can be identified that might be currently overlooked by impact investors but can affect the effectiveness of impact investors’ policies. Furthermore, the interviews were of semi-structured format, which allowed to get an answer to pre-defined questions, but also kept the interview conversational, with questions flowing from previous responses when possible (Guion et al., 2001). Moreover, as the researcher is less familiar with the challenges that women might face in the Jordanian (construction) workforce than the participants, semi-structured interviews allowed the researcher to assess the relevance of the predefined questions and ask questions that seemed to be more relevant, based on what the researcher learned during the interview. The interviews are analyzed based on the method described in section 3.1.3.

3.2.2 Answering the main research question

Combining the answers to all sub-questions, the final system diagram can be built and analyzed as described in section 3.1.2. By doing this, a policy advice can be written on how impact investors can increase EDI by investing in the AAWDCP, while taking into account the local context and needs of women, leading to an answer to the main research question.

	Objectives	Methods	Question	Outcome system diagram
Chapter 1 Problem Introduction	<ul style="list-style-type: none"> • Problem statement + Report structure 	<ul style="list-style-type: none"> • Desk research 		
Chapter 2 Literature review	<ul style="list-style-type: none"> • Knowledge gap + research question 	<ul style="list-style-type: none"> • Literature review 		
Chapter 3 Research approach and methodology	<ul style="list-style-type: none"> • Research approach + methods + reflection on quality 	<ul style="list-style-type: none"> • Desk research 		
Chapter 4 Setting the scene	<ul style="list-style-type: none"> • Sketch initial picture diagram based on existing literature 	<ul style="list-style-type: none"> • Literature review 	SQ1	System based on literature
Chapter 5 Identification of investors and their means and criteria	<ul style="list-style-type: none"> • Identify means + criteria + factors & relations based on gender strategies + exper interviews 	<ul style="list-style-type: none"> • Desk research • In-depth interviews 	SQ2 SQ3	System based on relations and factors mentioned by impact investors' strategies
Chapter 6 Experiences of professional Jordanian women	<ul style="list-style-type: none"> • Identify factors and relations as experienced by professional women in Jordan 	<ul style="list-style-type: none"> • In-depth interviews 	SQ4	System based on relations and factors mentioned by interviewees.
Chapter 7 Analysis of system diagram	<ul style="list-style-type: none"> • Develop final system diagram • Choose preferred policy 	<ul style="list-style-type: none"> • Desk research 	Main research question	Final system diagram based on previous findings
Chapter 9 Conclusion and Policy Advice	<ul style="list-style-type: none"> • Answer the main research question 			
Chapter 8 Discussion	<ul style="list-style-type: none"> • Discussion and reflection on the research 			

Figure 3.3: Research Flow Diagram

4

Setting the scene

As can be seen in Figure 3.3, this chapter aims to construct a causal diagram of factors that influence women's participation in the Jordanian construction workforce. This is done by means of a literature review, of which the process has been described in section 3.2.1. The outcome of the literature research will be a causal diagram of factors and relations influencing the participation of women in the professional construction roles in Jordan. Chapter 2 has shown that limited research is available on the participation of women in the professional construction roles in the Jordanian construction industry. Therefore the literature review in this chapter consists of two parts: (1) an analysis of women's participation in the Jordanian labor force, and (2) an analysis of women's participation in the construction work force. By combining those analyses, a tentative causal diagram will be sketched, which will be elaborated in the following chapters. In this chapter some words are printed in italic. These are the system factors that will be used in sketching the first version of the system diagram.

4.1 Women's participation in the Jordanian labor force

It was found by Kasoolu et al. (2019) and Shteivi (2015) that the nature of low *female labor force participation* in Jordan varies significantly with *educational attainment* of women. Friedrich et al. (2021) found that educational attainment positively influences *women's agency* as education may provide women better negotiating abilities and the drive to maintain or improve their agency. Nonetheless, the relatively high share of *women with post-secondary education* in Jordan stands in contrast with the low *female labor force participation of women with post-secondary education* (Friedrich et al., 2021). This traces back to *traditional social norms* regarding gender and poor public transportation, which limits women's *mobility* Kasoolu et al. (2019).

Women's mobility is also mentioned by Jamal et al. (2020), Koburtay et al. (2020), and Tuccio & Wahba (2018). According to Jamal et al. (2020) mobility is divided by gender and men are more likely to report that mobility is easier than women. Women's mobility is an important predictor for Women's agency (Friedrich et al., 2021). According to Friedrich et al. (2021) only 10% of women in Jordanian can move freely. Moreover, poorer people have more difficulties with mobility and, in addition to that, women living in *poverty* have a higher probability of being discriminated against

(Jamal et al., 2020). *Discrimination of women* can lead to *unequal treatment of women within organizations* and *lower female labor force participation* (Koburtay et al., 2020).

Traditional gender norms in Jordan can clearly be seen in Jordanian legislation. According to Friedrich et al. (2021), women in Jordan are required by law to obey their husbands who may restrict their mobility and access to employment opportunities. Furthermore, the Jordanian personal status law imposes male legal guardianship over single women until the age of 40, limiting *women's agency* (Friedrich et al., 2021). Moreover, within the constitution, article 6 pays attention to equality between people with different 'races,' 'languages,' and 'religions,' but not between 'genders,' showing the *exclusion of anti-discrimination practice between gender in Jordanian legislation* (Koburtay et al., 2020). On a more fundamental level, these perceptions must be further understood within the context of the Jordanian family structure, which denotes a *patriarchal order* in which men are perceived as the main providers for their families and women's main roles are to uphold the family and to perform *domestic work* (Shteivi, 2015). These gender norms have as a consequence that when women work in *male-dominated workspaces* (like the construction industry), they have to both adopt *masculine traits* and at the same time play their role as *honorable wives* to be perceived as *professional* and enhance their family's social position (Koburtay et al., 2020).

Many of these traditional gender norms lead back to *tribalism* (Jamal et al., 2020; Koburtay et al., 2020). In Jordan, tribalism and Bedouin customs largely impact women's employment and progression in their *upward career paths* and lead to the continuation of *patriarchy* and further inequality, through *patriarchal interpretation of religion* and the *exclusion of anti-discrimination practice between gender in Jordan legislation* (Koburtay et al., 2020).

Another important factor influencing women's agency is parenthood. According to Tuccio & Wahba (2018), more traditional gender norms lead to higher *fertility rates*, resulting in less female labor force participation as women are expected to be the main caretakers of the children. For women with lower education, having children may boost their agency because it increases their negotiating power in a patriarchal society. On the other hand, for higher educated women, who make up the research's target group, motherhood may reduce women's agency because having a first child can lead to a drop in resources due to a reduction in hours worked and income, fewer career options, or even quitting a job. (Friedrich et al., 2021). *Maternity/paternity benefits*, or Shared Parental leave (SPL) could increase job security for women (Groome, 2021; Jamal et al., 2020).

Figure 4.1 visualizes the relations that have been found in this section.

4.2 Women's participation in the construction industry

Women's participation in the construction industry is influenced by several factors, of which one is women's family commitments (Afolabi et al., 2019). This was also found in Section 4.1. If women have to fulfill their role as honorable wife, they have to spend more time on domestic and care taking work, resulting in less time to join the labor force (Koburtay et al., 2020). Consequently, this will also lead to a lower participation of women in the construction industry (Afolabi et al., 2019). An increasing factor on women's participation in the construction industry, according to Afolabi et al. (2019) is the presence of *female mentors and role models in construction*, which can motivate women in the construction industry. This is consistent with work done by Bleijenbergh & Van Engen (2015) who showed that the visibility of women in occupations could increase the participation of more women. In addition, more women in construction lead to more possibilities for women to take on professional construction roles (Wright & Conley, 2020).

To influence the participation of women in the construction industry, targets and sanctions could be set by, e.g. investing parties (Afolabi et al., 2019; Wright & Conley, 2020). This would lead to a higher number of women, however, would not solve any of the problems which lie at the roots

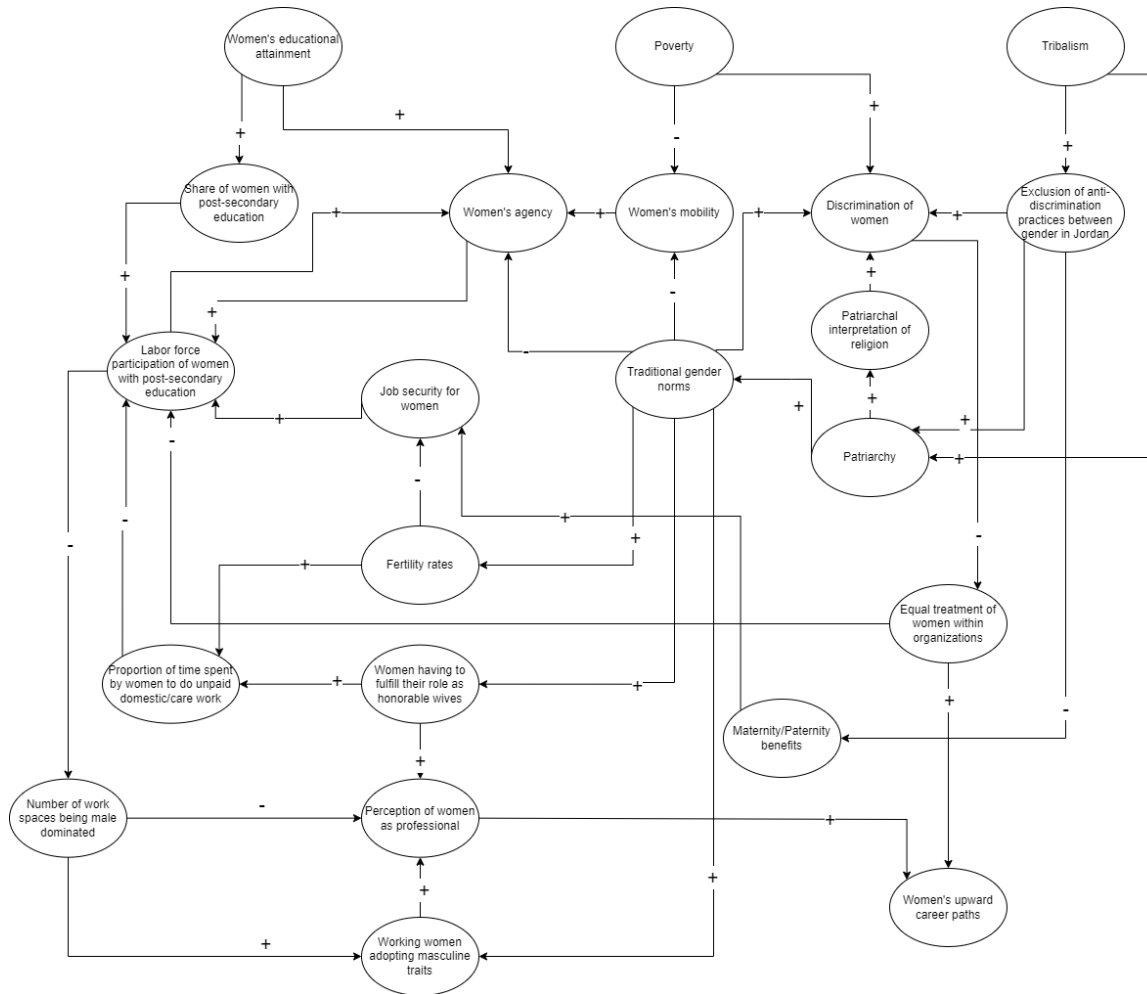


Figure 4.1: The interaction of factors that have been found in literature on women’s participation in the Jordanian labor force

of low female labor force participation in construction. These problems are for example that in the construction industry there is an over-emphasis of male values, such as a long working hours, competition, independence, and full-time working, leading to *discriminatory recruitment processes* (Afolabi et al., 2019; Wright & Conley, 2020) and the perception of the construction industry as a male occupation, which again strengthens discriminatory recruitment processes, resulting in lower participation of women in the construction industry (Afolabi et al., 2019).

The perception of the construction industry as a male occupation does not only cause discriminatory recruitment processes, but when looking at the construction site, it could lead to *territorial behavior of men* when women join the work force (Afolabi et al., 2019; Wright & Conley, 2020). This could lead unsafe work environments for women and could cause women to leave their jobs (Wright & Conley, 2020). Besides this territorial behavior of men, the construction sites can be unsuitable for women in terms of lacking *Menstrual Hygiene Management (MHM) facilities* and *unfitting protective equipment* (Groome, 2021).

To support women into STEM-based roles, like the construction industry, the *accessibility of early training and development without occupational stereotypes* during the formative years of a woman’s career can increase their *upward career paths* (Groome, 2021). Furthermore, as leaders in the con-

struction industry are predominantly male, women need to take on masculine traits in order to seem suitable for this leadership position (Groome, 2021). This is consistent with findings in section 4.1. An overview all relations in this section is shown in figure 4.2.

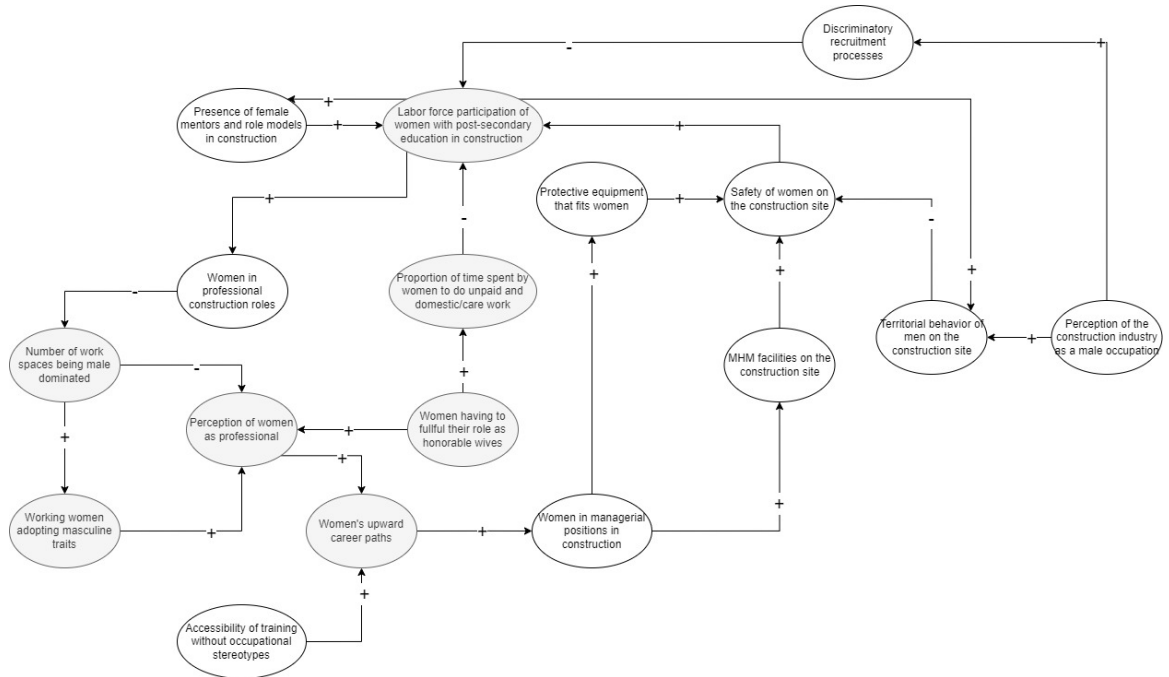


Figure 4.2: Factors influencing the participation of women in the construction industry. Grey indicates that factors are consistent with Figure 4.1

4.3 Factors influencing women’s participation in the Jordanian construction industry

Looking at Figure 4.2 it can be seen that some of the factors are consistent with factors in Figure 4.1. By means of these factors, Figure 4.2 can be connected to Figure 4.1 and factors from Figure 4.1 are analyzed for relevance for the construction industry. To connect the figures the factor *Women’s educational attainment* is changed into *women in engineering studies*. Engineering programs in Jordan have a relatively high number of women (Amani et al., 2021). Nonetheless, the participation of women in the professional construction roles is still low. Figure 4.3 shows the two figures connected.

4.3.1 Identification of external factors

Based on this literature review, some factors exist that can be considered as external factors. These are: women in engineering studies, poverty, and tribalism. Women in engineering studies can be considered as an external factor as influencing this factor is not expected to result in higher female labor force participation, due to all other system factors that influence the participation of women. The literature reviews in both of the prior sections, showed that the number of women in Jordan with post-secondary education stands in contrast with the low female labor force participation, which also accounts for women in engineering studies (Amani et al., 2021; Friedrich et al., 2021). Regarding poverty, it can be considered that this is an element that is beyond the scope of this project and will be something that can only be influenced when looking at long-term projects, with a specific focus on poverty reduction. Furthermore, tribalism is something that is be deeply rooted in the Jordanian

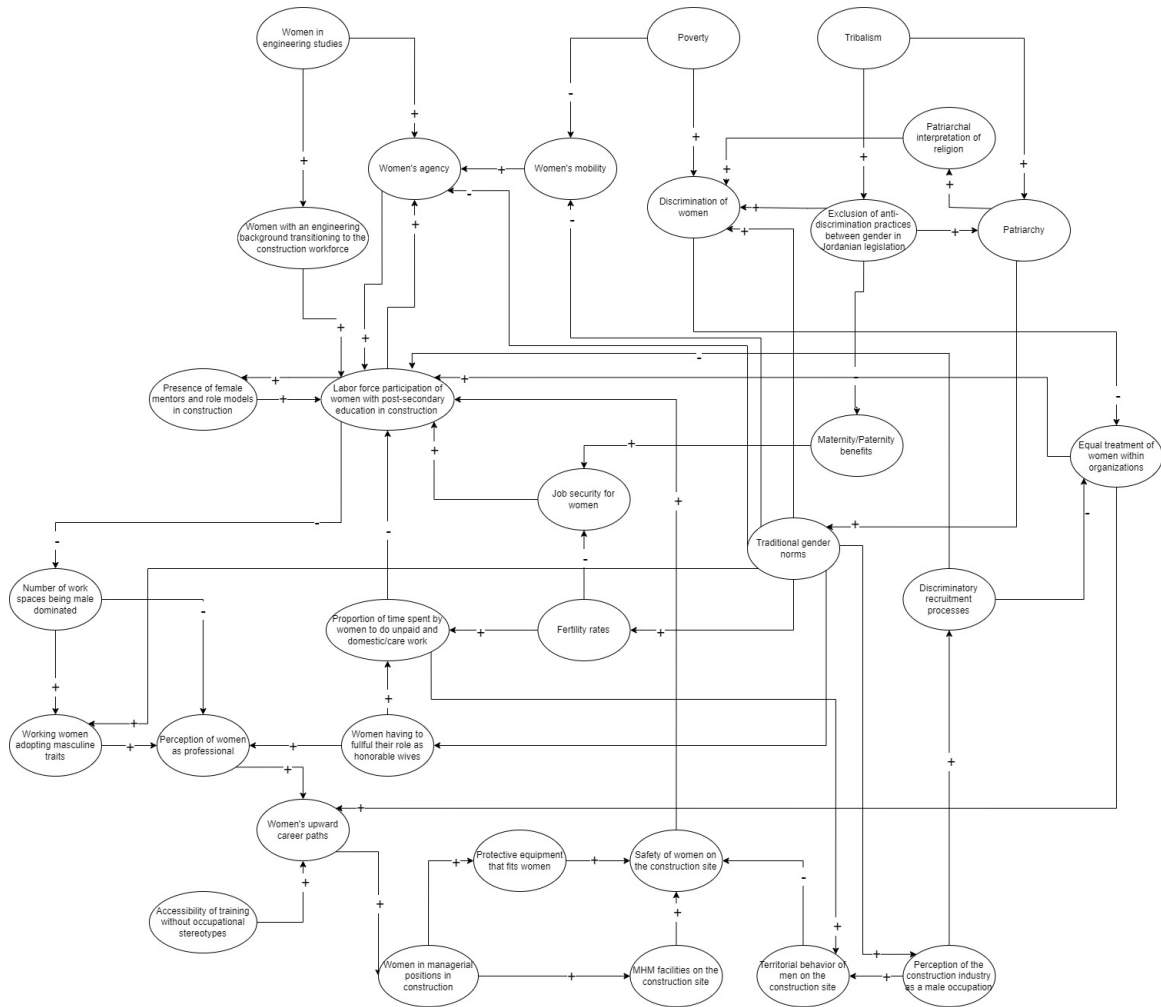


Figure 4.3: The diagram in which factors and relations from literature are combined

culture (Al Oudat & Alshboul, 2010). Therefore, this is also something that cannot be influenced by merely investing in the Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP).

5

Identification of investors and their means and criteria

Figure 3.3 shows that this chapter aims to provide an answer on which stakeholders the most influential impact investors are and what their means and criteria are. By doing this, the left and right side of the system diagram (Figure 3.1) can be constructed. The process of doing so is described in section 3.2.1. This chapter will conclude with a system diagram based on impact investors' gender strategies and the input of experts.

5.1 Selection of most influential impact investors

The Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP) is financed by different international investment parties (MWI Jordan, 2021). Many of these can, according to the definition provided in chapter 2, be grouped under the term impact investors as they aim to achieve social impact besides financial return. The ESIA Team (2022a) has defined several international investors that exist for the AAWDCP and among them are the European Investment Bank (EIB), United States Agency for International Development (USAID), German Credit Bank for Reconstruction (KfW), United Kingdom Aid Agency (UKAID), Japan International Cooperation Agency (JICA), and the Korean Organization for International Cooperation Agency (KOICA). The financial institutions with the highest interest and influence on the project are USAID and EIB (ESIA Team, 2022a). At a donor pledge held by the Jordanian government in March 2022 and USAID offered \$300 million as grant and USD 400 million as loans, while EU offered USD 147 million as grant and USD \$983 as loans and the EU offer will be operated by EIB (Jordan ZAD, 2022). Therefore these two Development Finance Institutions (DFIs) will be considered as the most influential impact investors and their gender strategy will be used for the analysis.

5.2 Specifying impact investors' criteria

Both EIB and USAID have formulated gender strategies, in which they set out their objectives towards more gender equality, and in which they explain their means to achieve those objectives. The

literature review in chapter 2 showed that a common challenge for impact investors is to formulate policies that go beyond a theory. This section is aimed at analyzing the gender strategies formulated EIB and USAID for abstractness and transforming potentially abstract objectives into measurable criteria.

5.2.1 Connecting objectives to Sustainable Development Goal (SDG) indicators

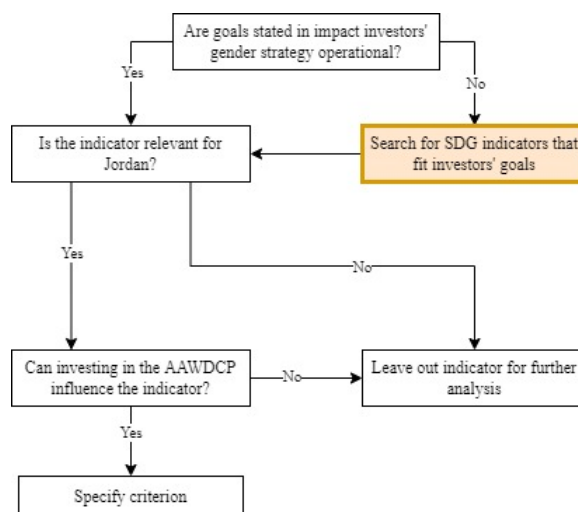


Figure 5.1: Overview of which step of the criteria specification will be performed

As can be seen in figure 5.1, which is a repetition of the flow diagram shown in section 3.2.1, figure 3.2, the first step of the specification of impact investors' criteria is to analyze whether goals stated in impact investors' gender strategies are operational and if not, to connect them to SDG indicators. This section will therefore set out the objectives stated by EIB's and USAID's gender strategies and will connect those goals to SDG indicators based on key words and themes. Table 5.1 shows an overview of all objectives that are found in the gender strategies and to which SDG indicator they correspond.

Equal land rights regardless of gender

Large-scale construction projects, such as the AAWDCP can be associated with involuntary resettlement (The World Bank, 2019). This resettlement relates to formal land rights people have and how they are compensated for losses (Søftestad et al., 1991). According to USAID (2020), women's land rights translate into higher economic growth, increased empowerment in making household decisions and more efficient land use. Nonetheless, women's rights to land and resources are rarely formally recognized, despite the fact that women are often the primary laborers and users of land (USAID, 2020). Both USAID and EIB strive for equal land rights for men and women, which can be connected to, target 1.4, indicator 1.4.2 and SDG 5, target 5.a, indicator 5.a.2.

Eliminate discrimination and inequality in opportunities

Both strategies mention the vulnerability of women that is caused by situations such as discrimination and social and cultural norms. Discrimination and social and cultural norms could lead to inequality in opportunity in the project-related labor force. Discrimination and inequality in opportunity could be connected to SDG 5, target 5.5, indicator 5.5.2.

Provide safe working environments for women

According to investors' strategies, women working on site of large-scale construction projects are at high risk of sexual harassment that might occur in construction projects (EIB Group, 2016), which corresponds several SDG indicators. When looking at risk of sexual harassment of women workers, it is important to promote safe and secure working environments. Safe working environments are also important to eliminate Gender Based Violence (GBV), which is according to (USAID, 2020) a major barrier to women's economic participation. Safe working environments are connected to SDG 8, target 8.8, indicator 8.8.2, as this refers to safe workplaces by means of complying with international labor rights. Furthermore, safe working environments can be connected to SDG 5, target 5.2, indicator 5.2.2.

Ensure safe sanitation and Menstrual Hygiene Management (MHM) for women

USAID (2020) specifically mentions the importance of safe sanitation and MHM for women as a means to promote equality and opportunity, which contributes to women's empowerment, since it alleviates a major constraint to their participation in public life. This objective can be connected to SDG 6, target 6.2, indicator 6.2.1.

Prevent GBV and trafficking as a consequence of labor influx and Stop the spread of sexually transmitted diseases

Another issue that is mentioned in both strategies is gender and public health, like the spread of sexually transmitted diseases and HIV/AIDS, including the risk of human trafficking that might arise from infrastructure projects and the influx of labor, job-seekers and sex-workers (EIB Group, 2016; USAID, 2020). The spread of sexually transmitted diseases comes back in SDG 3, target 3.3, indicator 3.3.1 and the risk of human trafficking is accounted for in SDG 5, target 5.2, indicator 5.2.2.

Formal employment for women, High paid jobs for women, and increase women's participation in corporate decision making

EIB mentions in their gender strategy that it is important to enhance the impact of EIB's considerations for gender equality by incorporating a gender perspective into all phases of an investment or project, recognizing opportunities within operations to advance gender equality and taking into account and sharing best practices. More specifically, this impact objective refers to the creation of high paid formal jobs for women and the support of diversity in the workforce and women's participation in corporate decision making, which can be covered by looking at different targets and indicators of SDG 8. Among these are target 8.3, indicator 8.3.1, target 8.5, indicator 8.5.1 and indicator 8.5.2, and finally women's participation in corporate decision making can be connected to indicator 5.5.2.

Women's economic empowerment

Finally, the EIB Group (2016) and USAID (2020) both mention the importance of investing in women's economic empowerment which includes (1) supporting the role of women in boosting productivity and employment, which can be covered by aforementioned indicators 8.5.1 and 8.5.2, (2) fighting the barriers that limit women's participation in the economy and labor force, which are set out by EIB Group (2016) as being limited mobility, illiteracy, limited access to Information Communication Technologies, lack of collateral, lack of formal identification and time poverty due to the uneven burden of unpaid housework and care work; (3) equal access to financial services for all; (4) support female entrepreneurs' networks. Fighting the barriers that limit women's participation in the economy and the labor force comes down to aforementioned indicators 8.5.1 and 8.5.2. Indicator 5.b.1 refers to the access to information communication technologies. Furthermore, SDG 4 mentions education, which could fight illiteracy. Therefore targets 4.1 and 4.3 are important, with indicator 4.1.2 and indicator 4.3.1. Women's mobility can be connected to SDG 11, target 11.2,

indicator 11.2.1. Finally, SDG 5 target 5.4, indicator 5.4.1 helps to identify the burden of unevenly distributed housework, which is according to both EIB Group (2016) and USAID (2020) a barrier for women to enter the labor market.

Table 5.1: Relevant SDG indicators related to objectives from the gender strategies

Objective from gender strategy	Targets	Indicators
SDG 1: End poverty in all its forms everywhere		
Equal land rights regardless of gender (EIB Group, 2016; USAID, 2020)	1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.	1.4.2: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure.
SDG 3: Ensure healthy lives and promote well-being for all at all ages		
Stop the spread of sexually transmitted diseases (EIB Group, 2016; USAID, 2020)	3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.	3.3.1: Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations
SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		
Improve access to education (EIB Group, 2016; USAID, 2020), Reduce illiteracy (EIB Group, 2016)	4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.	4.1.2: Completion rate (primary education, lower secondary education, upper secondary education)
Improve access to higher education (EIB Group, 2016; USAID, 2020), Improve access to work-related training opportunities for women (EIB Group, 2016)	4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.	4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex.
SDG 5: Achieve gender equality and empower all women and girls		

Table 5.1: Relevant SDG indicators related to objectives from the gender strategies

Objective from gender strategy	Targets	Indicators
Prevent GBV and trafficking as a consequence of labor influx (EIB Group, 2016; USAID, 2020), Provide safe working environments for women (EIB Group, 2016; USAID, 2020)	5.2: Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.	5.2.2: Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence.
	5.4: Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.	5.4.1: Proportion of time spent on unpaid domestic and care work, by sex, age and location
Eliminate discrimination and inequality in opportunities (EIB Group, 2016; USAID, 2020). Increase women's participation in corporate decision making (EIB Group, 2016)	5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life.	5.5.2: Proportion of women in managerial positions
Equal land rights regardless of gender (EIB Group, 2016; USAID, 2020)	5.a: Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.	5.a.2: Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control.
Increase access to information communication technologies (EIB Group, 2016)	5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.	5.b.1 Proportion of individuals who own a mobile telephone, by sex
SDG 6: Ensure availability and sustainable management of water and sanitation for all		

Table 5.1: Relevant SDG indicators related to objectives from the gender strategies

Objective from gender strategy	Targets	Indicators
Safe sanitation and MHM for women (USAID, 2020)	6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water
SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all		
Formal employment for women (EIB Group, 2016), Supporting female entrepreneurship networks (EIB Group, 2016; USAID, 2020)	8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.	8.3.1: Proportion of informal employment in total employment, by sector and sex.
High paid jobs for women (EIB Group, 2016)	8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.	8.5.1: Average hourly earnings of employees, by sex, age, occupation and persons with disabilities 8.5.2: Unemployment rate, by sex, age and persons with disabilities
Provide safe working environments for women (EIB Group, 2016; USAID, 2020)	8.8: Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.	8.8.2: Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status
SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable		

Table 5.1: Relevant SDG indicators related to objectives from the gender strategies

Objective from gender strategy	Targets	Indicators
Improve women's mobility (EIB Group, 2016)	11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2.1: Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities

5.2.2 Translating SDG indicators to criteria for the professional construction roles in the AAWDCP

This section aims to translate the SDG indicators that have been found in section 5.2.1 into criteria that are relevant for the AAWDCP.

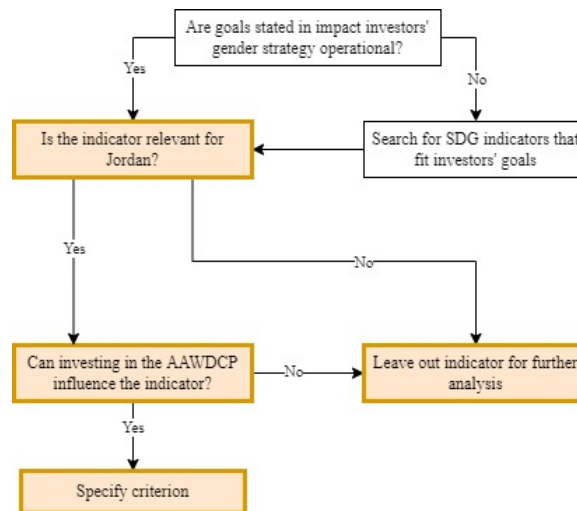


Figure 5.2: Overview of which step of the criteria specification will be performed

SDG 1: End poverty in all its forms everywhere

In Jordan SDG 1 has been achieved and Jordan is on track to maintain the achievement of this SDG (Sachs et al., 2022). The indicator belonging to SDG 1 is indicator 1.4.2. As this indicator has no relation with Equity, Diversity, and Inclusion (EDI) in the professional construction roles, the indicator will be left out for further analysis.

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Despite the fact that major challenges remain for SDG 3 in Jordan, the country appears to be moderately improving on this goal (Sachs et al., 2022). For this SDG indicator 3.3.1 was found. According to ILO (2008), risk for HIV/AIDS infections in construction projects comes, among other things, from construction workers' high mobility, isolation and working in confined environments with limited contacts, and inadequate access to health services. Regarding HIV/AIDS infections in

Jordan, there are some contradictory findings. According to Sachs et al. (2022) the number of new HIV/AIDS infections in Jordan has been zero since at least the year 2000, whereas Rahhal (2018) showed that the estimated prevalence of HIV in Jordan is 0.02% among the general population. Nonetheless, this is still considered as low (Rahhal, 2018). This indicator is mostly of importance when looking at the low- and semi-skilled jobs in the construction industry and less for the skilled and high-skilled jobs (Harinarain & Haupt, 2013). Therefore HIV/AIDS prevention will not be one of the criteria in this study.

SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

According to Sachs et al. (2022) major challenges remain for SDG 4 and progress is stagnating. It has been observed that, in Jordan, highly educated women participate in the labor force at similar rates as men, whereas the labor force participation of women with merely high school education or less is extremely low (Kasoolu et al., 2019). Nonetheless, education cannot directly be considered as a predictor for labor force participation, as despite the fact that women in Jordan are relatively highly educated, still the female participation rate is low (ESIA Team, 2022c). Therefore, women's educational attainment will be considered as an external factor and indicator 4.1.2, will not be included as one of the criteria of the problem owner. Indicator 4.3.1 refers to non-formal education and training. In the construction industry training courses are often male-dominated (Afolabi et al., 2019). It is important to invest in training for women as it ensures that women are skilled and ready to take up opportunities (Wright & Conley, 2020). Therefore, indicator 4.3.1 will be specified as one of the criteria and will be referred to as *participation of women in formal training*. The criterion will be achieved when the ratio of women participating in formal training and women workers is at least equal to the same ratio for men with comparable roles in the construction of the AAWDCP.

SDG 5: Achieve gender equality and empower all women and girls

When looking at the Sustainable Development Report by Sachs et al. (2022), it can be seen that major challenges remain in Jordan for SDG 5 and, like for SDG 4, progress is stagnating. From SDG 5, 6 indicators are found in the problem owner's gender strategy. The first one being indicator 5.2.2. In the West Asia and North Africa (WANA) region, of which Jordan is a part, sexual harassment remains a serious concern for women (Friedrich et al., 2021). Especially in the construction industry, where sexual harassment is one of the impediments for women to participate in the labor force (Afolabi et al., 2019). Therefore, indicator 5.2.2 should be taken into account for further analysis and will be referred to as *elimination of GBV on the work floor*. To achieve this goal, the number of women that are victims of GBV, which includes sexual harassment (Latcheva, 2017), should be zero.

The next indicator is indicator 5.4.1. According to Kasoolu et al. (2019) lack of time due to the unequal division of domestic work is one of the major barriers for women to participate in the labor force. Therefore, when aiming for an increased participation of women, it is important to take the distribution of domestic work between men and women into account. Nonetheless, the division of domestic work in Jordan is a consequence of traditional gender norms, which have their roots in tribalism and Bedouin customs (Koburtay et al., 2020). This tribalism can be considered as an external factor that influences other indicators in Jordan and should not be influenced by the problem owner. Because the status of indicator 5.4.1 is determined by an external factor, it will not be used as a criterion, but will be taken into account in the causal relations of the system diagram.

EDI in the workforce is not only about the quantity of women that participate. It is also about the quality of work and the division of roles. Therefore, if impact investors seeks to support EDI in the workforce, it should take into account indicator 5.5.2. This should be measured as the ratio of female managers and total female employees and should be at least equal to the same ratio for men.

As indicator 5.a.2 refers to local legislation, it can be considered more as an external factor. Indicator 5.b.1 on the other hand is something that can be influenced by the problem owner. Nonetheless, as this work mostly focuses on the professional construction roles, it is assumed that this indicator is less important than it would be for women on the semi-/low-skilled jobs.

SDG 6: Ensure availability and sustainable management of water and sanitation for all

In Jordan, major challenges exist with regards to achieving SDG 6, which is mostly because of Jordan's extreme water scarcity (Sachs et al., 2022). According to Sachs et al. (2022) the biggest part of the population has access to basic sanitation services. Nonetheless safe sanitation for women is needed, not only in on-site construction jobs, but also for increasing women's participation in managerial positions. Women need appropriate menstrual hygiene materials and service, which are often lacking in the workplace, leading to stress and anxiety, resulting in lower productivity (Sommer et al., 2016). Therefore, the *Existence of MHM facilities* is an important criterion for impact investors. As women take on average more time on the toilet than men, the number of toilets with MHM facilities available per woman should be around four times as high as the number of toilets that are available to per man (Greed, 2004)¹. Therefore this criterion is achieved if the number of cubicles for women, including MHM facilities is equal to four times the number of cubicles for men.

SDG 8: Promote Sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Despite major challenges, according to Sachs et al. (2022) Jordan is moderately improving on SDG 8. Several indicators from SDG 8 appeared compatible with the problem owner's gender strategy. The first one being indicator 8.3.1. When women are informally employed, they do not have access to benefits such as health care, leave or pension contributions (Barcucci et al., 2017). According to ESIA Team (2022c), the construction of the AAWDCP will contribute to employment opportunities on different skill levels. However, as this research focuses on the more professional construction roles for women, the criterion for informal employment will not be considered any further. Nonetheless, women still face different issues than men regarding social benefits, which are often received by men and can only be accessed by women can access through complicated administrative procedures (World Bank Group, 2014). Therefore *equitable access to social benefits for women* working on the AAWDCP is an important criterion.

Indicator 8.5.1 refers in this case to equal pay for women. To support this, impact investors can set the criterion that the average hourly earnings for women should be the same as men in the same role and with the same level of experience. From target 8.5, indicator 8.5.2 was also found as important. This indicator would refer to unemployment rate by sex and the criterion that can be set for the AAWDCP is the number of women that work in the professional roles in the project. This should be representative for the number of women that have graduated in the belonging professional field. Finally, indicator 8.8.2 refers to national legislation, which can be seen as an external factor.

SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable

In Jordan, significant challenges remain for SDG 11 and the score on this SDG is stagnating (Sachs et al., 2022). Indicator 11.2.1 refers to women's mobility, which is a significant constrain for women to be employed in Jordan. Criado Perez (2019) explains that women around the world tend to make use of public transportation more than men. However, in Jordan, public transportation is inadequate and unsafe for women (Deeb et al., 2020). As women are often responsible for doing unpaid jobs, e.g. carework for older relatives, it is important to design transport systems that allow women to do this unpaid care work and still get to the office in time (Criado Perez, 2019). To achieve gender-equitable transportation systems, sex-disaggregated data is needed to determine travel patterns for women. Therefore, *Safety and flexibility of public transportation* is an important criterion.

Together, eight criteria can be used for further analysis. An overview is given in Table 5.2.

¹Greed (2004)'s study was based on the number of public toilets needed in Britain, where the writer suggested 1 cubicle per 1100 men and 1 cubicle per 250 women

Table 5.2: Criteria relevant for the professional roles in the construction phase of the AAWDCP

Criterion		Requirements for achievement
C1	Participation of women in formal training	Ratio of women participating in formal training and women workers, should be at least equal to the same ratio for men with comparable roles in the construction of the AAWDCP
C2	Elimination of GBV on the work floor	Number of women that are victims of GBV must be equal to zero.
C3	Women in managerial positions	Ratio of female managers and total female employees should be at least equal to the same ratio for men.
C4	Women participating in the professional construction roles	Number of women participating in the professional construction roles should be representative for the number of women that have graduated in the field.
C5	Existence of MHM facilities	The number of cubicles for women, including MHM facilities is equal to four times the number of cubicles for men.
C6	Equitable access to social benefits for women	Women have access to the benefits that are required for the circumstances in which a project takes place
C7	Equal pay for women	Average hourly earnings for women should be the same as men in the same role and with the same level of experience.
C8	Safety and flexibility of public transportation	Transportation system are designed based on sex-disaggregated data

5.3 The criteria and their relation to EDI

As this research seeks to assess how impact investors can increase EDI, it is necessary to assess to which component of EDI certain criteria belong. Figure 5.3 shows how the criteria relate to equity, diversity, and/or inclusion.

5.3.1 Equity

Chapter 2 showed that equity, as opposed to equality, denotes justice and fairness and acknowledges that different individuals need different means to reach the same level. A visualization was shown in Figure 2.1. Some of the criteria indicate this as well such as C5, C6, C7, and C8. C5 indicated that in order for women to participate in the construction workforce, sufficient MHM facilities should be present, which is something that differs from men's needs. C6 mentions equitable social benefits for women, which indicates that women need different social benefits than men. Especially when taking into account that women are for a major part responsible for unpaid domestic/care work (Criado Perez, 2019). Furthermore, these social benefits are not as accessible for women as they are for men (World Bank Group, 2014). Therefore, providing equitable access to social benefits would contribute to more equity for women. C7 refers to equal pay, which is important for ensuring that

women get the same treatment as men that work in similar positions. Finally, C8 acknowledges that women experience public transportation differently than men and because of their different responsibilities they have different needs for transportation (Criado Perez, 2019).

5.3.2 Diversity

In chapter 2, diversity is referred to as a multifaceted concept that encompasses a variety of identifying elements (Fuentes et al., 2021). In this study diversity refers to the presence of both men and women within the system that is taken into consideration. When looking at the criteria, it can be seen that C3, and C4 refer to the presence of women in respectively managerial positions and in the professional construction roles. Increasing these criteria will consequently increase diversity in these positions.

5.3.3 Inclusion

The term "inclusion" refers to the active, deliberate, on-going engagement with diversity in communities (intellectual, social, cultural, and geographical) with which individuals may connect, in ways that increase awareness, subject-matter expertise, cognitive sophistication, and empathic understanding of the complex ways people interact within systems and institutions (Fuentes et al., 2021). Criteria for inclusion are therefore the criteria that actively contribute to the inclusion of women, which are C1, C2, C5, C6, C7, and C8.

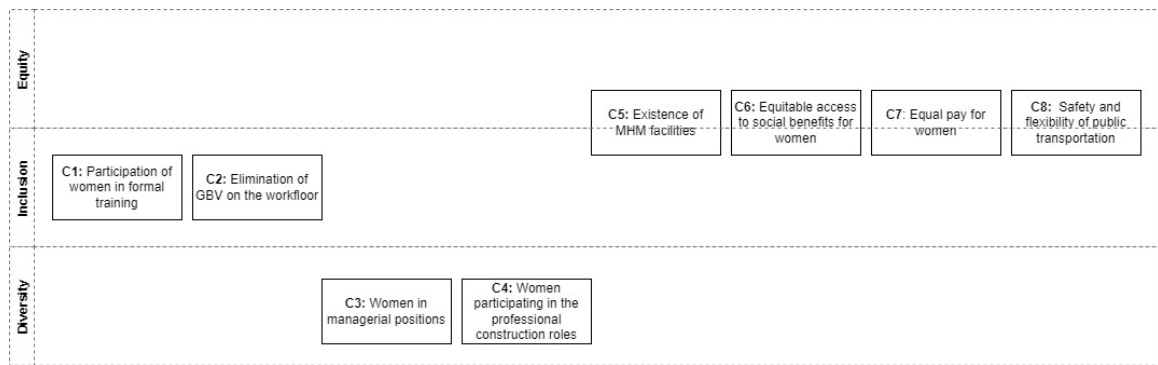


Figure 5.3: The criteria and their relation to equity, diversity and/or inclusion. For visualization inclusion was placed in the middle, since many criteria belong to both equity and inclusion

5.4 Identification of means

Following the method described in section 3.2.1, the next step is to analyze which means impact investors have when they wish to achieve the criteria that were identified in section 5.2.2. Table 5.4 shows the themes that were identified during the in-depth interviews with experts, along with some illustrative quotes. This section outlines each criterion and the means required, as determined by experts and gender strategies, to raise the targeted criterion. Words that are printed in *italic* show factors that are put in the system diagram in figure 5.4.

C1: Participation of women in formal training and C3: Women in managerial positions

Regarding participation of women in formal training (C1), USAID (2020) mentions that they can provide women with quality training and support, which could also lead to increasing *upward career paths* for women and consequently on the number of women in managerial positions (C3). When proposing this to the experts, a key point that was mentioned was the importance of considering the local norms and social structure. The experts point out that training will not increase women's

incentives to work if there are still underlying issues that limit women's participation in the labor force. To understand the social norms and structures it is important to work with local entities. Therefore a means to increase the participation of women in formal training and consequently the number of women in managerial positions (C3), is to provide women with quality training and support in collaboration with local entities (M1). As this means is expected to increase C1 and C3, the means will contribute to both inclusion and diversity.

C4: Participation of women in the professional construction roles

A good starting point to increase participation of women in the professional construction roles of the AAWDCP (C4) is to consider setting representative quota that respect cultural norms, followed by assessment and enhancement of skills could support women to stay in the workforce. The interviews showed that if women are assessed based on their capabilities, this could lead to a higher *feeling of appreciation* at work, resulting into a lower *turnover rate* and higher job sustainability. Therefore setting representative quota for the project workforce, followed by assessment and enhancement of skills is an important means. Since it is expected to increase C4, it will contribute to diversity.

C2: Elimination of GBV on the work floor

Regarding the elimination of GBV on the work floor (C2), USAID (2020) mentions that engaging men and boys is critical to make changes. Moreover, they point out the importance of providing GBV survivors with support to prevent a decline in women participating in the professional construction roles (C4). GBV has a negative impact on both *safety* on the work floor and *women's confidence* (Expert 2, personal communication, July 7th, 2022). In the interviews was found that men and boys are natural allies for GBV prevention and that they can be real change agents for the problem. Many men and boys, however, are not familiar with the definition of GBV and do not understand that what they are doing is violent toward women. Therefore engaging men in training about GBV (M3) is crucial and this should also be done in collaboration with local entities.

Another key topic that was found during the interviews when talking about GBV was victim blaming, which is often a major issue, causing women to not *open up about GBV*. Additionally, women can decide to not talk about GBV out of fear for consequences. Investors' responsibility is therefore to (1) educate men and boys about GBV and (M3) (2) create an environment where women can open up about GBV if something has happened to them. This can be done by providing proper grievance mechanisms, like a focus group with a local facilitator to increase women's confidence (M4). However, there should be options where a woman can submit something anonymously. It is then of importance that grievances that are applied by women are always taken seriously, which is the responsibility of superiors who should also be trained on how to deal with women's grievances, which is part of providing women with proper grievance mechanisms.

Another reason why women do not open up is because the police does not take them seriously and no *consequences follow for the perpetrator*.

Expert 1: "In Middle East countries, *tribal countries*, you as one person don't mean anything, but if you go there with a group, you are taken seriously immediately. That is really unfortunate."

To help women open up, women should know that they are not alone, by having educated staff that can stand by the victims, e.g. when they go to the police, which should also be part of M4. As M4, contributes to the elimination of GBV (C2), it increases inclusion. Expert 1 refers to *tribalism* as a barrier for women to open up about GBV. Section 4.3.1 argued that this is an external factor and should therefore be placed on the top border of the system diagram.

C5: Existence of MHM facilities

Another means to increase *safety* of women is to invest in facilities for MHM on the construction site, which is mentioned by USAID (2020) and Expert 1. Therefore the fifth means (M5) is to invest in facilities for MHM, which contributes to both equity and inclusion.

C6: Equitable social benefits for women

A criterion that has not been discussed yet, is C6, which refers to equitable social benefits for women. Investments in social infrastructure and the care economy can reduce the unpaid care burden (*Proportion of time spent on unpaid domestic/care work*) on women, leading to an increase in C3 (EIB Group, 2016). The investments could be into daycare facilities, maternity leave. In chapter 4 paternity leave was mentioned to increase job security for women. However, when proposing this to Expert 1, she indicated that in patriarchal societies such as Jordan, paternity leave might add up to a mother's burden.

These investments are again dependent on what is needed based on the social norms existing for the women that work on the project and based on what these women need, leading to an increase in equity. Investing in these facilities could lead to higher productivity and lower *turnover rate* of women and therefore prevent C4 to decrease, which contributes to diversity.

C7: Equal pay for women

It was already mentioned that a consequence of the assessment and enhancement of skills (M2) that is done for increasing C4, leads to an increased *feeling of appreciation*. Another way to show appreciation is by means of equal pay for men and women within the project (C7). Currently, a world wide gender pay gap exists because men and women usually work in different types of jobs and therefore have different types of salary (Expert 1, personal communication, August 10th, 2022). The assessment based on skills, as mentioned in M2, should include a structured policy that determines pay range based on different variables, leading to equal pay and therefore M2 also contributes to inclusion.

C8: Safety and Flexibility of public transportation

According to EIB Group (2016), poor public transportation systems keep women away from jobs. Therefore, gender considerations in public transportation are needed to achieve more participation of women. Expert 1 explains that this does not have to be by building entire new public transportation systems, but it could be done by means of security cameras and panic buttons, but also by providing more and better bus stops. The following is an example of a new initiative in Ankara, Türkiye:

Expert 1: "The mayor obliged the bus drivers to (...) and to leave [female] passengers wherever they want to (...) that directly reduces the danger."

A sixth means (M6) is therefore to include gender considerations in public transportation investments, which will contribute to equity and inclusion.

5.4.1 Working with local entities as an overarching theme

EIB Group (2016) mentions that it is important to work with willing promoters, co-financiers and other stakeholders to ensure achieving the criteria. This was also a reoccurring topic in the interviews where experts pointed out the importance of working with the local government and working with other local entities, like Non Governmental Organizations (NGOs). Furthermore, impact investors should always listen to local communities:

Expert 2: "I think (...) an impact investor from the West (...) [is not] in the right position to tell [the local communities] what must be done. But I think it's our position to ask questions."

It was pointed out that working with co-financiers could have valuable impacts based on the availability of knowledge and information about the area. Nonetheless, working with co-financiers could also cause that compromises should be made in the different strategies (expert 1, personal communication, 2022-08-10). Finally, both EIB Group (2016) and USAID (2020) mention supporting flagship initiatives around gender equality in corporate governance and in the labor force and around

reducing occupational segregation along gender lines as a means to achieve C3, but also for C5. According to the experts this also refers to working with local entities. As this collaboration with local organizations is an overarching theme throughout the interviews, it will not be formulated as a distinct means but rather should be incorporated into each individual means.

Table 5.3 provides an overview of the means that have been identified in this section. The system factors that were found in this section (printed in italic) are shown in Figure 3.1.

Table 5.3: Means of the investors to support the criteria

Means	
M1	Provide women with quality training and support in collaboration with local entities
M2	Set representative quota for the project workforce, followed by assessment and enhancement of skills
M3	Engage men and boys in GBV prevention
M4	Provide proper grievance mechanisms for GBV survivors in collaboration with local entities
M5	Invest in facilities for MHM
M6	Include gender considerations in public transportation investments
M7	Invest in social infrastructure and the care economy

Table 5.4: Quotes of experts regarding the criteria

Main themes	Quotes
C1: Participation of women in formal training	
Consider local norms	Expert 1: "If women cannot bear with (...) working with dozens of men in the workplace due to cultural pressure, or due to their religious beliefs, even if they have the proper education and proper training, formally or they have the means to access to training, they still may choose to not access those."
	Expert 2: "It is important to look at the social structures from a local perspective. The only solution, in my opinion, is to work with local consultants who work on grass-root level"
C2: Elimination of GBV on the workfloor	

Safety as the basis	Expert 2: "I think that when there is no safety in places where women work, you can try work on other issues all you want, but you will not get any further."
Awareness of the meaning of GBV	Expert 1: "Belittling someone's actions, mansplaining. These are also GBV"
Importance of taking into account a local perspective	Expert 2: "The person giving those trainings [on GBV] should (...) be from the area. Additionally these trainings need to be developed locally to prevent bias."
Men as change agents	Expert 1: " They[men and boys] are natural allies for GBV prevention (...), and they should definitely be included for GBV mitigation and measures.
	Expert 2: "I really see men as change agents"
Victim blaming	Expert 1: "That[awareness that harassment is never the fault of the victim] should be a part of the training.
Women opening up about GBV	Expert 2: "With (...) a focus group, trust can be created among women and they can be told that it is not okay if they are being violated, either physically or verbally, and that it is okay to talk to other women about this (...) such things [GBV] have a very negative impact on your confidence."
	Expert 1: "[There] should be paid extra attention when they [victims of GBV] submit something or when they talk with their superiors"
Women not being taken seriously	Expert 2: "Very often you see that the police tells women that there is not enough evidence and they do not take the time to investigate the case."
	Expert 1: "What impact investors should be doing in my opinion is having security staff who's call it is to stand with the victim and accompany the victim with her application to the police station.
C3: Women in managerial positions	
Male managers make environments suitable for men	Expert 1: "I have seen men for many years that. They[male construction managers] (...) set-up a a world made-up of only men."
C4: Participation of women in professional construction roles	
Feeling of appreciation	Expert 2: "If you provide women with the opportunities to grow and find autonomy in their jobs and give them a voice, this will give them a feeling of being able to share what is going well or what is not going so well and where they see improvement in their jobs. Then they can start working more efficiently (...) they will get better in the work that they do because they feel seen, heard and appreciated."
C5: Existence of MHM facilities	
Danger of assault due to the lack of safe restrooms	Expert 1: "There's always the danger of being assaulted while using the restroom, and that danger doubles when you have to use the same restroom with the men, or even if you are using a unisex restroom. It is definitely super important because a restroom has too many functions for us and you know due to our physical infrastructure, we cannot pee on the road side without having any fear, et cetera so there should be something designed for us."
C6: Equitable access to social benefits for women	

Investing in the care economy	Expert 1: "Eldercare, childcare and household responsibilities etcetera, it is sucking the whole time of an average woman everywhere. So I also think that it is also something that reduces your productivity when you think constantly about your child. And and and if you don't have any place to leave them permanently, or if you are thinking constantly again about elders. Because this is always the woman's responsibility (...) and it is the enemy of job sustainability."
C7: Equal pay for women	
Clear policies to determine pay range	Expert 1: "The investor should have a structured policy, in which any variable that could affect the pay range is clearly identified and documented."
C8: Safety and flexibility of public transportation	
Responsibility of investors to take care of employees' transportation	Expert 1: "With this project they[impact investors] should take into consideration public transportation. (...) there has to be a way to access the project site (...) It is also an investor's responsibility. (...) of course there should be many solutions to bring forward the public transportation within this project. (...) It doesn't have to end with the new public transportation idea as an associated facility (...) There should be, you know, other solutions [such as CCTV, panic buttons]."

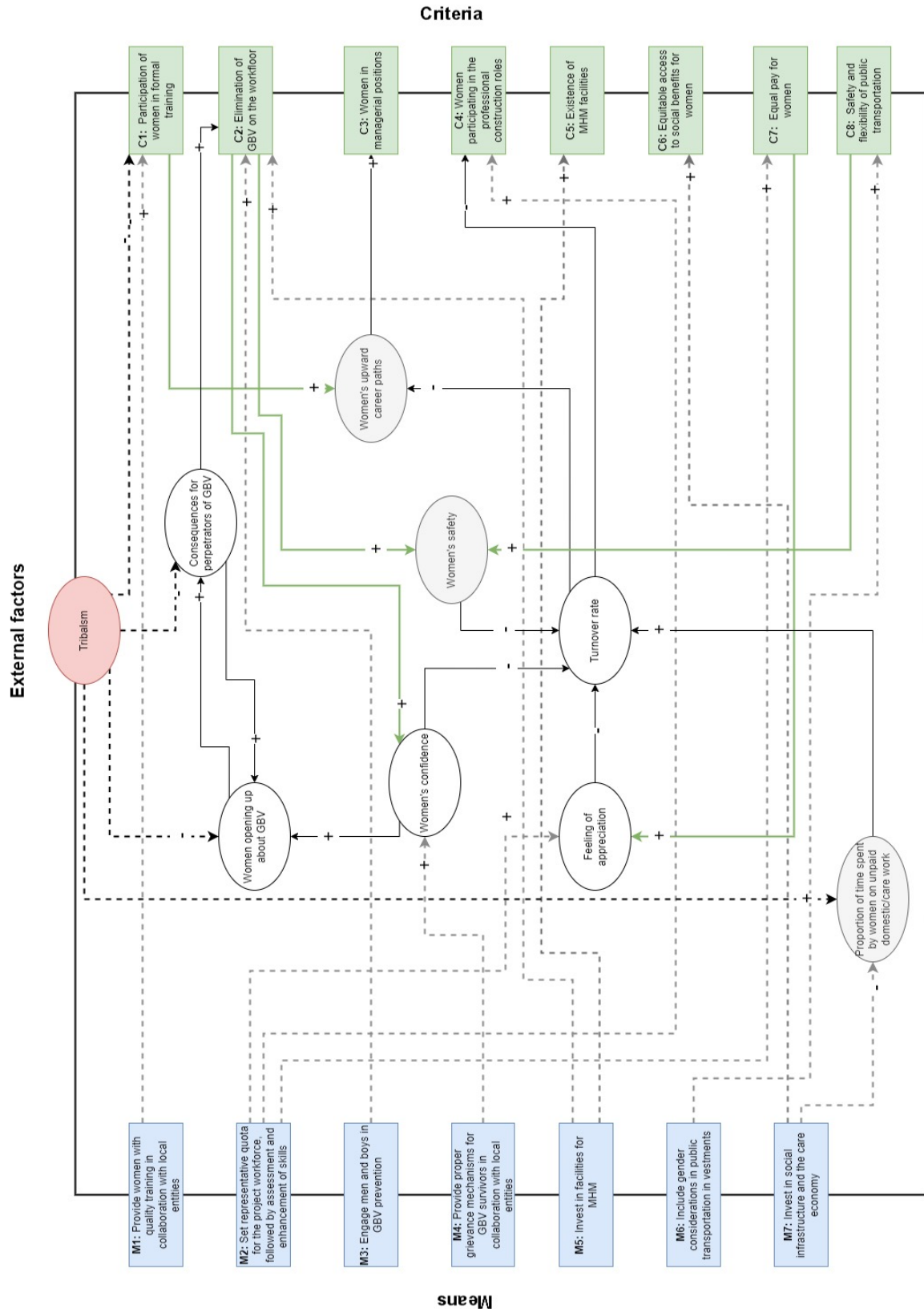


Figure 5.4: System diagram based on investors' strategies and expert interviews. The grey components indicate that these were also found in the previous chapter

6

Experiences of professional Jordanian women

Chapter 5 resulted into a system diagram which shows the factors and relations between impact investors' means and criteria and their effect on Equity, Diversity, and Inclusion (EDI). Figure 3.3 shows that this chapter aims to identify which factors and relations are experienced by professional women in Jordan. This is done by semi-structured in-depth interviews. The pre-defined questions are mostly based on the factors and relations that were found in the previous analyses. Furthermore, this chapter aims to analyze women's opinion on what is needed to achieve EDI. An elaboration of the method utilized in this chapter can be found in section 3.2.1. The outcome of this chapter is a system diagram based on the in-depth interviews with professional Jordanian women. The words displayed in italics, as in chapters 4 and 5, denote system factors or external factors.

6.1 Barriers for women to participate in the labor market

Like the literature review in Chapter 4, this chapter starts with an analysis of barriers that limit women from participating in the labor force in general, before going into the construction workforce specifically. Figure 6.1 shows the main themes that were found during the interviews and how these themes relate to each other. This section will explain those themes and their relations in further detail. Table 6.1 shows the main themes along with some illustrative quotes from the conversations.

The leaky pipeline

One of the findings in Chapter 4 was that in Jordan, women have very high rates of education, yet they make up a small portion of the labor force. This is also referred to as the leaky pipeline, which entails the loss of competent women in the fields of Science, Technology, Engineering, and Mathematics (STEM) at different stages of their career (Liu et al., 2019). Participants were asked whether they recognized this phenomenon from their personal network. Although not all of the professional women experienced this themselves, most of the women were aware of this. As the participants were all professional women who were highly educated, many of them indicated that

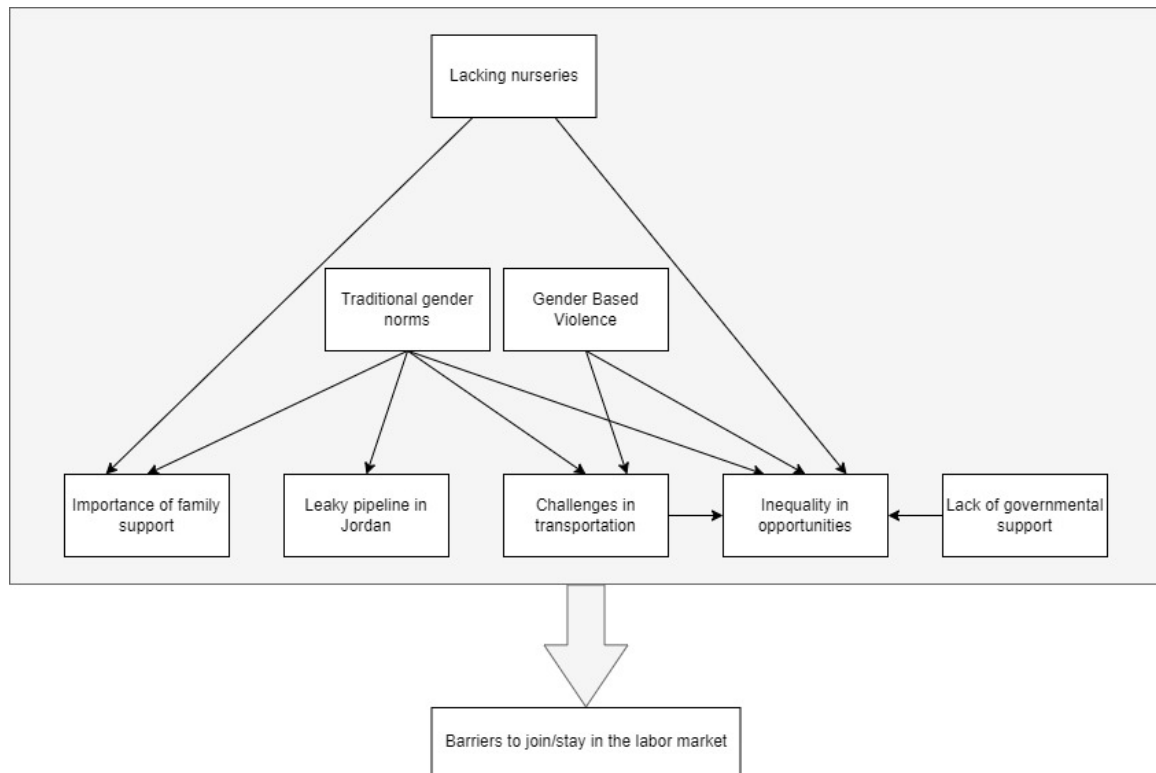


Figure 6.1: Main themes found when women were asked about what they experience as the major barriers for joining or staying in the labor market. The arrows indicate that one theme influences another theme.

they were surrounded mostly by professional women and therefore the overall low participation of women confused them. Furthermore, it was indicated during the interviews that when women grow up in a more open-minded or in a more intellectual family, that they are less stuck in traditional norms and have more opportunities. One of them even said that a person might not even notice the disparities inside the country if they work among successful women:

Interviewee 1: "You can be *completely oblivious* to [these] discrepancies in the country if you've worked in the right places."

Traditional gender norms

When the women who recognized the leaky pipeline were asked for explanations for this phenomenon, they mostly referred to the *traditional gender norms* that exist in the country. It was found in Chapter 4 that due to these traditional norms, to be perceived as professional, women have to both take on masculine traits and at the same time be an honorable wife. However, even though a woman is still responsible for the household, the take on masculine traits at work has changed:

Interviewee 1: "Women no longer feel the need to look like a man (...) But, but there's definitely a cultural understanding that the woman is the one that takes care of the kids and the households in Jordan."

Importance of family support

Due to traditional gender norms, women are not the main decision makers in traditional Jordanian families. One of the participants indicated that families do not want women to be educated to be an educated employee, but to be able to help their children with school as an educated wife (Interviewee

4, personal communication, 2022-08-04). This shows the *importance of a supportive family* in order to help a woman succeed in her career. COVID-19 has been a set back for women's position. On the one hand, women are able to *work remotely* and the perception on flexible work hours changed because of the situation. Nonetheless, working from home brought new challenges for women as families think that if a woman works from home, she can take care of the kids at the same time and will therefore not support her as much.

Inequality in opportunities

When asked whether women felt like they experienced a lot of competition or inequality in opportunities most of the participants indicated that they personally did not experience much competition, because they had worked very hard during their studies to distinguish themselves before they would enter the labor market by being the top of their class, doing internships and working part time during their studies. However, they do indicate that women face different challenges than men that lead to inequality in opportunities, such as taking care of the children when a woman is a mother, or having to take the full *responsibility in the household*, which again traces back to *traditional gender norms*.

Challenges in transportation

Another cause of inequality in opportunities, refers to the challenges that women face regarding their *mobility*. Transportation is time intensive and *unsafe* due to the risk of harassment. Especially if a woman has to mobilize between different governorates, which would be the case for the Aqaba-Amman Water Desalination and Conveyance Project (AAWDPC) as this project crosses multiple governorates between Aqaba and Amman (ESIA Team, 2022c).

Lacking nurseries

Another theme that arose that is causing inequality in opportunities was the lack of *decent nurseries*, which causes major challenges for mothers to continue in the labor force. The existing nurseries are either expensive, or of bad quality. One of the women even refers to these cheaper basic nurseries as '*horrible places*':

Interviewee 5: "For women, if they feel that they put their kids in such *horrible places* or basic nurseries [she will say:] No, for me, I will [stay] at my home and (...) take care of my kids rather than being good with the minimum wage."

Another issue with the nurseries is that the hours of nurseries do not match women's working hours, making it difficult for women to get to their work in time. Therefore many women still need their *family's support* with their children if women need to go to work.

Lack of governmental support

The lack of governmental support was also mentioned as a challenge by the women. Jordan is a masculine society, in which women cannot expect much support from the government. This could lead to very difficult situations for women, e.g. when they have to leave their marriage:

Interviewee 2: "I left my marriage and I became a single mom (...) If I wanted to keep my kids with me, this had to mean that I need to earn a good income so that I can be independent."

Moreover, women indicate that they feel like the government does not understand their issues as mothers, causing women to experience difficulties in rejoining the labor market after having children.

Gender Based Violence

Gender Based Violence (GBV) is mentioned by many women as a barrier to participate in the labor force. It is mostly referred to in relation with public transportation. When something related to GBV happens to a woman she is the one that is being held responsible, causing women to not *open up* if something has happened to her. Furthermore, if a woman is not afraid to open up would go to the police she will not be taken seriously on her own and even if she were taken seriously, there would be no *consequences for perpetrators*, because there are *no laws that criminalize sexual harassment*, which is illustrated by the following quote:

Interviewee 4: "If I don't have a male person with me (...) they[the police] won't take me seriously. (...) And if I did file against him[the perpetrator] (...) all he can do is sign a paper telling them[the police] that [he] won't do this again."

Table 6.1: Main themes mentioned by women during the interviews along with proof quotes

Main theme	Illustrative quotes
The leaky pipeline in Jordan	Interviewee 1: "It's a very confusing topic to me because Jordan is a country where there's lots of strong women in senior positions (...) So sort of trying to understand the country that has so many powerful women also has 14% for female participation in the workforce, is very confusing."
	Interviewee 4: "Some families in Jordan only want their daughters to be educated so she can (...) help her kids in the future to study (...) you need your education only to use it in the household so you can be [an] educated mother, educated wife but not [an] educated employee."
	Interviewee 6: "All women around me, they are very successful. They work very hard. They they got very good jobs actually. "
Traditional gender norms	Interviewee 1: "We have cultural barriers where the woman is expected to play the full role in the household."
	Interviewee 5: "Even if you work you need to take care of your household. You need to take care of your kids to educate them. It's also another job in the in the home waiting for you."
Inequality of opportunities	Interviewee 2: "I always say a woman and the man in the same position in their career means that the woman has put lots of more effort than the man"
	Interviewee 3: "Some companies refuse a woman if she is married. They ask her, do you want to get pregnant? And if she says yes, they refuse her."
	Interviewee 7: "I think there are many opportunities that I couldn't apply for because I'm a woman. And there are many challenges like transportation. And (...) work hours, there are many obstacles."
	Interviewee 3: "I studied engineering but I didn't work in engineering. (...) But I noticed something with my friends, which is that still men have a higher opportunity than women with engineering backgrounds."
	Interviewee 6: Men took chances better than us. (...) because I think we have much [more] responsibilities to do beside our work
Lacking nurseries	Interviewee 7: "For example, in my son's school, I'm the only woman or mother who works. And this is because of many reasons [such as] a lack of decent nurseries."

Table 6.1: Main themes mentioned by women during the interviews along with proof quotes

Main theme	Illustrative quotes
	<p>Interviewee 4: "In case you are educated and a mother, a great number of companies don't provide you with daycare for your kids (...) So she has to choose between working and have, like at least 20% of her salary go to the daycare, which is not feasible."</p> <p>Interviewee 5: "The working hours for the nursery, it's not matching the working hours in most of the companies. (...) and they will [charge] extra for waiting time."</p> <p>Interviewee 7: "[the lack of] nurseries is a big issue because it's very costly and the ones that are not costly are not decent and not suitable for kids."</p>
Governmental support	<p>Interviewee 1: "Women need to be financially independent because our laws are not the most supportive in case of family breakups."</p> <p>Interviewee 3: "the ministry doesn't understand the situation of moms (...) and their needs in the work [force]."</p>
Challenges in transportation	<p>Interviewee 3: "In in the same governorate it's easy to mobilize the from [one] point to other points, but from governorates to another governorate. It's it's really hard because of time, because they[women] need time for their family."</p> <p>Interviewee 4: "I had like a contract with a one taxi who (...) can pick me up every day from my house and pick me up from my work so I would stay safe with the same person (...) [I had] to pay almost more than half of my salary to transportation."</p>
GBV	<p>Interviewee 1: "You should have a zero tolerance policy for (...) abuse."</p> <p>Interviewee 2: "She [the victim of GBV] will be shamed, actually. And she will be labeled. And then if she goes to her husband or or her father (...) they tell her to quit her job."</p> <p>Interviewee 4: "For example, if I get harassed and I go to, let's say, to the police station (...) they would definitely blame me."</p>
Importance of family support	<p>Interviewee 2: "Women do not believe in themselves in the Arab world, so they they need this push, they need people to tell them to believe in themselves. And I was lucky to have a family that raised me this way"</p> <p>Interviewee 4: "You are not a decision maker as a female. (...) And whenever she's applying for a job (...) it's going to be filtered and chosen by their family, so she can be safe (...) [and] she would still have time to go back and support her family"</p> <p>Interviewee 5: "It's a real issue, but my husband supported me with my son and my husband supports me (...) in order to let me be able to go to my work. Even if I have to travel, he stays with my son or even goes with me with my son."</p> <p>Interviewee 6: "It depends on the relationship with their husband some of the men have their cultural issues (...) I think single women, it's easier for them as long as they have the support from their families."</p> <p>Interviewee 7: "There are many new challenges that came up [during COVID-19], because if you work from home, you will not get the same support from your family because they don't understand that work at home is work. So they think that you can take care of your children at the same time."</p>

6.2 Barriers for women to participate in the construction industry

Many of the barriers that were discussed in section 6.1, were also mentioned for the construction industry, like the importance of *family support*, *mobility* and the lack of *decent nurseries*, and GBV. However, there were also other difficulties that were unique to the construction sector, including the *perception of the construction industry as unsuitable for women*, the *demanding nature of the construction industry*, and the underestimation of *women's capability*. Figure 6.2 shows the main themes that were found when asking women specifically about the barriers to participate in the construction workforce combined with the main themes shown in Figure 6.1. Illustrative quotes belonging to these themes can be found in Table 6.2.

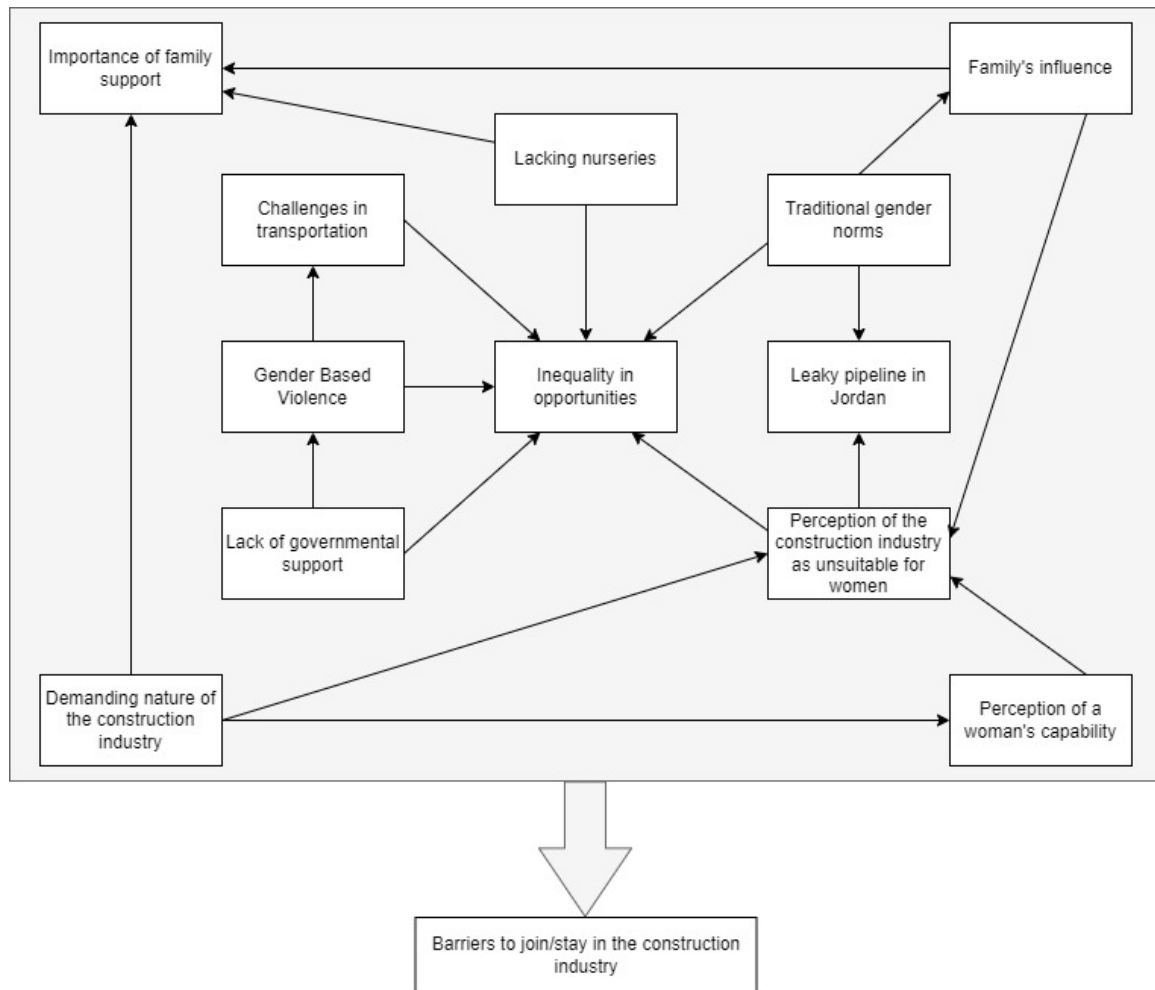


Figure 6.2: Main themes that lead to barriers for women to join or stay in the construction industry

Demanding nature of the construction industry

During the interviews, the demanding nature of the construction industry came forward as a significant challenge. According to the interviewees, combining the demanding nature of the construction industry with responsibilities that women have at home is not always feasible. Because of this, the construction industry is often perceived as less suitable for women. All three women that work in professional construction roles, mentioned this demanding nature, which is due to the fact that the

construction industry is project based and highly urgent, leading to unstable working hours:

Interviewee 8: It[the construction industry] is demanding. It's highly urgent. (...) What needs to happen today needs to happen today. You can't delay it (...) even half a day."

This demanding nature also increases the importance of a supportive family, which was a barrier found in section 6.1. Women need their family support in order to help them with their children and to support them in taking a job with such unstable working hours.

Family's influence

Furthermore, the construction industry requires traveling, which is not preferred for women by some families.

Interviewee 9: "I have a friend (...) who is working as a manager for a contracting company and she's very open minded. She travels everywhere (...) But when [her] daughters decided to go and study outside Jordan, she said no. She's afraid because [they are] without [their] brother (...) it's deep in our minds."

This illustrates that even though women who work in construction are open minded themselves and come from open-minded families, still traveling is an issue. It can thus be observed that, like for joining the labor force in general, women's families have a major impact on women's career opportunities in the construction industry.

Perception of the construction industry as unsuitable for women

As families prefer women to be working in jobs where they can be home in time to take care of the family, the construction industry, with the unstable hours and the traveling, is not perceived as most suitable for a woman. Moreover, many families prefer women to work in a female environment, which is not the case for the construction industry. One of the women added that in addition to families believing that the construction business is inappropriate for women, women themselves are fearful of the difficulties they may encounter in this industry.

Perception of a woman's capability

Furthermore, as the construction industry is male-dominated and also very traditional, a woman might be perceived as less capable depending on the role that she is fulfilling in the project. However, all three participants who work in the construction industry said they believed that if you put in the necessary effort, you can achieve the same level of success as your male peers.

Nonetheless, personal experiences show that women have to face more challenges than men to get to those positions, such as aforementioned challenges related to the influence of a woman's family and combining the demanding nature of the construction industry with family responsibilities. However, women also face challenges in how they are perceived by the men that work in such an industry:

Interviewee 6: "Some of the workers they thought maybe that *if a woman is a leader she's gonna be weak and we can do whatever we want*. But I did not give in and they started to respect me."

Especially in the field, women are perceived as less capable than men and their leadership is not accepted right away.

The leaky pipeline

Like in section 6.1, the leaky pipeline came forward as an important theme. Women are even outperforming men in engineering studies but tend to drop out of the workforce over time or start working in a different sector (Interviewee 8, personal communication, 2022-08-11).

Table 6.2: Main themes and illustrative quotes from interviews with women about the construction industry

Main theme	Illustrative quotes
The leaky pipeline	Interviewee 3: "I think we have many students that are women (...) They study civil engineering but I [don't] know why they [don't] work in this field."
	Interviewee 8: "Most architecture schools and engineering schools have a majority of females in the classes. But when you go to the workforce, they tend to fall out of the process with time. (...) the more you progress in career the more you see men and less women."
Demanding nature of the construction industry	Interviewee 6: "Some companies want you to work more than the allowed hours. (...) If you are a woman you want to go to your house, you want to have your life. And men usually work more hours. (...) Some of my colleagues they slept at the office when we were delivering some projects."
	Interviewee 8: "Construction is very demanding and very male dominant (...) Plus it is not very lucrative in terms of pay. So they[women] start to balance out their options and many of them tend to either change their fields or stay at home."
	Interviewee 9: "The project was in Aqaba. It is 3,5 hours between Amman and Aqaba weekly (...) It's really hectic to travel every week."
Family's influence	Interviewee 4: "The husband, the brother and the father can refuse to send their daughters to work in a mixed environment"
	Interviewee 9: "I travel, but one of my team members, she got married and her husband said that it is impossible for her to stay outside the house. She's not allowed because of his mentality."
Perception of capability of a woman	Interviewee 8: "It[the construction industry] tends to be very dominated by large scale traditional players (...) I think it's a rough industry and sometimes you need to be a little bit rough in it. And I think a lot of times men feel like they need to be like that[rough and traditional]."
	Interviewee 9: "There is no difference between males and females, and if you work hard you earn this position. Especially in the private sector there is no limitation."
Perception of the construction industry as unsuitable for women	Interviewee 6: "Some women they refuse to work at the construction field (...) because they feel that they will be exposed to (...) too many problems. They'll be exposed with workers from other nationalities (...). The problem is here that most of the women they don't try"

6.3 What is needed for change

After asking women about the existing barriers, they were asked what is needed to change the situation according to them. Three main themes came up, which are (1) exposure to career options, (2) more women in politics, and (3) increased family support. Table 6.3 shows the main themes along with some illustrative quotes.

Exposure to career options

Many women indicate the importance of starting to create awareness of a woman's career options at a young age and stress the importance of educational changes, where both boys and girls are exposed to different opportunities

Interviewee 2: "You need to introduce success stories of women around them[the children] and show them examples. This will boost their potential and make them think about the things they can do."

Furthermore, besides educational reforms, women mention the importance of national campaigns to expose women to all their options and of success stories.

The women pointed out that some campaigning is already happening.

Interviewee 4: "It's like the private sector who started this, to be honest. And the international NGOs (...) Sometimes in advertisements on TV you would see the male cooking and she [his wife] is on her laptop and he's supporting her (...) so a great number of campaigns now are addressing women."

Women point out that most campaigning is not done by the government, but by Non Governmental Organizations (NGOs) and the private sector.

Women in politics

Some women believe that the government should be giving the private sector more incentives, whereas others indicate that the government itself is very conservative and therefore cannot influence others.

Furthermore, the women indicate that the government should be more supportive for working mothers, by providing more decent nurseries and improved maternity benefits. Moreover, as stated in section 6.1, Jordanian legislation is not supportive of women and more legislation is needed to support women in the labor market. As a solution, women mention the importance of women in politics. However, when women were asked what would be needed to support women to become active in politics, they stated that women are trying but they are not being elected.

Family support

Finally, the women mention family support as an important theme. When women work, they need a lot of support from their family.

Interviewee 3: "We have an increased number of women who (...) *need* the salary at the end of the month (...) So they[the men] *need* to support women in the house. I see this support now more than 5 or 10 years [ago]. I think 10 years [ago] men refused their their wife to work.(...) But it's bad, really, because they[men] need to accept this because this is a right, it is not just [the] economic situation."

Currently, the economic situation is forcing women to work, which causes an increase in support of men for working women. Nonetheless, men should not only support working women because they need the salary but should realize that this is a human right. However, women indicate that despite improvements over time, for men to help their wives in the household is still not popular (Interviewee 4, personal communication, 2022-08-04).

Table 6.3: Main themes that women mentioned when asked what is needed for change along with illustrative quotes

Main theme	Illustrative quotes
Exposure to career options	Interviewee 1: "I think girls from a young age need to be exposed to all the career opportunities and that there's no career opportunity you can't pursue as a woman (...) it changes the the perceptions they form at a young age of of gender roles."
	Interviewee 2: "So I'm telling you my wishful thinking: I would love to change the curriculum and start from an earlier stage or age, but we don't give up (...) We try to do national campaigns."
	Interviewee 4: "We need like a great number of campaigns to raise awareness (...) The change is going to be [in] baby steps. But if each and every organization did (...) 1% we definitely (...) get somewhere one day."
	Interviewee 6: "We have to make success stories about women who work at the field and that they are very successful and I think that will encourage more people to participate."
Women in politics	Interviewee 7: "They[the government] are not supporting women to participate in the workforce, (...) So they can't influence others."
	Interviewee 3: "They need women to advocate this [women's needs in the labor market] to the ministry".
	Interviewee 5: "They tried to participate, but we do election. But there is only a few woman in that election."
Family support	Interviewee 4: "I do have friends who support their wives and let's say, do laundry and cooking etcetera. But I think we still need an another, let's say 50 years before this is the norm"
	Interviewee 5: "It will take years, too many years in order to convince them to take care of their kids."

6.4 Women's narrative towards impact investors

As the main question indicates the importance of considering local needs, it is important to assess how the professional women in Jordan feel about impact investors from other countries than Jordan setting criteria for EDI. Main themes that emerged when talking about this topic were that (1) women are skeptical of foreign entities coming in to set these objectives but also indicated the importance of changing the current situation, (2) the women felt like impact investors are able to push towards more women's empowerment, (3) changes attempted by impact investors must be localized and genuine, and should not clash with the government's agenda, and (4) also the investors themselves should be aware of EDI in their own teams when working on this issue. Table 6.4 shows the main themes along with some illustrative quotes.

Skeptical but need for change

Despite the fact that most of the women are skeptical about impact investors coming in with their investment criteria, women felt like it is really necessary that their government is getting a push from outside to empower women.

Impact investors can push towards women's empowerment

Women indicated that because impact investors come in with money, they are in a position to set conditions. Therefore they can push towards more empowerment of women. Furthermore, if they do so, they can set an example for other companies, resulting in incremental change.

Changed must be localized and genuine

Nevertheless, they stress the need for localization and collaboration with regional organizations to prevent conflicts between their goals and those of the government. Furthermore, women indicate that changes must be made in such a way that it is genuine.

More women in managerial positions and on investment committees

Moreover, women argue for women in the investment committees and in leadership positions as women are able to approach the issue from a different perspective than men (interviewee 1, personal communication, 2022-07-20).

Table 6.4: Themes that arose when investigating women’s narrative towards impact investors

Main theme	Illustrative Quotes
Skeptical but need for change	Interviewee 1: "It’s a bit of the colonization past where they’re coming to save us (...) But I also think that there are some changes that need to be made and if our sort of male dominant government isn’t inducing it? Then I’m all for: <i>OK. Someone twist their arm to get it done.</i> "
	Interviewee 2: "Sometimes people are skeptical. (...) But it’s fine. <i>When you speak, money talks in the end</i> , so when they come with their money, people have to listen."
	Interviewee 8: "I’m generally, let’s say, skeptical about funding that comes from foreign entities that is aimed towards a certain agenda. But in this case I feel like it’s something that Jordan needs."
	Interviewee 9: "This kind of tradition cannot easily change (...) I think it’s difficult for somebody from outside, like an investor, but let them try."
Impact investors can push towards women’s empowerment	Interviewee 1: "I think it’s sort of a top down pressure (...) companies eventually change behavior if there’s actually incentives to do so."
	Interviewee 2: "Investors can always help because (...) power comes with money. The person or the entity that has money has the power to make changes (...) So they can push towards more women empowerment."
	Interviewee 3: "Impact investors can (...) become a model for the other companies (...) Everyone will start seeing their success and (...) they will start doing like them. It’s a sort of from small change. Then it will become bigger."
Change must be localized and genuine	Interviewee 2: "If it doesn’t happen from the heart (...) it’s not ticking a box. It has to be something people believe in. That’s very important."
	Interviewee 2: "There might be some sensitive areas where where they cannot go to, for example, promoting LGBT ¹ (...) and I think if foreign investors come to Jordan (...) they definitely have to partner with local entities so that the voice becomes local."
	Interviewee 1: "I think it needs to be more genuine because one of the problems with donors and impact investors is that they put very high superficial level outputs to measure (...) it just becomes surface level."

¹Lesbian, gay, bisexual, transgender (LGBT)

Table 6.4: Themes that arose when investigating women’s narrative towards impact investors

Main theme	Illustrative Quotes
Diverse investment teams are needed	Interviewee 1: "I think one thing is that we need more women on the investment committees and in the management teams, because we're able to look at things differently."

6.5 Women about investors’ means

To be able to adapt the means that have been found in chapter 5, the means are proposed to the women that are interviewed. Regarding each means, a main theme was identified. The main themes for each means along with illustrative quotes are shown in table 6.5.

M1: Provide women with quality training and support in collaboration with local entities

The women who work in the construction industry indicated that training is not necessarily the main issue and that there are no barriers set by companies for women to follow professional training. The biggest issue why women do not participate in training as much as men, is because of their family who restricts them in their freedom.

Interviewee 9: "For the project in Aqaba, they were giving, let’s say refreshments or some educational sessions with the people there and giving some safe notes: Your daughter will be safe if she works. (...) On one of the cases (...) there was a woman that worked with the security team (...) So I think slowly families in Aqaba start to be convinced"

Furthermore, women indicate that lack of training is not the problem for the low participation of women, as it is mostly the high demand in combination with the low pay in the industry.

M2: Set representative quota for the project workforce, followed by assessment and enhancement of skills

Although quota could help, it important that setting quota is not only done for the number but because people actually believe that this is needed. Moreover, it should be realized, that even though quota are set, still other challenges remain.

M3: Engage men and boys in GBV prevention

Women indicate that in the construction industry, old and traditional mentalities exist. This can lead to men having a condescending attitude towards women. Including men and boys to create awareness of this form of violence should start from a young age. When talking about physical violence, like sexual harassment, women indicate that it is not only about including men and boys but also about awareness for the women themselves.

M4: Provide proper grievance mechanisms for GBV survivors in collaboration with local entities

The biggest challenge that was mentioned for this means was getting women to open up when they are not supported to do so. It is questionable whether impact investors could play a role in this since it also involves the legislative system.

M5: Invest in Menstrual Hygiene Management (MHM) facilities

The women who work in construction say that the portable offices have separate restrooms and that the bathrooms on construction sites are mostly for men. Lack of MHM facilities is seen a barrier if a woman is working as an engineer. However, women see this as an easy thing to solve.

M6: Invest in safe transportation

The women did indicate that investors can set a condition to fund a project only if they provide safe and flexible transportation. Providing safe transportation is important since women need to pay a lot of money if they want to get to work safe. Nonetheless, it is important to realize that this does not solve the problem of either women not entering the workforce or safety. Like with GBV prevention, women mention that to increase safety, it is important to teach children from a young age how to be respectful.

M7: Invest in social infrastructure and the care economy

It was found that in Jordan it is not common that companies provide nurseries. However, investments in childcare would relieve the women from the pressure they experience to manage their personal lives.

Table 6.5: Main themes from the interviews when asking women for their opinion on the suggested means

Main themes	Illustrative Quotes
M1: Provide women with quality training and support in collaboration with local entities	
Lack of training is not the main issue	Interviewee 9: "I don't think the companies have problems with whether the the one who's getting the training is a man or a woman. But sometimes it is related to the families and the mentality of the families."
	Interviewee 8: "It's not like women are not ready to work. I don't think that's the problem. The problem is more in the demands of the field of the of the industry. The low pay. These are more barriers than training."
	Interviewee 9: "For example, a newly graduated engineer she is happy that she will go, for example, to Egypt for a training course. She doesn't have any problem except that her father or her mother says no you can't travel alone."
M2: Set representative quota for the project workforce, followed by assessment and enhancement of skills	
Change must be genuine	Interviewee 8: "I'm a believer that a high percentage of women in the workforce tends to hear better results overall (...) But as long as they understand why it's not just about the KPI, it's not just about <i>Ohh, let's hire more females</i> . It's more like understanding why it's good to have that balance."
M3: Engage men and boys in GBV prevention	
Awareness on GBV is needed for men and boys, but for women and girls as well	Interviewee 8: "Sometimes it's a more condescending attitude towards women (...) it gets sort of exhausting or frustrating. They[women] can't complain because there's no obvious incident (...) It's more of the daily interaction and that is <i>definitely</i> frustrating."

Table 6.5: Main themes from the interviews when asking women for their opinion on the suggested means

Main themes	Illustrative Quotes
	<p>Interviewee 8: "What I would recommend is starting at a very early age, (...) because [if] you go to boys that are (...) 16 or 17 or 20 or whatever (...) they've been programmed to think that way and it's part of their ego."</p> <p>Interviewee 2: "We give awareness [training] about sexual harassment for both men and women, so that we eliminate it."</p> <p>Interviewee 4: "Sexual literacy is important because sometimes they[women and girls] don't even acknowledge that something is harassment. So we need to (...) teach them[women and girls] about this so they can know the definition of sexual harassment."</p>
M4: Provide proper grievance mechanisms for GBV survivors in collaboration with local entities	
The biggest issue is to get women to open up	Interviewee 8: "Women's ability to speak up is an issue because they would often be afraid of the social implications of speaking up. And if they do speak up then you have the legal system which may not be very powerful in protecting them (...) So I don't know how investors would be the people to influence that."
M5: Invest in MHM facilities	
lacking MHM facilities is a barrier, but easy to solve	<p>Interviewee 8: "I'm pretty sure that this is a barrier (...) However, we have had the projects where we just signed a female resident engineer and we requested that they have their own facilities (...) if you put it in the request in the bid or the project, it would definitely be provided."</p> <p>Interviewee 9: "On the construction site itself the the bathrooms (...) are for men (...) but for the administration and engineering (...) They have separate toilets. So it is in the movable or portable office on the construction site."</p>
M6: Invest in safe transportation	
Investing in safe transportation is not a means in itself	<p>Interviewee 1: "OK, now there's public transportation, so we're gonna expect all the women to go to the workforce. It's not that simple. I think there's a mindset shift that needs to occur."</p> <p>Interviewee 4: "I think if we are going to make transportation more safe, we need to go back to the first grade in the schools and teach boys in general and also girls, how to respect each other."</p> <p>Interviewee 4: "Even if you put like cameras or whatsoever, I don't think we can prevent it[harassment]. And if it's already done, (...) even if you go back to the cameras in the past, etcetera, the police themselves, they would say: <i>sign this paper and go home.</i>"</p> <p>Interviewee 8: "If you're investing in a company and you can for example have a condition that they have to provide transportation means (...) that is easy to apply on the private sector level."</p>
M7: Invest in social infrastructure and the care economy	
Relieving women from some of the pressures in their personal lives	Interviewee 8: "That would allow women to have the childcare, which is a big barrier for women. So maybe, yes, investing in in similar facilities would (...) relieve some of the pressure of on women to manage their personal lives."

6.6 Identification of external factors

Figure 6.3 shows an overview of the relations that have been stated in the interviews. It can be seen that besides all the system factors that were identified in the prior sections, three factors are placed on the top border as external factors. These are *women in engineering studies*, *demanding nature of the construction industry*, and *women in politics*. Women in engineering studies was also found in chapter 4 where it was argued to be an external factor due to the existing paradox between female participation in engineering studies and female participation in the workforce. This was also found in section 6.2 in this chapter. The demanding nature of the construction industry has been chosen as an external factor since it is an existing fact that the construction industry is project based and therefore causing unstable working hours. This is a characteristic of the construction industry that is not expected to change. Finally, the number of women in politics is not something that can or should be influenced by impact investors in this project as it is a result of Jordanian elections.

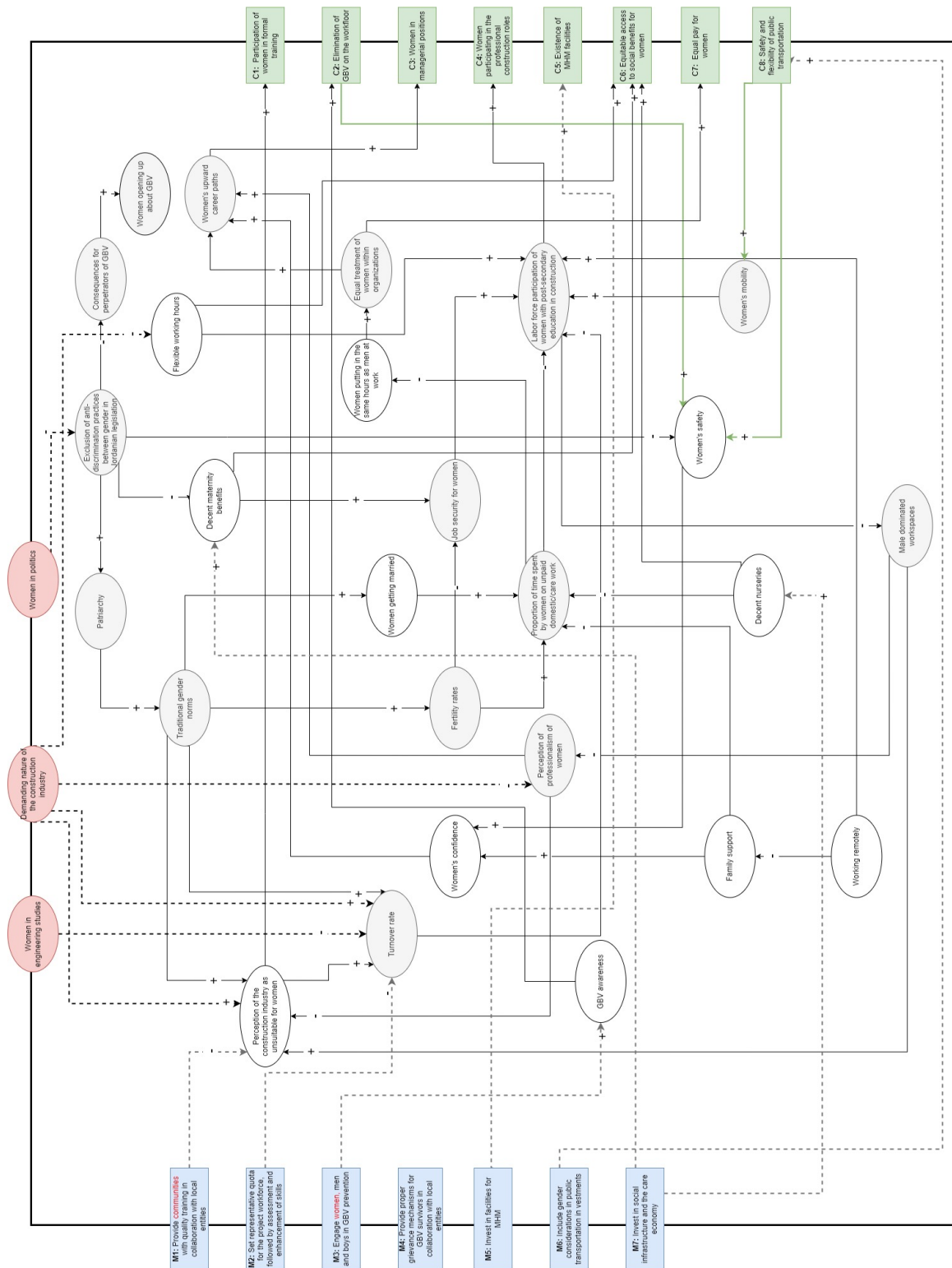


Figure 6.3: Relations as stated in interviews. Grey indicates that factors are consistent with previous findings. Red text indicates a change in the means

7

Analysis of the system diagram

The chapters 4, 5, 6 all concluded in a system diagram based on factors and relations that have been found in that chapter. Looking at Figure 3.3 it can be seen that the goal of this chapter is to analyze these diagrams and turn them into the final system diagram, which can be used for the preferred policy selection. After selecting the preferred policy, an analysis is done of the robustness and flexibility of the policy by performing a scenario analysis. All steps will be done according to the method explained in chapter 3 section 3.1.2.

7.1 Constructing the final system diagram

The final system diagram is constructed out of all the individual diagrams that were made at the end of each preceding chapter. This was done in two steps: First, the causal diagram that was created in Chapter 4, shown in figure 4.3 is connected to the means and criteria that have been formulated in chapter 5 and relations are assessed based on information in both chapters. Second, the resulting diagram is compared with the diagram has been created in chapter 6 and is then cleaned by removing redundant factors. This leads to the final system diagram that will be used for analysis.

7.1.1 Combining the findings from literature with the expectations of experts

This section describes the first step of creating the final system diagram, which is combining the factors that were found in chapter 4 with the system diagram that was created in chapter 5.

Adding the means and criteria

In the literature review in chapter 4 no means have yet been defined for achieving increased Equity, Diversity, and Inclusion (EDI). Therefore, to make one system diagram out of figure 4.3 and figure 5.4, each of the means identified by the experts needs to be added along with the criteria. Some of the factors that were found in Chapter 4 were consistent with the criteria that were found in Chapter 5. These were: labor force participation of women with post-secondary education in construction, which is consistent with C4: Women participating in the professional construction roles, as women with post-secondary education in construction are expected to be working on the professional roles.

Territorial behavior of men is a form of Gender Based Violence (GBV) and is therefore consistent with C2: Elimination of GBV on the work floor.

Changes to system factors and relations

Experts expect that M2, which refers to setting quota followed by assessment and enhancement of skills, leads to an increased *feeling of appreciation*, which is a factor that was not found by the literature and will therefore be added along with its relations that were identified during the expert interviews. Secondly, according to the experts, the provision of grievance mechanisms for GBV survivors is expected to increase *women's confidence*, which would lead to women opening up about GBV. These are both factors that were not found in literature and should be added to the diagram. According to the experts, women opening up about GBV would give the security staff of the project the chance to stand with the victim and increase the chance that there will be *consequences for perpetrators*, leading to an increase in C2, which refers to the elimination of GBV on the workforce. According to the experts, *women's confidence* also leads to *lower turnover rates*, which is also a factor that should be added to the diagram. Thirdly, in the literature, it was found that *maternity/paternity benefits* would lead to an increase in women's job security. Nonetheless, during the interviews it was indicated that in patriarchal societies there is a risk that paternity leave would only add up to women's pressure. Therefore, the factor is changed to *maternity benefits*.

7.1.2 Comparison with relations and factors stated by professional Jordanian women

The next step into creating the final system diagram is to compare the result of section 7.1.1 to the system diagram that was created by means of in-depth interviews with Jordanian women. This section will set out the most important changes that have been made to create the final system diagram. All potential implications for the system diagram are shown in Table A.1 in appendix A.

Changes to means

Several changes in the means were observed, such as to M1, which refers to the provision of quality training to *communities* instead of to *women* with the goal to convince communities and families that the construction industry is suitable for women. This perception of suitability is also a factor that needed to be added to the final diagram. Secondly, M3, which refers to GBV prevention and who should be engaged in this, is rewritten to indicate the importance of engaging women and girls as well as men and boys. The importance of engaging women and girls is not something that was denied by experts but it was made more explicit during the interviews with professional Jordanian women.

Changes to external factors and relations

Additionally, the interviews with women showed some differences with previous findings in the external factors and the relations that exist between external factors and system factors. First, women indicated an increasing relationship between poverty and traditional gender norms by stating that the less privileged tend to be more traditional. Chapter 4 indicated that poverty is a predictor for discrimination against women. However, as opposed to what was found in chapter 6, chapter 4 shows no direct link between poverty and traditional gender norms. When examining this connection in literature, it was discovered that while poverty does not necessarily directly cause more traditional gender norms, the effects of these traditional gender norms are more severe for women who live in poverty (Deere & Doss, 2006). This relation therefore needs to be added to the final system diagram. Secondly, some women stated the presence of women in politics, which is something that impact investors cannot directly influence as this is a consequence of elections in Jordan. Therefore, the presence of women in politics is added as an external factor, along with its relations as stated by the interviewed women. Finally, the demanding nature of the construction industry is a new external factor that needs to be added to the diagram along with its relations.

Changes to system factors and relations

The women that were interviewed also indicated some changes in the factors within the system, such as the relation between the proportion of time spent on domestic/care work and equal treatment of women in organizations. This is because the interviewed women indicated that if a woman can put in the same effort into her job, she will get the same opportunities. This is limited however, if a woman by herself is responsible for taking care of the household. Secondly, women mentioned the importance of family support, which needs to be added to the diagram. Thirdly, working remotely was mentioned by the women. According to the women, on the one hand, remote working could lead to more women participating in the workforce due to increased flexibility, but on the other hand it can result in less family support. This decreased family support is a consequence of people believing that working from home can be combined easily with taking care of the household. This has also been found in literature – beyond Jordanian context – where it was found that working from can facilitate the combination of work and family (Van der Lippe & Lippényi, 2020). However, both Lui & Chang (2020) and Van der Lippe & Lippényi (2020) found that the work-family balance for women who work from home is ambiguous and conflicts might arise. Finally, flexible working hours is a system factor that has not been mentioned before and was indicated as an important component for women to participate in the labor market. Therefore this should also be added to the final system diagram.

7.1.3 Cleaning the final system diagram

Finally, the redundant factors are removed from the system diagram for legibility of the model. System factors are redundant when they are only connected to one other system factor (Enserink et al., 2010). Therefore each system factor with only one outgoing arrow will be removed from the diagram. These factors are: Women opening up about GBV. Consequences for perpetrators of GBV, women with an engineering background transitioning to/staying in the workforce, women’s agency, women’s mobility, discrimination of women, patriarchy, maternity benefits, job security for women, working women adopting masculine traits, which was already indicated by the women as not necessarily being the case anymore, perception of women as professional, nurseries on site, protective equipment that fits women, turnover rate, feeling of appreciation. Table A.2 in appendix A.2 shows the redundant system factors that are removed and the implications that removing the system factor has on the model. Finally the final system diagram is shown in Figure 7.1. In figure 7.1 it can be seen that some factors are colored green. These are shadow variables of some of the criteria to increase the readability of the diagram. The green dotted lines show to which criteria the shadow variables are connected.

7.2 Analysis of the impact of means and external factors on EDI

Figure 5.3 in chapter 5 already showed how the criteria are related to EDI. This section aims to analyze the effectiveness of impact investors’ means on EDI. This is done by first performing a means-criteria analysis, resulting in the selection of a preferred policy, followed by a scenario analysis in which the preferred policy is checked for robustness and flexibility. An elaboration on this analysis can be found in appendix B.

7.2.1 Identification of loops

When analyzing the system diagram, it is important to consider potential loops. The presence of a loop could cause a relation that is seemingly increasing to turn into a decreasing effect due to feedback mechanisms. This has been explained in more detail in chapter 3, section 3.1.2. When following each arrow in the system diagram in figure 7.1, twelve reinforcing loops and two balancing loops can be identified. An overview of these loops can be found in Appendix B, Figure B.1.

7.2.2 Preferred policy selection

After identifying the loops, the effects of each means on the criteria could be analyzed, by following all relations in the final system diagram. Based on this means-criteria analysis, a preferred policy can be chosen. The method of doing so has been described in chapter 3, section 3.1.2. An elaboration on the means-criteria analysis is written in appendix B, section B.1. In summary, the means-criteria analysis is done by following the relations from a means to a criterion and assessing whether the effect of that means on the criterion is either increasing or decreasing. During the means-criteria analysis, it was observed that all means had a balancing impact on C2, which refers to GBV prevention. The means that showed the most promising effect on of the criteria were found to be M5, M6, and M7. This is because M5, M6, and M7 are expected to have a merely increasing impact on four out of eight criteria whereas M1, M2, and M4 only show expected increases on three criteria. M3 even shows no expected increases. Hence, the preferred policy is formulated as follows:

Investing in facilities for Menstrual Hygiene Management (MHM), including gender considerations in public transportation investments, and investing in social infrastructure and the care economy.

Looking at the effect of the preferred policy on EDI, an increasing effect can be observed for equity, for both diversity and inclusion, increasing effects can be observed, which are balanced by some decreasing effects. However, it appears that the growing impacts outweigh the declining effects. As a result, when the recommended policy is implemented, an increasing effect is anticipated for both diversity and inclusion. A more elaborate overview of the means-criteria analysis that led to the preferred policy selection, can be found in appendix B.1.

7.2.3 Scenario analysis

A scenario analysis is executed to estimate the effectiveness of the preferred policy under different circumstances. This allows for the observation of the robustness and flexibility of the preferred policy. This section will set out three different scenarios. These are a scenario in which the model will be used in a more rural area (Scenario 1), a plausible scenario of the current situation in Amman (Scenario 2) and a best case scenario (Scenario 3), which shows a situation where Jordan is much less conservative. A more elaborate explanation of the scenario analysis can be found in appendix B.3.

Scenario 1: Rural scenario

It was found during the interviews that in the more remote rural areas, tribalism plays a bigger role than in Amman, which is where the professional women are from. It is important to consider this scenario however, as the construction of the Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP) is done throughout different governorates in Jordan (ESIA Team, 2022c). Furthermore, the professional women that are interviewed indicated that the existence of more traditional gender norms causes that few to no women will enter engineering studies. Moreover, it is plausible to assume that poverty plays a larger role in people's lives than in Amman, as there are less job opportunities in remote areas. The analysis of the external factors on EDI showed that on each of the elements an overall decreasing effect is expected. Combining this effect with the preferred policy shows that the decreasing effect that was observed for equity, changes to an expected increasing effect, for diversity, the overall effect is still expected to be a decreasing effect. However, a slight improvement is expected compared to the situation without the preferred policy. To increase the effect of the preferred policy on diversity, impact investors could therefore focus on means to increase the number of women in managerial positions and the number of women participating in the professional construction roles, such as M2, which refers to setting quota followed by assessment and enhancement of skills. Nonetheless, as it has been stated that in this scenario, few to no women are participating in engineering studies. This causes a lack of skilled women. Therefore a more interesting means to focus on would be M1, which would allow more women to participate in formal training. This would, on the short term not necessarily lead to more women in the professional

construction roles of the AAWDCP but could be an investment for future projects. This was also something that was mentioned by interviewee 9 in chapter 6 who explained that, in one of the projects that she worked on, educational sessions for local communities led to the participation of a woman in the security team.

Scenario 2: Plausible scenario

Scenario 2 is the current situation in Amman as experienced by the interviewed women. As these women are successful in their careers, it is assumed that they do not suffer from poverty. Therefore in this scenario poverty will be set to zero. The number of women in politics is still very low, therefore this will also be set to zero. The other factors in this scenario will stay constant. The combined effect of the external factors in this scenario leads to an expected decrease in EDI. Combining this with the preferred policy shows an improvement in each element. The effect on diversity seems to be balanced, which is still an improvement compared to the situation where the preferred policy is not applied. Nonetheless, when impact investors want to be more certain of an increase in diversity, they could include M2, which refers to setting quota followed by assessment and enhancement of skills in the preferred policy.

Scenario 3: Best-case scenario

Scenario 3 is a best-case scenario where women participate in engineering studies. Since the group of women that is considered for this scenario is the group of women with secondary education, it is assumed that poverty will not play a role in this scenario. Nonetheless, the scenario should still be a plausible one and therefore tribalism will still play a role, since the women that were interviewed indicated that this something that is deeply rooted in everyone's system. For this scenario however, the number of women in politics increases. The demanding nature of the construction industry will be still high, as this is a characteristic for the sector. The combined effect of the external factors in this situation show a balancing effect on EDI. When combining this situation with the preferred policy, consisting of only M5, M6, and M7, this shows an expected increasing effect and therefore an improvement in all three elements of EDI.

7.2.4 Policy robustness and flexibility

Looking at the outcome of the preferred policy in the different scenarios, it can be seen that in each scenario an improvement is expected on EDI when applying M5, M6, and M7. Therefore it can be stated that the policy is robust and flexible. Nonetheless, in situations such as the rural scenario and the plausible scenario, it was found that to be more certain of increasing EDI impact investors could choose to include additional means in the preferred scenario as well. The preferred policy therefore needs to be adapted based on the scenario in which the AAWDCP will take place.

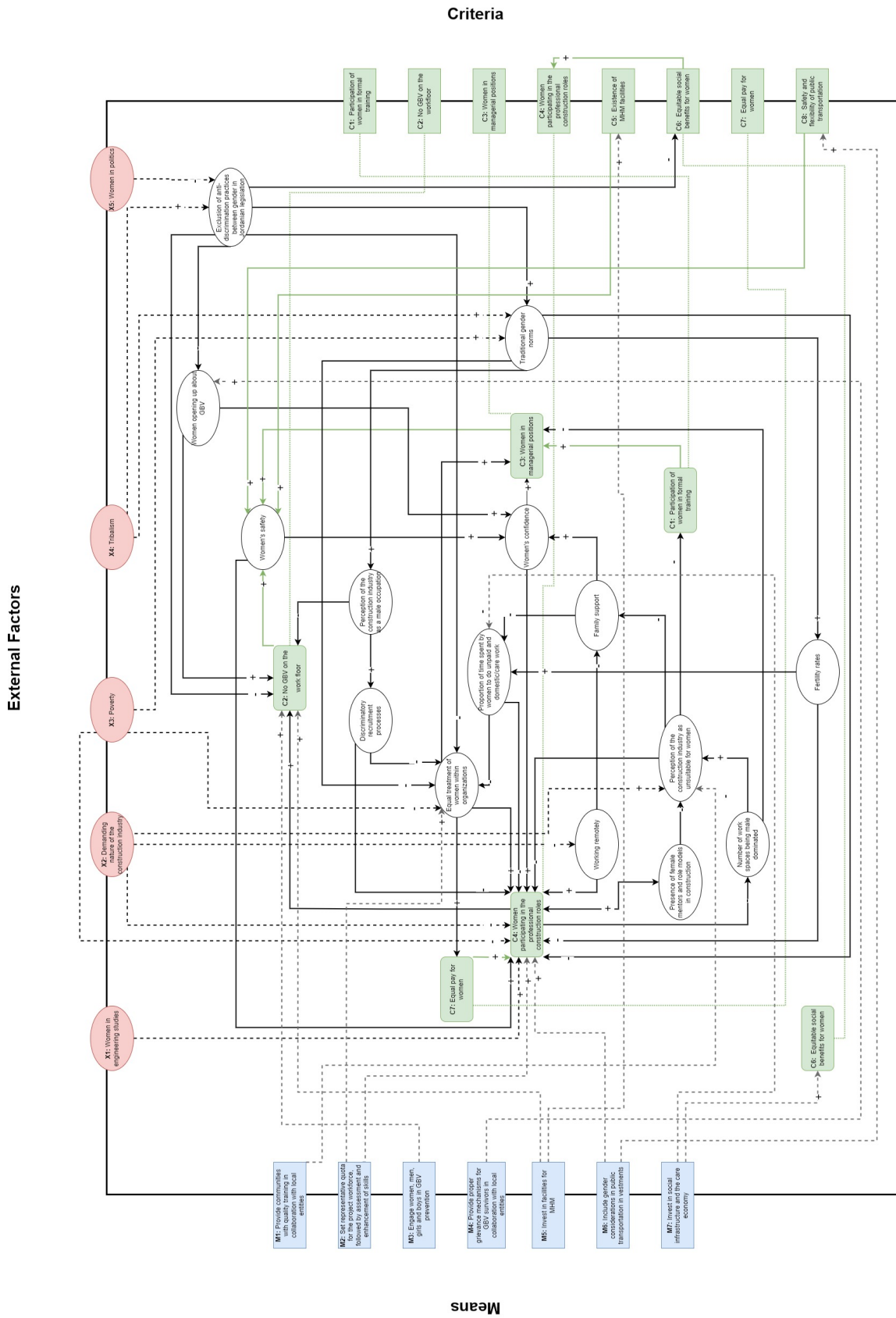


Figure 7.1: The final system diagram

8

Conclusion

In this chapter the main research question will be answered. Furthermore, this chapter will reflect on both the scientific and societal contribution of this thesis.

8.1 Summary of the research objectives and methods

This thesis aimed to dive into the question of how impact investors can play a role in increasing Equity, Diversity, and Inclusion (EDI) in the Aqaba-Amman Water Desalination and Conveyance Project (AAWDCP). To answer this question, an explorative analysis was performed on what factors might influence EDI for women in the AAWDCP in the form of a system diagram. To identify relevant criteria for measuring EDI, an analysis of the gender strategies of the European Investment Bank (EIB) and United States Agency for International Development (USAID) was paired with an examination of the Sustainable Development Goal (SDG) indicators that were relevant for the context in which the AAWDCP will be constructed. The factors and the means were identified through three different channels, including a literature review, in-depth interviews with experts in the field of gender-related investments, and in-depth interviews with professional Jordanian women. Finally, the system diagram was analyzed to identify a preferred policy to achieve an increase in EDI for women in the professional construction roles in the AAWDCP.

8.2 Answering the research question

The main research question that this thesis aimed to answer is:

How can impact investors increase equity, diversity and inclusion for women in the professional construction roles of the Aqaba-Amman Water Desalination and Conveyance Project, while considering the local context and needs?

This section will provide an answer to this question and can be interpreted as an advice for impact investors.

Gender as a cross-cutting theme

Regarding EDI, the findings of this study showed that women face many different challenges than men when they wish to participate in the labor force. Especially when women wish to work in a male-dominated field, such as the construction industry. In such an industry, the male needs are often the default and female needs are considered as a deviation from standard practices. This is striking, considering that the interviews with Jordanian women showed that women are outperforming men in engineering studies. Nonetheless, the findings of this research show that they are not provided with the resources that they need to succeed in this industry, resulting in women to drop out or not even enter the construction workforce. Especially in more tribal countries, such as Jordan, this effect occurs. It was found during this research that women's career paths are strongly determined by what their family perceives as suitable for them. Often this opinion is based on traditional gender norms, where success for women is still defined as getting married and having children. Furthermore, women are expected by their families to take the full responsibility in the household, which is challenging in combination with the construction industry's demanding nature and the lack of decent and affordable nurseries in Jordan. The fact, however, that women's needs differ from men's, does not mean that they can be considered as less important. The experts that were interviewed for this study therefore argued that gender should always be a cross-cutting theme throughout impact investors' investments. Moving forward, impact investors should take this advice and should realize that investing in gender-related issues is not something extra or something that is 'nice to have'. Addressing these challenges with appropriate policies is a necessity and should be standard practice if impact investors wish to provide decent work for *everyone*.

The preferred policy

Regarding the formulation of appropriate policies, the scenario analysis that was performed in this research showed that a policy consisting of *investing in facilities for Menstrual Hygiene Management (MHM), providing decent transportation, and investing in social infrastructure and the care economy* could lead to an expected improvement in EDI for women in the professional construction roles in the AAWDCP. The selection of the preferred policy does not indicate that the other means, which are Gender Based Violence (GBV)-related means, are redundant. The results of this study, however, revealed that these were anticipated to be less effective in the short term since they are strongly influenced by problems with Jordan's legal system and tribal heritage. Therefore the women that were interviewed raised the question of whether foreign investment partners are the entities to bring about such change. Nonetheless, the interviewed experts argue that impact investors could take responsibility within project boundaries by training staff members to stand with victims of GBV or setting up focus groups with a local facilitator, to still provide women with the right grievance mechanisms and to create a culture with a zero tolerance policy for perpetrators.

Attention for the local context

Furthermore, when considering the local context, as mentioned in the main research question, it is important to consider that the AAWDCP will traverse different governorates. The scenario analysis in chapter 7 showed that the preferred policy is expected to improve EDI. However, to be more certain of an increasing effect, it may be necessary to complement the preferred policy with various ways when aiming different groups of women. When adopting the preferred policy, impact investors must therefore constantly collaborate with local organizations and prioritize the needs of the impacted community over their own Key Performance Indicators (KPIs), which might require reformulating their objectives based on that specific context.

Female investors

Finally, the findings showed the importance of a greater proportion of female investors in impact investors' own investment teams, as this may result in deeper insights and a more accurate understanding of the conditions that impact investors strive to alter in their projects. Therefore, this

research showed that impact investors should not only look into EDI in the projects they invest in, but should first increase EDI in their own project teams in order to increase effectiveness.

8.3 Scientific contribution

Both chapter 1 and chapter 2 showed that despite the role that impact investors can play in fighting gender-related challenges, research is lacking and major challenges exist for impact investors to be effective. To bridge this gap, this thesis integrated empirical evidence on some of the EDI challenges that women face in the Jordanian construction sector with academic research to create a system diagram that assisted in formulating an advice on how impact investors can be more effective when they seek to increase EDI in the AAWDCP.

The problem of gender segregation in the Jordanian construction workforce was found to be a *wicked problem* according to the definition of such problems stated by Enserink et al. (2010). This wickedness of increasing EDI for women in the professional construction roles in the AAWDCP was something that also emerged during the analysis, as it was found that EDI was influenced by numerous factors and relations, causing it to be a complex issue to structure. By following the method formulated by Van der Lei et al. (2011) and Enserink et al. (2010) of creating a system diagram, the reader was taken on a journey of structuring this problem step by step to account for its wickedness.

Part of structuring the problem was the formulation of criteria that allowed for measuring EDI in the AAWDCP. The literature review in chapter 2 showed, by referring to Hazenberg & Paterson-Young (2022), Hebb (2013), and McCallum & Viviers (2020), that such a set of standards for measuring social impact is still lacking in literature but is needed to increase impact investors' effectiveness. Furthermore, Brouwers (2013) and Mukhopadhyay (2016) showed that this abstractness of policies could lead to accountability issues as nobody is ultimately responsible if a policy fails to move beyond a theory. This abstractness was also found during the analysis of the gender strategies that were formulated by EIB and USAID in which the objectives were not measurable on a unit scale. The criteria that have been formulated in this research for the AAWDCP as well as the method of defining those criteria, could be a starting point for researchers towards the development of a consistently agreed upon set of standards for measuring social impact.

The process of structuring the problem also included combining the findings from literature and policy documents with knowledge from investment experts and actual experiences from professional women in Jordan. Work by Alvi (2021), De Cordier (2010), and Rajan & Thornhill (2019) showed that impact investors are often entities from high-income countries investing in low-to-middle income countries, which could lead to investors essentializing the culture of local communities they seek to benefit due to insufficient investigation of the problem. By providing a platform for professional Jordanian women to share their personal experiences, this research followed the recommendations of Crenshaw (2013), De Cordier (2010), and Hazenberg & Paterson-Young (2022) of placing beneficiaries at the center of the problem formulation. In doing so, this research provided insights from policy beneficiaries instead of merely providing a top-down perspective. This led to more specific insights with regards to the problem, such as the barriers for women to open up about GBV due to the country's tribalist culture and the struggles women experienced with transportation and the lack of decent nurseries. Furthermore, the influence of a woman's family on her career was emphasized by the women. Providing this extra nuance of local experiences, could help researchers to focus on the most important aspects of the problem.

8.4 Societal contribution

The problem statement in chapter 1 showed that Jordan is facing many challenges regarding female labor force participation. Furthermore, chapter 1 showed that impact investors could play a major role in fighting this gap. Although during the interviews some women stated that within companies, women and men get equal opportunities if they put in the same effort, this research showed that

women in Jordan are facing different challenges than men. Due of this, many women are unable to devote the same amount of time to their work as their male counterparts. Additionally, the interviewed women stated that since their own government is failing to provide them with the right support, they confirmed the importance of impact investors in fighting such challenges. Nonetheless, consistent with Minkman et al. (2021)'s statement from the literature review in chapter 2, the experts as well as the Jordanian women indicated the importance of working with local entities, as this causes the population to be more willing to cooperate and can increase the effectiveness of broader policy adoption.

The interviewed women indicated that impact investors could serve as role models for other businesses. Chapter 1 referred to Combs (2014) who stated that companies that prioritize their social impact may outperform competitors that only seek financial return. Therefore, successful implementation of EDI interventions in the AAWDCP might encourage other businesses to focus on EDI as well. Moreover, this effect is increased considering that both in the literature study in chapter 4 and in the interviews with professional Jordanian women showed that increased visibility of women in professional roles could cause a positive feedback loop. This could lead to other women being inspired and could normalize the presence of women in roles that are generally non-traditional for them. Therefore, for impact investors to focus on increasing EDI for women in the professional roles in the AAWDCP, might be a small step, but when executed with care and in collaboration with local entities, it could be a step towards incremental change towards increased EDI for women in Jordanian society.

9

Discussion

This chapter discusses the limitations of the research, offers reflections on the research methodology, and assesses the research's quality in an effort to promote transparency and earn the reader's trust. The chapter will also provide numerous ideas for additional research based on these subjects.

9.1 Suitability of this research for the master program

This thesis was written for the MSc program Engineering and Policy Analysis (EPA) at Delft University of Technology, Faculty of Technology, Policy, and Management. The work is suitable for the program as it is analytical in character and exhibits a systems perspective in which needs of local actors are combined with actions of impact investors. Furthermore, conceptual modeling has been employed for problem analysis and exploration, which is an exemplary method for EPA. Finally, the project is related to the Grand Challenge of fighting gender in-equality and concludes with a policy advice. Since the Aqaba-Amman Water Desalination and Conveyance Project (AAWDPC) is a project that includes both public and private collaboration (ESIA Team, 2022c), the policy advice will be supporting decision making on both the public and private policy domain. Considering these elements, the work can be considered as a 'typical' EPA thesis.

9.2 Research limitations

This section discusses the research limitations, which partly forms a basis for the future research suggestions.

Specific number of professional jobs in the construction phase of the AAWDCP is unknown

Chapter 1 states that the construction phase of the AAWDCP will create jobs on a variety of skill levels. Nonetheless, due to the fact that this study is an ex-ante evaluation, it is unknown how much of these jobs are professional construction roles. Therefore this research cannot put a specific number on how many women should participate in the construction phase of the AAWDCP. Nonetheless, in the criteria that have been proposed in chapter 5, table 5.2, ratios are proposed that impact investors

can use as guidelines. As the conclusion of this study indicated that investing in Equity, Diversity, and Inclusion (EDI) in the professional construction roles could lead to incremental change, not knowing the actual number of professional construction roles that are created by the project causes uncertainties regarding the magnitude of this change.

EDI is limited to the binary division of cisgender men and women

A second limitation is that this research focused merely on EDI with regards to the binary division between cisgender men and women. Chapter 1 already showed that *gender* encompasses also queer, transgender, and non-gender identities (Giliberto & Labadi, 2022). Albeit the importance of including these marginalized groups of people, researchers and impact investors should bear in mind that, if they are not native to the nation they are targeting, their personal objectives should not contradict with those of the targeted country. This was something that was pointed out in the literature review in chapter 2 (Alvi, 2021; De Cordier, 2010), the interviews with experts in chapter 5, as well as the interviews with professional Jordanian women in chapter 6. For Jordan, one of the interviewed professional women indicated that Jordan is ready for more women empowerment, but that some areas, such as the support of the Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersex, Asexual, and more (LGBTQIA+) community would be something that would not be accepted (yet) by the local people. This does not take away the importance of providing a platform for these people to advocate their needs in order to fully participate in society. However, this is something that should be done from a local perspective.

Furthermore, as this research was strictly bounded to increasing EDI for women in the professional construction roles of the AAWDCP it did not consider EDI on other identifying elements than gender. Considering that EDI could also encompass elements such as one's race or ethnicity and the fact that chapter 1 already showed that Jordan's population consists for one third out of refugees (Gordon, 2021; Odeh et al., 2022), this research only represents one part of reality by looking at EDI merely from a gender perspective. Nonetheless, as this research aimed to structure a wicked problem setting strict system boundaries was a requirement to perform the analysis. Including these different groups of people, however, could lead to the identification of different barriers, which could require different means in order to be addressed.

Limited attention to the country's historical background

As stated in chapter 2, equity as opposed to equality focuses on correcting historical wrongs that leave certain people behind (Binagwaho, 2020). Although some women indicated during the interviews in chapter 6 that the current position in Jordan is a consequence of centuries of patriarchy, this research is limited to a sketch of the situation as it is today. Looking into Jordan's history, could clarify some of the existing challenges that women today have to face. A conversation with a Dutch woman who worked in Amman - that was not part of any of the interviews - clarified that Amman has seen tremendous growth in the last 100 years, which is another factor contributing to the city's transportation challenges (K. Koedam-Wiersma, personal communication, 2022-09-07). Including more knowledge on the country's history, could add more nuance to the analysis and could lead to new insights in the cause of certain factors, resulting in possibly targeted means to solve underlying issues of the barriers that are faced by women.

Limited attention to different actors

In chapter 3, it was mentioned that wicked problems are characterized by a large number of actors. Despite some mentions of the Jordanian government and the traditional nature of the construction industry, it is not known if in Jordan powerful actors exist that are deliberately working against EDI. If these are present, this could lead to significant changes in impact investors' effectiveness. Furthermore, in a single-actor system diagram, such as the one proposed in this thesis, actions of other actors will be represented as system factors or external factors (Enserink et al., 2010). A multi-actor system diagram shows these factors as means, which could increase the legibility of the system diagram.

Strength of relations is unknown

Finally, as this research is a qualitative one, the relations that have been found can only show whether there is an increasing or decreasing effect. Nothing can be stated about the strength of these relations. Therefore, all policy outcomes in chapter 7 are expected outcomes. To increase the accuracy of the outcomes of a policy, quantification of the model would be needed, which would allow for the impacts to be measured. This could lead to more detailed insights on certain means and could assess the effectiveness of the preferred policy.

9.3 Reflection on the research approach

The methodology of this research consisted of a case study, system analysis, and in-depth interviews.

9.3.1 The case study approach

The case study approach was suitable for this research as it allowed to set clear boundaries of what needed to be researched. Nonetheless, the case study approach caused that the results that have been found cannot always be generalized beyond the AAWDCP. Although some of the recommendations that are provided in chapter 8 are more widely applicable such as the need for more women on investment teams, the importance of prioritizing local needs over corporate Key Performance Indicators (KPIs), and the need for ensuring that investment policies do not conflict with those of the country, it should be noted that the findings in this research might not be representative for increasing EDI in projects from a different sector or within another country. It might be expected that some of the means can be utilized in more infrastructure projects in various countries, such as investing in Menstrual Hygiene Management (MHM) facilities, which is always a necessity for places where women work, also when looking at different industries than the construction industry. However, it is always important to assess whether a certain policy is overkill, such as in a situation where MHM facilities are already sufficiently present. Therefore, even while some methods appear to be universal, it is always vital to evaluate the unique circumstances before jumping to solutions, as doing so may lead to insights where certain investments may be put to better use in different ways than anticipated.

9.3.2 The system analysis

The construction of a system diagram is an excellent way to structure wicked problems. It allows for a visual representation of all contextual factors and relations within a certain part of reality and allows for an exploration of how an actor can affect this part of reality and for the selection of a robust and flexible policy to achieve its goals within the system. As this research is an ex-ante exploration of the AAWDCP, a system analysis was a promising method to see how impact investors' objectives towards EDI would be affected by the existing relations in the system.

Despite that the process of creating a system diagram allows for a structured research demarcation and analysis of a wicked problem, the system diagram that was developed in this study is relatively hard to read for users of the model. This is due to the structuring of means on the left side, external factors on the upper border and the criteria on the right border, which causes the placement of the factors to be constrained. The visualization of the diagram in a way to increase readability of the model therefore was a time intensive process. A more time-efficient way that allows the mapping of a system, would be the development of a Causal Loop Diagram (CLD) or an Stock Flow Diagram (SFD) instead of a system diagram as both a CLD and an SFD do not require the means, external factors, and criteria to be placed on the system borders. Furthermore, both a CLD and an SFD allow to identify loops in a more efficient way when software is used that automates this process, such as Vensim. Another disadvantage of systems analysis is the known fact that system diagrams are "necessarily incomplete", which is caused by the fact that constant choices need to be made of what will be considered and what not, resulting in uncertainties (Enserink et al., 2010). These uncertainties are partially addressed by the scenario analysis that has been performed

in chapter 7. However, claiming that no uncertainties remain as a result of this scenario analysis is unrealistic. Nonetheless, despite those uncertainties, this diagram could still serve as a basis for future research.

9.3.3 In-depth interviews

As stated in chapter 3, the interviews that were performed for this research were in-depth interviews with experts and with professional Jordanian women. In-depth interviews with experts were used to clarify the gender strategies of European Investment Bank (EIB) and United States Agency for International Development (USAID) and to identify means that would be needed to increase EDI for women in the professional construction roles of the AAWDCP. Additionally, the method was excellent for the purpose of investigating the problems that professional Jordanian women face in their careers and to sketch a more complete picture of factors and relations influencing EDI in the AAWDCP. Limitations of the method were that it was very time consuming, due to the fact that each individual interview lasted between 30 minutes to more than one hour. Furthermore, each interview needed to be transcribed, organized and analyzed. Nonetheless, the in-depth interviews provided rich information that allowed for a comprehensive investigation of participants' feelings and ideas on the topic. Additionally, the open-ended nature of the interviews allowed for the researcher to frame additional questions leading to a detailed analysis of the situation as it is experienced by professional women in Jordan.

9.4 Reflection on the research quality

The quality of this researched was assessed in chapter 3 by means of reflecting on validity, positionality and reliability. This section looks at situations that may have affected the research quality.

9.4.1 Validity

Both in this chapter and in chapter 3 it has already been stated that the generalizability of the research is limited due to the case study approach. This generalizability is limited further because of the lack of attention for intersectionality in the research. The women who were questioned for this study were highly educated and employed in excellent positions. With a few exceptions, they also admitted that they were somewhat isolated from the issue of gender inequalities because they were surrounded by only other professional working women. Not to mention that all of the women lived in Amman and indicated that women in more remote areas face different challenges than women in Amman. This was also indicated by some of the women that were interviewed as sometimes they indicated that the answer they gave about personal experiences might be completely different when asking other women. These differences even exist within Amman, since west-Amman is completely different from the rest of the city (K. Koedam-Wiersma, personal communication, 2022-09-07). Therefore, it is important to realize that this research does not represent all women in Jordan and not even all women in Amman. Furthermore, for this research nine Jordanian women were interviewed, of which only three work in professional construction roles. Interviewing more women in construction could also result in broader insights into the construction industry itself. Nonetheless, interviews have been conducted until saturation, meaning that no new information was retrieved when interviewing another participant, which indicates that the number of interviews conducted should have been sufficient to analyze the data for this target group.

9.4.2 Positionality

The researcher's positionality as written in chapter 3 must also be taken into account because it may have an impact on how interview questions are phrased and how the findings are perceived by the researcher. Despite the importance of performing the research from a local perspective as well, there are advantages to the fact that the researcher is not a local, such as that the researcher can distance herself from the problem as she herself is not affected by the specific issues she is investigating,

secondly, being distant from the problem causes that the research does not harm the researcher's social position. Finally, the fact that the researcher is more distant from the problem, allowed the women that were interviewed to speak their minds without suffering social consequences of doing so.

9.4.3 Reliability

A linguistic barrier occasionally appeared during the interviews as a result of the intersectionality of the research and the fact that the researcher did not speak Arabic, which was the participants' mother tongue. Despite the fact that each participant had a high level of English proficiency, the danger of information loss increases if one is unable to communicate in their mother tongue. This risk is further heightened by the fact that the researcher's native tongue is not English either. Participants occasionally employed Arabic expressions that the researcher was unable to comprehend, and this was consequently regarded as a desire by the women to be powerful through their language.

Furthermore, it should be noted that the experts that were interviewed to clarify EIB's and USAID's gender strategies did not work for these entities. Interviewing experts from EIB and USAID could have provided more specific insights on how their strategies ought to be applied to increase EDI for women in the professional construction roles in the AAWDCP. Despite numerous attempts, the researcher was unable to reach any of the gender specialists employed by these organizations.

9.5 Suggestions for future research

Considering the issues stated in the sections prior to this one, several suggestions can be made for future research.

Looking into the effect of increasing EDI on investment teams

Chapter 8 finalized with the advice to policy makers to first increase EDI in their own investment teams before setting targets on foreign projects. However, this research does not provide insights on the status of EDI in their own investment teams and the impact this has on increasing EDI in their projects. Future research could therefore focus on investigating whether having more women on investment teams actually leads to better results on EDI for women in targeted projects.

Performing multiple case studies to increase generalizability and empirical validity

By performing more case studies, this model can be generalized for different projects and contexts. Furthermore, future research can look for differences and similarities with this model, allowing for conditions to be developed for when certain context dependent factors have an influence on other factors or criteria and in which cases they are not relevant. Similarities could show whether a basic structure exists, which would allow to use the model in different circumstances. Moreover, especially when performing more ex-post analyses the model can be adjusted based on real-life observations, which could increase the empirical validity of the model.

Development of a CLD and/or SFD for quantification

This model might be used as a starting point for further studies to create a CLD or an SFD using appropriate software such as Vensim. This program allows certain components of the model to be turned off and on in response to conditions provided by the researcher. An advantage of turning the current model in an SFD specifically is that this method allows for modeling stocks and flows, such as the number of women in engineering studies (stock) and the number of women graduating from engineering from engineering studies per time interval flowing into the labor force (flow). Given that the current model is made up of loops, which would also be the case for a CLD, that could eventually lead to infinite increases in size if there are no restrictions on stocks and flows, creating an SFD in Vensim allows for a more representative picture of reality. Finally, both developing a

CLD and an SFD would allow future studies to quantify the effects of impact investors' policies on EDI. However, to create the requisite equations that capture the relations in a quantitative model, would necessitate a significant amount of empirical study. This would also eliminate the limitation regarding the unknown strength of relations.

9.6 Implications for policy makers

Policy makers should keep the limitations, and the reflection on the research approach in mind when designing EDI interventions for their projects. This study has clearly demonstrated which actions might be valuable to increase EDI for women in professional construction roles in the AAWDCP. Nonetheless, study cannot provide an exact answer of how impact investors can increase EDI in each and every project in their portfolio. Multiple case studies should assess the generalizability of this model, or part of it, in order to be able to develop a basic structure for future projects that can be complemented with specific features of countries or industries in which the model will be used. However, despite the challenges regarding generalizability, the study also provides recommendations that could be used more broadly. Such recommendations being incorporated into policies would already be a start in the direction of more fruitful cooperation to gradually plug leaky pipelines around the world.

Bibliography

- Afolabi, A., Oyeyipo, O., Ojelabi, R., & Patience, T.-O. (2019). Balancing the female identity in the construction industry. *Journal of Construction in Developing Countries*, 24(2), 83–104.
- Almahmoud, E., & Doloi, H. K. (2016). Assessment of social sustainability in construction projects using social network analysis. *Journal of International Business Research and Marketing*, 2(1), 35–46.
- Alotabi, A., Edum-Fotwe, F., & Price, A. (2019). Identification of social responsibility factors within mega construction projects. *International Journal of Engineering Management and Economics*, 13(1).
- Al Oudat, M. A., & Alshboul, A. (2010). “jordan first”: Tribalism, nationalism and legitimacy of power in jordan. *Intellectual Discourse*, 18(1).
- Alvi, F. H. (2021). Social impact investing as a neoliberal construction: ego and altruism in the post-colonial space of oaxaca, mexico. *critical perspectives on international business*.
- Amani, S., Hillman, S., Youssef, E. M., Alagha, R. Y., & Ruimi, A. (2021). “this is a very male job”: Challenges encountered by females during recruitment and hiring for engineering jobs in qatar. In *2021 asee virtual annual conference content access*.
- Assaad, R., Hendy, R., Lassassi, M., & Yassin, S. (2020). Explaining the mena paradox: Rising educational attainment, yet stagnant female labor force participation. *Demographic Research*, 43, 817.
- Babatunde, O. M., Munda, J. L., & Hamam, Y. (2019). A comprehensive state-of-the-art survey on power generation expansion planning with intermittent renewable energy source and energy storage. *International Journal of Energy Research*, 43(12), 6078–6107.
- Barucci, V., Zanola, L., & Axmann, M. (2017). *Vocational Education and Training (VET) and the Transition of Young Women and Men to the Labour Market in Middle-Income Countries: A Comparative Analysis Based on International Labour Organization (ILO) Surveys in Jamaica, Jordan, Peru, Tunisia, Ukraine, Vietnam and Zambia*. Springer.
- Bass, R., & Murphy, P. (2020, 09). *The Impact Investing Market in the COVID-19 Context: Advancing Social Equity to Build Resilience* (Tech. Rep.). Retrieved from <https://thegiin.org/research/publication/the-impact-investing-market-in-the-covid-19-context-advancing-social-equity-to-build-resilience>
- Bear, S., Rahman, N., & Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of business ethics*, 97(2), 207–221.
- Binagwaho, A. (2020, 03). *The difference between gender equity and equality—and why it matters*. Retrieved 2022-08-01, from <https://fortune.com/2020/03/25/gender-equality-and-equity-iwd-womens-education/>

- Bleijenbergh, I., & Van Engen, M. (2015). Participatory modeling to support gender equality: The importance of including stakeholders. *Equality, Diversity and Inclusion: An International Journal*.
- Boeijs, H. (2010). *Analysis in qualitative research*. Sage Publications.
- Brest, P., & Born, K. (2013). When can impact investing create real impact. *Stanford Social Innovation Review*, 11(4), 22–31.
- Brière, S., & Auclair, I. (2020). Toward gendered projects in international development: Paradoxes, resistance and convergent approaches. *International Journal of Project Management*, 38(8), 500–514.
- Brouwers, R. (2013). Revisiting gender mainstreaming in international development: Goodbye to an illusionary strategy. *ISS Working Paper Series/General Series*, 556(556), 1–36.
- Combs, K. (2014). More than just a trend: The importance of impact investing. *Corporate Finance Review*, 18(6), 12.
- Cornwall, A., Harrison, E., & Whitehead, A. (2007). Gender myths and feminist fables: The struggle for interpretive power in gender and development. *Development and Change*, 38(1), 1–20.
- Crenshaw, K. (2013). Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. In *Feminist legal theories* (pp. 23–51). Routledge.
- Creswell, J. W. (2009). Mixed methods procedures. *Research design: Qualitative, quantitative, and mixed methods approaches*, 3, 203–225.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Criado Perez, C. (2019). *Invisible women: Data bias in a world designed for men*. Penguin Random House UK.
- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC medical research methodology*, 11(1), 1–9.
- De Cordier, B. (2010). On the thin line between good intentions and creating tensions: a view on gender programmes in Muslim contexts and the (potential) position of Islamic aid organisations. *The European Journal of Development Research*, 22(2), 234–251.
- Deeb, R., Tvedt, J., & Yelgezekova, Z. (2020). Women’s economic empowerment in Jordan, Oman and Tunisia.
- Deere, C. D., & Doss, C. R. (2006). The gender asset gap: What do we know and why does it matter? *Feminist economics*, 12(1-2), 1–50.
- Dembi, V. (2022). Ensuring energy justice in transition to green hydrogen. Available at SSRN 4015169.
- Dezsö, C. L., & Ross, D. G. (2012). Does female representation in top management improve firm performance? a panel data investigation. *Strategic management journal*, 33(9), 1072–1089.
- Dictionary.com. (2021, 01). *Positionality*. Retrieved 2022-08-14, from <https://www.dictionary.com/e/gender-sexuality/positionality/#:%7E:text=What%20does%20positionality%20mean%3F,and%20outlook%20on%20the%20world>.

- Department of Statistics (DoS) Jordan. (2019). *Employees by Economic Activity, Nationality and Sex For Year 2019 For Both Public and Private Sectors*. Department of Statistics Jordan. Retrieved from <http://dosweb.dos.gov.jo/labourforce/employment-in-establishment/tables-of-employment-in-establishment/>
- Duarte, M. E. (2017). *Network sovereignty: Building the internet across indian country*. University of Washington Press.
- Dziubaniuk, O., Ivanova-Gongne, M., & Berdysheva, E. (2021). Challenges of network interaction in managing sustainable development projects in developing countries: case of an international consulting company. *critical perspectives on international business*.
- Eden, L., & Wagstaff, M. F. (2021). Evidence-based policymaking and the wicked problem of sdg 5 gender equality. *Journal of International Business Policy*, 4(1), 28–57.
- EIB Group. (2016). *Protect, Impact, Invest - The EIB Group Strategy on Gender Equality and Women's Economic Empowerment*. European Investment Bank Group.
- EIGE. (n.d.). *Economic Benefits of Gender Equality in the EU*. Retrieved 2022-01-14, from <https://eige.europa.eu/gender-mainstreaming/policy-areas/economic-and-financial-affairs/economic-benefits-gender-equality>
- Enserink, B., Hermans, L., Kwakkel, J., Thissen, W., Koppenjan, J., & Bots, P. (2010). *Policy analysis of multi-actor systems*. Lemma.
- ESIA Team. (2022a, 03). *Task 1.11: AAWDC Project Stakeholder Engagement Plan* (Tech. Rep.).
- ESIA Team. (2022b, 04). *Task 1.12: AAWDC Project Environmental and Social Management Plan* (Tech. Rep.).
- ESIA Team. (2022c, 04). *Task 1.15: AAWDC Project – Final Environmental and Social Impact Assessment Report* (Tech. Rep.).
- Espinoza Trujano, J., & Lévesque, A.-M. (2022). Development finance institutions and the care economy: opportunities for building more resilient and gender-equitable economies. *Journal of Sustainable Finance & Investment*, 1–20.
- Friedrich, C., Engelhardt, H., & Schulz, F. (2021). Women's agency in egypt, jordan, and tunisia: The role of parenthood and education. *Population Research and Policy Review*, 40(5), 1025–1059.
- Fuentes, M. A., Zelaya, D. G., & Madsen, J. W. (2021). Rethinking the course syllabus: Considerations for promoting equity, diversity, and inclusion. *Teaching of Psychology*, 48(1), 69–79.
- Galea, N., Powell, A., Loosemore, M., Chappell, L., et al. (2018). Demolishing gender structures.
- Giliberto, F., & Labadi, S. (2022). Harnessing cultural heritage for sustainable development: An analysis of three internationally funded projects in mena countries. *International Journal of Heritage Studies*, 28(2), 133–146.
- Government of Jordan (GoJ). (2022, 08). *The current government*. Retrieved 2022-08-17, from <https://pm.gov.jo/AR/CustomPages/Government>
- Gordon, J. (2021). The international governance of refugee work: reflections on the jordan compact. *Global Public Policy and Governance*, 1(3), 239–255.
- Greed, C. (2004). A code of practice for public toilets in britain. *World Toilet Summit of The World Toilet Organization, Beijing*.
- Groome, P. (2021, 12). *Enhancing Equality, Diversity and Inclusion for Transport Infrastructure Skills* (Tech. Rep.). Retrieved from <https://www.gov.uk/government/publications/transport-infrastructure-skills-improving-equality-diversity-and-inclusion>

- Guion, L. A., Diehl, D. C., & McDonald, D. (2001). *Conducting an in-depth interview*. University of Florida Cooperative Extension Service, Institute of Food and . . .
- Harinarain, N., & Haupt, T. (2013). The vulnerability of the construction industry to hiv and aids. In *Association of schools of construction of southern africa (asocsa)–the seventh built environment conference, cape town* (pp. 28–30).
- Hazenberg, R., & Paterson-Young, C. (2022). *Social impact measurement for a sustainable future*. Springer.
- Hebb, T. (2013). *Impact investing and responsible investing: what does it mean?* (Vol. 3) (No. 2). Taylor & Francis.
- Humbert, A. L., Kelan, E., & van den Brink, M. (2019). The perils of gender beliefs for men leaders as change agents for gender equality. *European Management Review*, 16(4), 1143–1157.
- Hussain, C. M., Paulraj, M. S., & Nuzhat, S. (2022). Chapter 5 - source reduction and waste minimization in construction industry. In C. M. Hussain, M. S. Paulraj, & S. Nuzhat (Eds.), *Source reduction and waste minimization* (p. 111-126). Elsevier. Retrieved from <https://www.sciencedirect.com/science/article/pii/B9780128243206000058> doi: <https://doi.org/10.1016/B978-0-12-824320-6.00005-8>
- ILO. (2008). *National Stakeholders' Consultation On HIV/AIDS and the Construction Sector* (Tech. Rep.). Retrieved from https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/meetingdocument/wcms_125187.pdf
- ILO. (2017). *Engagement with the construction sector in the arab states*. Retrieved 2022-05-23, from https://www.ilo.org/beirut/projects/fairway/WCMS_552302/lang--en/index.htm
- Jamal, A., Pagliani, P., & Hsu, E. (2020). *Arab Human Development Report* (Tech. Rep.). Retrieved from <https://arab-hdr.org/wp-content/uploads/2020/12/Final-Citizenship-360-in-the-Arab-Region.pdf>
- Jordan ZAD. (2022). *Germany is the “second largest” contributor to the grant provided to the national water carrier project*. Retrieved 2022-07-11, from <http://www.jordanzad.com/index.php?page=article&id=486799>
- Kasoolu, S., O'Brien, T., Hausmann, R., & Santos, M. (2019). Female labor in jordan: a systematic approach to the exclusion puzzle. *Available at SSRN 3808864*.
- Kiviniemi, M. (2015). *Gender - OECD*. Retrieved 2022-07-19, from <https://www.oecd.org/gender/push-gender-equality-economic-sense.htm>
- Koburtay, T., Syed, J., & Haloub, R. (2020). Implications of religion, culture, and legislation for gender equality at work: Qualitative insights from jordan. *Journal of Business Ethics*, 164(3), 421–436.
- Kochan, T., Bezrukova, K., Ely, R., Jackson, S., Joshi, A., Jehn, K., . . . Thomas, D. (2003). The effects of diversity on business performance: Report of the diversity research network. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, 42(1), 3–21.
- Kordi, N. E., Belayutham, S., & Che Ibrahim, C. K. I. (2021). Mapping of social sustainability attributes to stakeholders' involvement in construction project life cycle. *Construction management and economics*, 39(6), 513–532.
- Latcheva, R. (2017). Sexual harassment in the european union: A pervasive but still hidden form of gender-based violence. *Journal of interpersonal violence*, 32(12), 1821–1852.

- Liu, S.-N. C., Brown, S. E., & Sabat, I. E. (2019). Patching the “leaky pipeline”: Interventions for women of color faculty in stem academia. *Archives of Scientific Psychology*, 7(1), 32.
- Lui, L., & Chang, C.-f. (2020). Gendering the job demands-resources model: work–family conflict in taiwan. *Families, Relationships and Societies*, 9(3), 431–450.
- Magomedova, N., Roig, L., & Bastida-Vialcanet, R. (2020). Innovation applied to financing of enterprises of social economy. a case of impact investment. *CIRIEC-Espana Revista de Economía Publica, Social y Cooperativa*(98), 127.
- McCallum, S., & Viviers, S. (2020). Private sector impact investment in water purification infrastructure in south africa: a qualitative analysis of opportunities and barriers. *Water SA*, 46(1), 44–54.
- Minkman, E., van Buuren, A., & Bekkers, V. (2021). Un-dutching the delta approach: network management and policy translation for effective policy transfer. *Review of Public Policy*, 172.
- Mukhopadhyay, M. (2016). Mainstreaming gender or “streaming” gender away: feminists marooned in the development business. In *The palgrave handbook of gender and development* (pp. 77–91). Springer.
- MWI Jordan. (2021). Jordan water infrastructure - aqaba-amman water desalination conveyance project (aawdcp). *Technical Briefing*.
- Ministry of Water and Irrigation (MWI) Jordan. (2022). *Aqaba-amman water desalination conveyance project - draft feasibility study* (Tech. Rep.).
- NACE. (n.d.). *Equity Definition*. Retrieved 2022-09-06, from <https://www.nacweb.org/about-us/equity-definition/>
- Odeh, R., Gharaibeh, L., Badran, E. F., Hani, F. B., & Alassaf, A. (2022). Children with type one diabetes who are migrants and refugees suffer from poor metabolic control and frequent acute complications, a study from jordan, a limited resource country with high migrant/refugee population. *Diabetes Research and Clinical Practice*, 185, 109807.
- Ormiston, J., Charlton, K., Donald, M. S., & Seymour, R. G. (2015). Overcoming the challenges of impact investing: Insights from leading investors. *Journal of Social Entrepreneurship*, 6(3), 352–378.
- Pacific University Oregon. (2021, 7). *Equity, Diversity Inclusion Glossary of Terms*. Retrieved 2022-09-07, from <https://www.pacificu.edu/life-pacific/support-safety/office-equity-diversity-inclusion/edi-resources/glossary-terms>
- Post, C., & Byron, K. (2015). Women on boards and firm financial performance: A meta-analysis. *Academy of management Journal*, 58(5), 1546–1571.
- Pratt, M. G. (2008). Fitting oval pegs into round holes: Tensions in evaluating and publishing qualitative research in top-tier north american journals. *Organizational Research Methods*, 11(3), 481–509.
- Rahhal, A. (2018, 07). *Evaluation of HIV/AIDS Activities in Jordan* (Tech. Rep.). Retrieved from [https://data2.unhcr.org/en/documents/download/67753#:~:text=In%20terms%20of%20epidemiology%2C%20Jordan,users\)%20according%20to%20the%20last](https://data2.unhcr.org/en/documents/download/67753#:~:text=In%20terms%20of%20epidemiology%2C%20Jordan,users)%20according%20to%20the%20last)
- Rajan, H., & Thornhill, K. (2019). Dilemmas of feminist practice in transnational spaces: Solidarity, personal growth, and potential solutions. *Gender, Place & Culture*, 26(10), 1345–1352.
- Rice, C., Harrison, E., & Friedman, M. (2019). Doing justice to intersectionality in research. *Cultural Studies Critical Methodologies*, 19(6), 409–420.

- Ruiz, S., Romero, S., & Fernandez-Feijoo, B. (2021). Stakeholder engagement is evolving: Do investors play a main role? *Business Strategy and the Environment*, 30(2), 1105–1120.
- Sachs, J., Lafortune, G., Kroll, C., Fuller, G., & Woelm, F. (2022). *Sustainable Development Report 2022 - From Crisis to Sustainable Development: the SDGs as Roadmap to 2030 and Beyond* (Tech. Rep.). Retrieved from <https://s3.amazonaws.com/sustainabledevelopment.report/2022/2022-sustainable-development-report.pdf> doi: 10.1017/9781009210058
- Shteiwi, M. (2015). Attitudes towards gender roles in Jordan. *British Journal of Humanities and Social Sciences*, 12(2), 15–27.
- Søftestad, T., Berg, E., et al. (1991). Anthropology, development, and human rights: the case of involuntary resettlement. *Ethnologie im Wiederstreit. Kontroversen über Macht, Geschäft, Geschlecht in fremden Kulturen*, 365–387.
- Sommer, M., Chandraratna, S., Cavill, S., Mahon, T., & Phillips-Howard, P. (2016). Managing menstruation in the workplace: an overlooked issue in low-and middle-income countries. *International journal for equity in health*, 15(1), 1–5.
- Subrahmanian, R. (2004). Making sense of gender in shifting institutional contexts: some reflections on gender mainstreaming.
- Tamtik, M., & Guenter, M. (2019). Policy analysis of equity, diversity and inclusion strategies in Canadian universities—how far have we come? *Canadian Journal of Higher Education/Revue canadienne d'enseignement supérieur*, 49(3), 41–56.
- The World Bank. (2019, 05). *Gender Equality PPPs* (Tech. Rep.). Retrieved from <https://ppp.worldbank.org/public-private-partnership/library/gender-equality-infrastructure-and-ppps>
- Tuccio, M., & Wahba, J. (2018). Return migration and the transfer of gender norms: evidence from the middle east. *Journal of Comparative Economics*, 46(4), 1006–1029.
- Ucal, M., & Günay, S. (2019). Female employment status: a survey analysis of selected member states of the Arab League. *Eurasian Economic Review*, 9(3), 373–394.
- UN Jordan. (2020). *Meta-Analysis on Women's Participation in the Labour Force in Jordan* (Tech. Rep.). Retrieved from https://jordan.un.org/sites/default/files/2020-11/Meta_LR_021120%20%28003%29.pdf
- UNESCO. (2022, 4). *Jordanian women shine in science!* Retrieved 2022-09-05, from <https://www.unesco.org/en/articles/jordanian-women-shine-science>
- UNICEF Jordan. (2017). *Water, sanitation and hygiene*. Retrieved 2022-06-02, from <https://www.unicef.org/jordan/water-sanitation-and-hygiene#:~:text=Jordan%20is%20the%20second%20most,which%20defines%20severe%20water%20scarcity.>
- USAID. (2020). *2020 gender equality and women's empowerment policy*. United States Agency for International Development.
- Van der Lei, T., Enserink, B., Thissen, W. A., & Bekebrede, G. (2011). How to use a systems diagram to analyse and structure complex problems for policy issue papers. *Journal of the Operational Research Society*, 62(7), 1391–1402.
- Van der Lippe, T., & Lippényi, Z. (2020). Beyond formal access: Organizational context, working from home, and work–family conflict of men and women in European workplaces. *Social indicators research*, 151(2), 383–402.

World Bank Group. (2014, 4). *Women in Jordan – Limited Economic Participation and Continued Inequality*. Retrieved 2022-09-08, from <https://www.worldbank.org/en/news/feature/2014/04/17/women-in-jordan---limited-economic-participation-and-continued-inequality>

Wright, T., & Conley, H. (2020). Advancing gender equality in the construction sector through public procurement: Making effective use of responsive regulation. *Economic and Industrial Democracy*, 41(4), 975–996.



Development of the final system diagram

A.1 Potential implications on the final system diagram

Table A.1 shows the difference between the system diagram that was created from the literature and the expert interviews and the system diagram that was created after interviewing professional women in Jordan.

Table A.1: Implications for the model based on in-depth interviews with Jordanian women

Means/relations	Difference from previous findings	Implications on the model
M1: Provide communities with quality training and education in collaboration with local entities	About communities instead of just women	By providing communities with training and refreshment sessions, a woman's family's perceptions of the construction industry might become more positive, leading to family's allowing their daughters to travel for training, leading to an increase in C1 through this factor instead of directly from M1.

Table A.1: Implications for the model based on in-depth interviews with Jordanian women

Means/relations	Difference from previous findings	Implications on the model
M2: Set representative quota for the project workforce followed by assessment and enhancement of skills	Relation according to women directly on women with an engineering background transitioning/staying in the workforce. According to previous findings relation through feeling of appreciation and more equal treatment of women which would lead to higher participation	Previous findings show more thorough explanations. Therefore the relations will remain as shown in previous findings.
M3: Engage women, men, girls and boys in GBV prevention	women and girls are added to the means	This would (1) increase GBV awareness for everyone, causing less GBV on the workforce.
M4: Provide proper grievance mechanisms for GBV survivors in collaboration with local entities	According to previous findings, these grievance mechanisms could help create confidence among women, which could lead to more women opening up. The women explain this more thoroughly that a culture can be created where women can open up which would increase women's confidence.	Culture where women can open up increases women's confidence. However, women's confidence is not always related to GBV. Therefore instead of the arrow from women's confidence to opening up about GBV in the previous diagram, a relation will be sketched between the culture where women can open up about GBV to women opening up about GBV.
External factors/relations	Difference from previous findings	Implications on the model
Poverty to traditional gender norms	Poverty according to previous findings does not lead to more traditional gender norms. The women indicated that the less privileged tend to have more traditional gender norms	An increasing arrow from poverty to traditional gender norms
Tribalism	Tribalism was not mentioned specifically by the women. The previous mentioned tribalism as the factor influencing	No implications
Women in politics	Women mentioned that an increase of women in politics would decrease the exclusion of anti-discrimination practices between gender in Jordan.	Decreasing arrow from women in politics to exclusion of anti-discrimination practices between gender in Jordanian legislation.
Demanding nature of the construction industry	This factor was not mentioned in previous findings	Factor will be added, including the relations between the factor and family's perception of the construction industry as unsuitable for women and women transitioning/staying in the workforce
Factors/relations	Difference from previous findings	Implications on the model

Table A.1: Implications for the model based on in-depth interviews with Jordanian women

Means/relations	Difference from previous findings	Implications on the model
Family's perception of the construction industry as unsuitable for women	Not mentioned in previous diagram	(1) No direct arrow from M1 to C1, but through family's perception of the construction industry as unsuitable for women. (2) A decrease in labor force participation of women with post-secondary education in the construction industry and therefore in C4. (3) A decrease in women with an engineering background transitioning to/staying in the workforce.
Relation between proportion of time spent on unpaid domestic/care work and equal treatment of women within organizations	Women indicate that if they would put in the same amount of time as men in their work, they would get equal opportunities	This relation will be added to the diagram
Relation between male dominated work spaces and family's perception of the construction industry as unsuitable for women	This relation was indicated by the women	Increasing relation between male dominated work spaces and male dominated work spaces
Working women adopting masculine traits	Women explained that this is mostly something from the past	Factor will be removed.
Family support	Family support is mentioned by the women	Family support increases when family perceives that women work in suitable environments and it will increase women's confidence and decrease women's time spent on unpaid domestic/care work.
Working remotely	Working remotely is mentioned by women as a consequence of COVID	(1) Demanding nature of the construction industry makes working remotely difficult for the professional construction roles. (2) Working remotely will decrease family support. (3) Working remotely in itself will increase labor force participation
Presence of female role models	The women refer to this as success stories of women that work in construction.	Arrow will be added to family's perceptions
Flexible working hours	Not mentioned in previous diagram	Leads to an increase in labor force participation
Women's confidence	According to the women this also has an effect on women's upward career paths	Increasing relation between women's confidence and women's upward career paths.

A.2 Redundant Factors

Table A.2: Redundant factors and implications on the model when they are removed

Factors	Implications on the model
Women opening up about GBV	(1) Direct line from Tribalism to consequences for perpetrators of GBV (2) Direct line from culture where women open up about GBV to consequences for perpetrators of GBV
Consequences for perpetrators of GBV	(1) direct line from Tribalism to C2 (2) direct line from exclusion of anti-discrimination practices to C2 (3) direct line from culture where women can open up about GBV to C2.
Women with an engineering background transitioning to the construction workforce	(1) Direct line from demanding nature of the construction industry to labor force participation (2) Direct line from women in engineering studies to labor force participation.
Women's agency	(1) direct line from women's mobility to labor force participation (2) direct line from traditional gender norms to labor force participation
Women's mobility	Direct line to labor force participation from M6, and poverty
Discrimination of women	Direct line to equal treatment of women from poverty, exclusion of anti-discrimination practices in Jordanian legislation, and traditional gender norms
Partiarchy	Direct line to traditional gender norms from tribalism, and exclusion of anti-discrimination practices in Jordanian legislation
Maternity benefits	Direct line to job security of women from exclusion of anti-discrimination practices in Jordanian legislation, and M8
Job security for women	Direct line to labor force participation from fertility rates, exclusion of anti-discrimination practices in Jordanian legislation, and M8
Feeling of appreciation	Direct line to turnover rate from M2, and C5
Turnover rate	Direct line to C4 from C5, M2, women's confidence, women's safety
Protective equipment that fits women	Direct line from women in managerial positions to women's safety
Women's upward career paths	Direct line to women in managerial positions from perception of women as professional, equal treatment of women within organizations, women's confidence, and M1
Perception of professionalism of women	Direct arrow to women in managerial positions from number of workspaces being male dominated, and women having to fulfill their role as honorable wives
Flexible working hours	No new implications
Decent nurseries	direct line from M8 to proportion of time spent by women to do unpaid and domestic care work

B

Analysis of the final system diagram

B.1 Means-criteria analysis

Starting from M1, it can be seen that M1 decreases family's perception of the construction industry as unsuitable for women, which causes several loops, which are loop 2, loop 4, loop 5, loop 6, loop 7, loop 8, loop 9, loop 10, loop 11, and loop 12. Loop 2 from M1 causes an increase in C1, C3, and C4. The same effect can be seen for loop 5. Nonetheless, the effect will be balanced on C4 due to loop 13, which in combination with loop 14 causes a balanced effect in C2 as well. Loop 4, loop 7, and loop 8 lead to an increase in C3 and C4, loop 6, loop 9, loop 10, loop 11 to an increase in C4 and finally, loop 12 to an increase in C4 and C7.

M2, will lead to a direct increase in C4, of which the effect will be enforced due to loop 2, loop 3, loop 4, loop 5, loop 6, loop 7, loop 8, loop 9, loop 10, loop 11, loop 12, and loop 14. which will lead to an increase in C1, C2, C3, and C4 and C7. Nonetheless, loop 13 causes a balanced effect on C2 and C4. M2 also leads to more equal treatment of women, causing an increase in C3, C4, and C7. Moreover, due to more equal treatment of women, the effect on C3 and C4 is reinforced through loop 7, loop 8, loop 11 and loop 12.

M3 leads to an increase in C2, causing to go through loop 13 and 14, resulting in a balanced impact C2 and C4.

M4 causes an increased culture where women can open up about Gender Based Violence (GBV), which leads to an increase in women's confidence and an increase in C2. Due to the increase in C2, the same loops will occur as described for the effect of M3 on C2, leading to balanced effect on C2 and C4. The increasing effect of M4 on women's confidence leads to an increase in C1, C3, and C4 through loop 1, loop 4, loop 5, loop 8, and loop 9.

Following M5, an increase in C2 and C5 can be observed. The increasing effect on C2 leads to another balanced impact on C2 and C4, according to the same dynamics as described for M3 and M4. Another arrow from M5 leads to an increase in women's safety. Looking at the dynamics as described for M3, this causes another increase of C1, C3, C4 and C7.

M6 leads to a direct increase in C6 and also in C4, leading to an increase in C1, C3, and C7 and a balanced effect on C2 and C4. Furthermore, M6 causes an increase in women’s safety leading to an additional increase of C1, C3, C4, and C7.

Finally M7 leads to an increase in C4 and therefore also in C1, C3 and C7 and a balanced effect on C2 and C4. Additionally, M7 causes a decrease in time women spend on domestic work, causing another increase in C4.

Table B.1 shows the results of the means-criteria analysis.

Table B.1: Analysis of the influence of investors’ means on the criteria

Means	C1	C2	C3	C4	C5	C6	C7	C8
M1	+	+/-	+	+/-			+	
M2	+	+/-	+/+	+/-/+			+/+	
M3		+/-		+/-				
M4	+	+/-	+	+/-/+			+	
M5	+	+/-	+	+/-/+	+		+	
M6	+/+	+/-	+/+	+/-/+			+/+	+
M7	+	+/-	+	+/-/+		+	+	

Looking at Table B.1 a preferred policy can be chosen based on which means are most efficient to achieve the criteria. It can be observed that none of the means influences all criteria. However, when looking at M5, M6, and M7 it seems like all criteria will be affected. Therefore the preferred policy consists of these three means. The combined effect of the policy is shown in Table

Table B.2: Result of the preferred policy on the criteria

C1	C2	C3	C4	C5	C6	C7	C8
+/+/+/+	+/-/+/-	+/+/+/+	+/-/+/ +/+/-/+ +/-/+	+	+	+/+/+/+	+

Table B.1 shows the impact of the means on the criteria. Figure 5.3 shows how the criteria are related to the Equity, Diversity, and Inclusion (EDI) and shows that C1 and C2 contribute to diversity, C3 and C4 to inclusion and C7, C6, C7, and C8 contribute to both equity and inclusion. The effect of the means on EDI is shown in

Table B.3: Consequence table of the preferred policy on EDI

Equity	Diversity	Inclusion
+/+/+/+	+/+/+/+	+/+/+/+
+/+/+/+	+/+/-/	+/+/+/+
+	+/+/-/	+/+/+/-/
	+/+/-/+	+/-/+/-

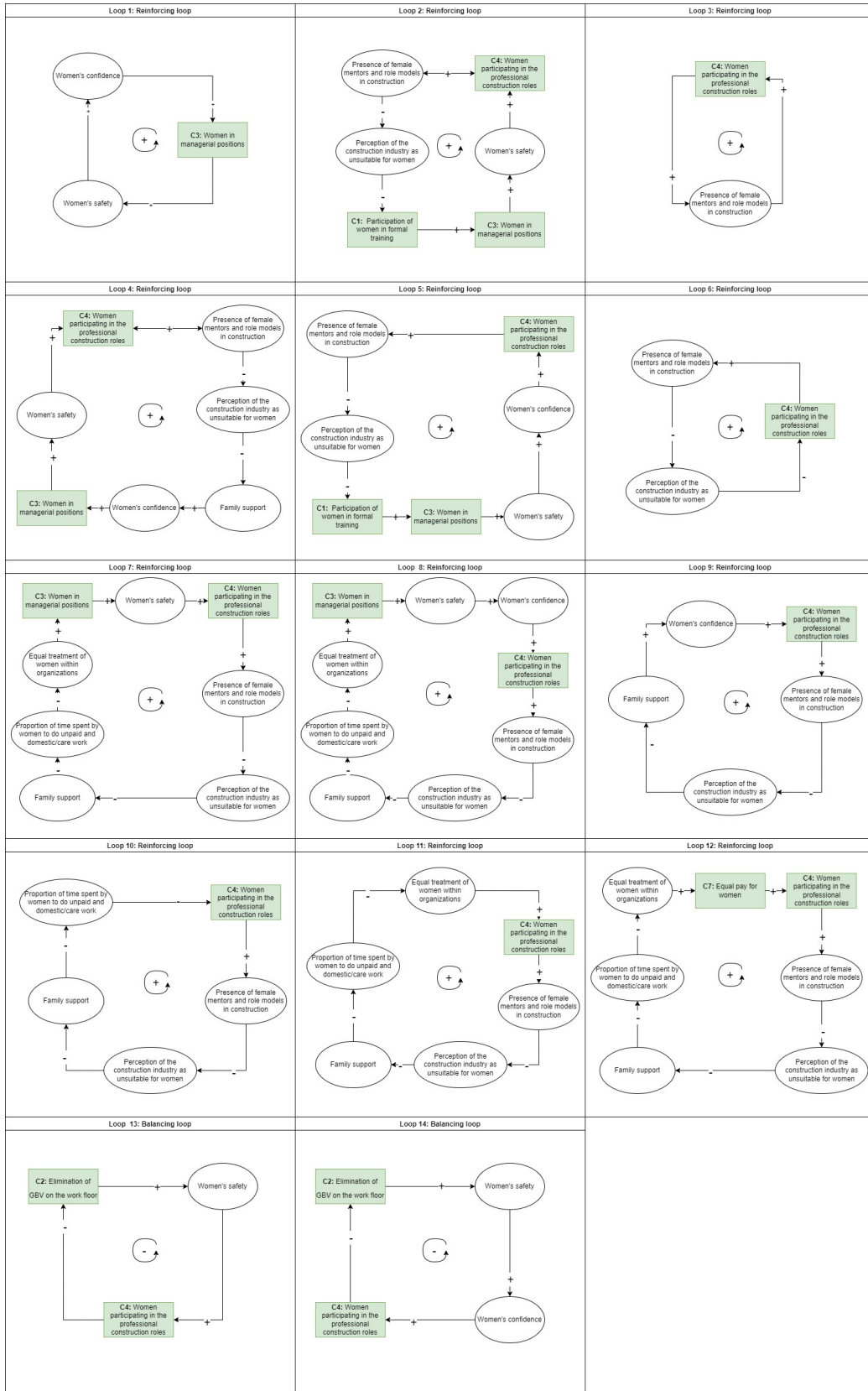


Figure B.1: The loops that have been identified in the system diagram

B.2 External factors-criteria analysis

Starting from X1, it can be seen that women in engineering cause an increase in C4, which causes an increasing effect on C1, C2, C3, and C7 due to loop 2, loop 3, loop 4, loop 5, loop 6, loop 7, loop 8, loop 9, loop 10, loop 11, loop 12, and loop 14. Through loop 13 however, the increasing effect on C4 and C2 is balanced.

X2 causes a decrease in C4, which will be reinforced through all the loops that are caused by C4. Therefore X2 also has a decreasing effect on C1, C2, C3, and C7 as well. Nonetheless, this decreasing effect on C2 and C4 is balanced through loop 13. X2 also leads to an increase in a woman's family's perception of the construction industry as a male occupation, which will, which causes several loops, which are loop 2, loop 4, loop 5, loop 6, loop 7, loop 8, loop 9, loop 10, loop 11, and loop 12. These loops result in another decrease in C1, C3, C4 and C7. Finally, X2 causes a decrease in the opportunities for women to work remotely. This results in a decrease in C4. Nonetheless, this decreasing effect on working remotely causes an increase in family support, leading to an increasing effect on C1, C3, C4, and C7.

X3 causes an increase in traditional gender norms, causing an increased perception of the construction industry as a male occupation, higher fertility rates, a decrease in equal treatment of women within organizations, and a decrease in C4. An increased perception of the construction industry as a male occupation causes a decrease in C2, which leads to decreased safety of women. This effect will be reinforced by several loops causing a decreasing effect in C1, C3, C4, and C7 as well. Furthermore, an increased perception of the construction industry as a male occupation leads to discriminatory recruitment processes causing a decrease in C4, and less equal treatment of women, reinforcing the decrease in C1, C3, and C7. Secondly, X3 causes a decrease in equal treatment of women within organizations, resulting in a decrease in C3 and C4. Finally, X3 causes a decrease in C4, so also in C1, C2, C3 and C7. Nonetheless, the decreasing effect on C2 and C4 is balanced through loop 13.

X4 leads to increased traditional gender norms, causing, like X3, a decrease in each criterion. Secondly, X4 strengthens the exclusion of anti-discrimination practices between gender in Jordanian legislation, leading to a decrease in C2, which leads to a decrease in C4 as well through loop 14. This effect is balanced through loop 13. Furthermore X4 leads to a decrease in culture where women can open up about GBV, also leading to a decrease in C2, less equal treatment of women within organizations, which leads to a decrease in C1, C3, C4, C6 and C7, and increased traditional gender norms, resulting in a decrease in C1, C2, C3, C4, and C7 as well. Again the effect on C2 and C4 is balanced through loop 13.

Finally X5 leads to less exclusion of anti-discrimination practices between gender in Jordanian legislation, causing an increase in C1, C2, C3, C4, C6 and C7. The results are shown in Table B.4.

Table B.4: Analysis of the influence of external factors

External factors	C1	C2	C3	C4	C5	C6	C7	C8
X1	+	+/-	+	+/-			+	
X2	-/-/+	-/+/-	-/-/+	-/+/-/-/ +			-/-/+	
X3	-/-	-/-/+	-/-/-	-/-/-/+			-/-	
X4	-	-/+/-/+	-	-/+/-/+		-	-	
X5	+	+	+	+		+	+	

B.3 Scenario analysis

To perform the scenario analysis, three scenarios are proposed to test the effectiveness of the means. These are a scenario in which the model will be used in a more rural area (Scenario 1), a plausible scenario of the situation in Amman (Scenario 2) and a best case scenario (Scenario 3), which could show a situation where Jordan is much less conservative.

B.3.1 Scenario 1

In the more remote rural areas, tribalism plays a bigger role than in Amman. It is also assumed that less women will enter engineering studies. Moreover, it is plausible to assume that poverty plays a role in people's lives. Furthermore, currently female participation in politics in Jordan is low, causing the scenario as shown in Table B.5

Table B.5: External factors' impact on criteria in scenario 1. Signs in the first column represent changes in the external factors

	C1	C2	C3	C4	C5	C6	C7	C8
X1 = 0								
X2 = +	-/-/+	-/+/-	-/-/+	-/+/-/-/ +			-/-/+	
X3 = +	-/-	-/-/+	-/-/-	-/-/-/+			-/-	
X4 = +	-	-/+/-/+	-	-/+/-/+		-	-	
X5 = 0								
Combined effect	-/-/+/ -/-/-	-/+/-/ -/-/+/ -/+/-/+	-/-/+/ -/-/-/-	-/+/-/-/ +/ -/-/-/+/ -/+/-/+		-	-/-/+/-/ /-/-	

The combined effect of the external factors in scenario 1 on EDI is shown in Table B.6.

Table B.6: Combined effect of scenario 1 on EDI

Equity	Diversity	Inclusion
		-/-/+/ -/-/-
	-/-/+/ -/-/-/-	-/+/-
-/-/-/+/ -/-/-	-/+/-/-/ +/ -/-/-/+/ -/+/-/+	-/-/+ -/+/-/+ -/-/-/+/ -/-/-

Combining table B.6 with table B.13, gives the effect of the preferred policy in scenario 1. This is shown in table B.7

Table B.7: Combined effect of scenario 1 on EDI

Equity	Diversity	Inclusion
		+/+/+/
	+/+/+/	+/+/+/
	+/+/-/	+/+/+/
	+/+/-/	+/+/+/-/
-/-/-+/	+/+/-+/	+/-/+/-/
-/-/-	-/-+/	-/-+/
+/+/+/	-/-/-/	-/-/-
+/+/+/	-/+/-/-/	-/+/-
+	+/	-/-+/
	-/-/-+/	-/+/-+/
	-/+/-+/	-/-/-+/
		-/-/-

It can be observed from Table B.5 that the means cause an improvement for equity and inclusion in scenario 1.

B.3.2 Scenario 2

Scenario 2 is the current situation in Amman as experienced by the women interviewed. As these women are successful business women, poverty will be set to zero. Also as, women in politics is still very low, $X_5 = 0$. The other factors in this scenario will stay constant as this diagram was built with help of women from Amman. The scenario is shown in table B.8

Table B.8: Analysis of the influence of external factors in scenario 2

External factors	C1	C2	C3	C4	C5	C6	C7	C8
X1 = +	+	+/-	+	+/-			+	
X2 = +	-/-+/	-/+/-	-/-+/	-/+/-/-/			-/-+/	
X3 = +	-/-	-/-+/	-/-/-	-/-/-+/			-/-	
X4 = +	-	-/+/-+/	-	-/+/-+/		-	-	
X5 = 0								
combined effect	+/-/-+/	+/-/-+/	+/-/-+/	+/-/-+/		-	+/-/-+/	
	-/-/-	-/-/+/-	-/-/-/-	-/-/+/-			-/-/-	
		-/-/+/-		-/+/-+/				

Table B.9: Combined effect of scenario 2 on EDI

Equity	Diversity	Inclusion
		+/-/-/+
	+/-/-/+	/-/-/-
	/-/-/-/-	+/-/-/+
-/+/-/-/-	+/-/-/+	/-/-/+/-
+/-/-/-/-	/-/-/+/-	/-/-/+/-
	/-/-/+/-	+/-/+
	/+/-/+	-/+/-/-/-
		+/-/-/-

Table B.10: Consequence table of the preferred policy on EDI in scenario 2

Equity	Diversity	Inclusion
		+/-/-/+
	+/-/-/+	/-/-/-
	/-/-/-/-	+/-/-/+
	+/-/-/+	/-/-/+/-
+/+/++/+	/-/-/+/-	/-/-/+/-
+/+/+	/-/-/+/-	+/-/+
-/+/-/-/-	/+/-/+	-/+/-/-/-
+/-/-/-/-	+/+/+	+/-/-/-
	+/+/+	+/+/+
	+/+/-/-	+/+/+
	+/+/-/-	+/+/+
	+/+/-/+	+/+/+
		+/+/+/-/-
		+/-/+/-

From Table B.8 it can be observed that the means have an improving impact on each criterion.

B.3.3 Scenario 3

Scenario 3 is a best case scenario where more women will participate in engineering studies, there will be no poverty, no tribalism, and increasing women in politics. Nonetheless, the demanding nature of the construction industry will be the same, as this is a characteristic for the sector. This will lead to the scenario shown in Table B.11

Table B.11: Analysis of the influence of external factors in scenario 3

External factors	C1	C2	C3	C4	C5	C6	C7	C8
X1 = +	+	+/-	+	+/-			+	

Table B.11: Analysis of the influence of external factors in scenario 3

External factors	C1	C2	C3	C4	C5	C6	C7	C8
X2 = +	-/-/+	-/+/-	-/-/+	-/+/-/-/ +			-/-/+	
X3 = 0								
X4 = +	-	-/+/-/+	-	-/+/-/+		-	-	
X5 = +	+	+	+	+		+	+	
Combined effect	+/-/-/+ /-/+	+/-/-/+ /-/+/- /+/>+	+/-/-/+ /-/+	+/-/-/+ /-/-/+ /-/+/- /+/>+		+/-	+/-/-/- /+/>+	

Table B.11 shows that the policy will improve each factor. However, for C6, the policy seems to be overkill as the goal has been achieved.

Table B.12: Combined effect of scenario 3 on EDI

Equity	Diversity	Inclusion
+/-/+/-/- /-/+/>+	+/-/-/+/>+ /-/+/>-/-/ +/-/-/+/>- /+/>-/+/>+	+/-/-/+/>-/ +/>+/>-/-/+/>+ -/+/>-/+/>+ +/>-/+/>-/- /-/+/>+

Table B.13: Consequence table of the preferred policy on EDI in scenario 3

Equity	Diversity	Inclusion
+/-/+/>-/- /-/+/>+ +/>+/>+/>+ +/>+/>+/>+ +	+/-/-/+/>+ /-/+/>-/-/ +/-/-/+/>- /+/>-/+/>+ +/>+/>+/>+ +/>+/>-/ +/>+/>-/ +/>+/>-/+	+/-/-/+/>-/ +/>+/>-/-/+/>+ -/+/>-/+/>+ +/>-/+/>-/- /-/+/>+ +/>+/>+/>+ +/>+/>+/>+ +/>+/>+/>+ +/>+/>+/>-/ +/>-/+/>-