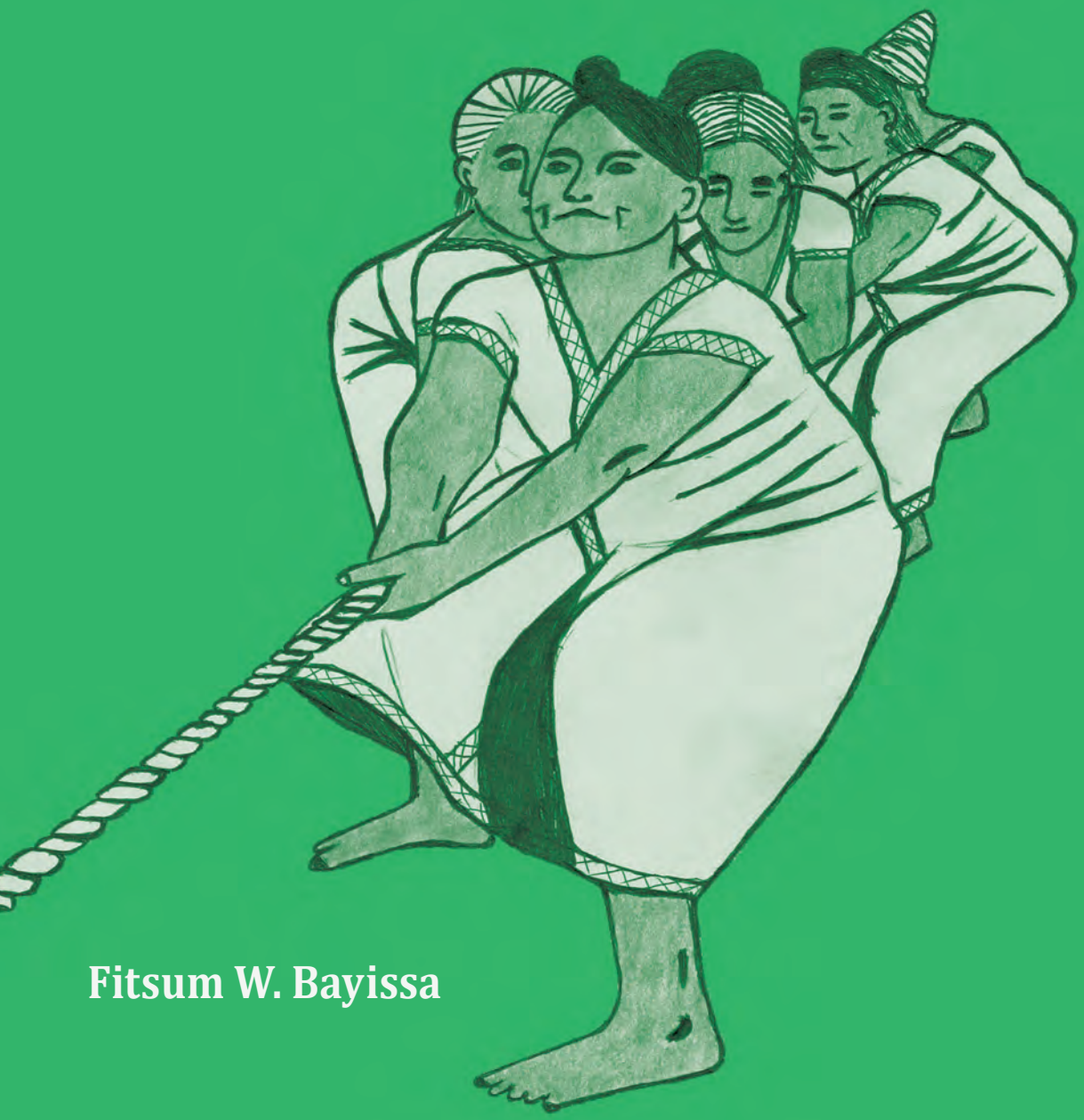
EMPOWERING WOMEN THROUGH COLLECTIVE ACTION

The performance of all-female red-pepper processing workgroups in Addis Ababa, Ethiopia



Fitsum W. Bayissa

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Cover Picture: Designed and painted by Fitsum W. Bayissa

This study has received financial support from the Netherlands Initiatives for Capacity Building in Higher Education in Ethiopia (NICHE/ETH/019).

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Proefschrift

ter verkrijging van de graad van doctor

aan de Radboud Universiteit Nijmegen

op gezag van de rector magnificus prof. dr. J.H.J.M van Krieken,

volgens besluit van het college van decanen

in het openbaar te verdedigen op woensdag 20 december 2017

om 11.30 uur precies

door

Fitsum Wakweya Bayissa

geboren op 13 februari 1985

te Nazareth, Ethiopië

Promotoren

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ERRATUM

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ISBN/EAN: 978-94-028-0895-7

Financial support:

This study was supported by Netherlands Initiatives for Capacity Building in Higher Education in Ethiopia (NICHE/ETH/019). It was elaborated within the framework of the project “supporting the development of commercial agriculture programs at four Ethiopian Universities” funded by the Netherlands Organization for International Cooperation in Higher Education (NUFFIC). We gratefully acknowledge the financial support of NUFFIC/NICHE program.

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Doctoral Thesis

to obtain the degree of doctor

from Radboud University Nijmegen

on the authority of the Rector Magnificus prof. dr. J.H.J.M. van Krieken,

according to the decision of the Council of Deans

to be defended in public on Wednesday, December 20, 2017

at 11.30 hours

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Table of Contents

List of tables

List of figures

Acknowledgment

Completion of this doctoral dissertation was possible with the support and guidance that I received from the Almighty Lord and many people. First of all, I would like to give thanks to the Almighty God, in the name of our Lord Jesus Christ, for granting me the wisdom, health and strength to undertake this study and enabling me to its completion.

I am extremely grateful to my promoter Professor Ruerd Ruben, for his valuable guidance, immense knowledge, consistent encouragement and all the useful discussions and brainstorming sessions throughout my time as his student. I consider it as a great opportunity to do my PhD study under your guidance and greatly appreciate the freedom you have given me to find my own path and the support you offered when needed. I offer my sincerest gratitude to my advisor Dr. Jeroen Smits, for his patience, motivation and enthusiasm. He patiently provided the vision, encouragement and advice necessary for me to proceed through the doctoral program and to learn from his research expertise. Without his guidance and constant feedback, this PhD would not have been achievable. I have been extremely lucky to have a supervisor who cared so much about my work, and who responded to my questions and queries so promptly despite his busy schedules. Thank you very much for investing time and providing interesting and valuable feedback.

I would also like to thank all staff of Anthropology and Development Studies at Radboud University, Nijmegen for their concern and good wishes. I want to thank Dr. Roldan Muradian for his guidance and all the useful discussions during the difficult conceptual development stage. I thank Dr. Luuk van Kempen for his valuable comments on some of the research papers of the thesis. I acknowledge Dr. Joost for his encouragement and supervisory role. Very special thanks goes to Mrs. Saskia, who has been a truly dedicated secretary with an amicable and positive disposition; she has always made herself available to clarify my

doubts and provided me with her assistance throughout my stay in Nijmegen. Thank you for all your help and support. You are just an inspiration.

I gratefully acknowledge the funding received towards my PhD from the NICHE project. I remember the staff of Addis Ababa Micro and Small enterprise Offices, who helped me to identify every respondent of this study, their cooperation and inputs enabled me to complete this work. I am indebted to all my Ethiopian fellow students Sintayehu, Molla, Birhanu and Alemayehu for their friendship during my time in Nijmegen. I take this time to express my gratitude to all staff of school of Gender, Environment and Development Studies at Hawassa University for their concern and encouragement.

I am deeply thankful to my mother (Enatiye) for her unconditional love, support, sacrifices and constant pray in all those things of life beyond doing a PhD. I owe a lot to my sisters and brothers, and their families Rech, Esu, Mekdi, Isiru, Ase, Sami, Negash and Amenye, who being there for me, encouraged and helped me at every stage of my personal and academic life, and longed to see this achievement come true. I would not be here if it not for you. I am very much indebted to my mother-in-law (Ado), who supported me in every possible way to see the completion of this work. I dedicate this thesis to the memory of my late father-in-law (Ebbe), whose role in my life was, and remains immense. I am gratefully thankful to my brothers-in-law, sisters-in-law and their families Ade, kuku, Zed, Emu, Josh, Sench, Tenu, Job, Elsi, Tare, Tinsa, Mesi, Wosen and Tsihon for their encouragement and constant support - both emotionally and financially.

Last but not the least, I would like to acknowledge the two most important persons in my life – my husband (Konjo) and my daughter (Joye). Words cannot express the feelings I have for them, and their love provided my inspiration and was my driving force. Heartfelt thanks goes to my darling Joye for being such a cute little baby over the past year, and making it possible for me to complete what I started. My husband has been a constant source of strength

and inspiration. There were times during the past five years when everything seemed hopeless and I didn't have any hope. I can honestly say that it was only his pray, determination and encouragement that ultimately made it possible for me to see this study through to the end.

Chapter 1

Introduction

1.1 The current conditions of women in Ethiopia

Since 1993, the Ethiopian federal constitution grants women equal rights with men in all spheres of life including marriage, property rights, inheritance and bodily integrity (Women's Affairs Sub Sector, 2004). Cultural practices that reduce women's welfare (e.g. female genital mutilation, polygamy and early marriage) have legally been prohibited (Bevan & Pankhurst, 2007). However, Ethiopia is still one of the countries with the highest level of gender inequalities in the world. According to the gender inequality index of the Human Development Report of 2015, Ethiopia ranked 129 out of 156 countries on the list (UNDP, 2015).

Ethiopian women do not enjoy their legal rights due to social, cultural, political and economic disadvantages in accessing opportunities, decision-making and ownership of basic resources (Ogato, 2013). According to the UN Women (2012)3 reports, 49% of women in Ethiopia have experienced physical violence from a partner and 59% have experienced sexual violence. The Ethiopian Demographic and Health Survey (EDHS, 2011) data shows that 68% of Ethiopian women still believe that their husbands hold the right to physically harm them. Around 74% of Ethiopian women have undergone female genital mutilation (WHO, 2011), and 31% of the Ethiopian women who underwent the genital mutilation supports its continuation (EDHS, 2005). Polygamy still occurs in Ethiopia (Bevan & Pankhurst, 2007), and 41% of girls are married before they are 18 years (UNICEF, 2013). Ethiopian women have low level of political representation thus affecting their political movement in being

small and weak (Biseswar, 2008). Few women in Ethiopia own productive assets and even for these women the assets are often controlled by men (Lim *et al*., 2007).

1.2 Ethiopian women and the red-pepper value chain

In Ethiopia, 85 percent of total employment is within agriculture (CIA, 2012). Hence, a promising way for women to find employment opportunities is to participate in the more profitable aspects of agricultural value chains. This might also change the women's positional condition in society. Increasing women's participation in agricultural value chains not only contributes to their empowerment but may also enhance the development prospects of the value chains. This is because the participation of women in the workforce does enhance the quality and quantity of labour use in every activities of the value chain (Pioneti *et al*., 2011; UNFPA, 2005; Gupta & Yesudian, 2006; Mehra & Hill-Rojas, 2008).

To increase women's participation in the agricultural value chains, it is important to gain insight into the determinants of women's access to resources, to identify constraints and opportunities for women engagement in the chain, and to study the division of labour within the chain (KIT, APF & IIRR, 2012). Generally, in agricultural value chains, tasks are often separated by gender. Men may have better understanding of some parts of the chain and women of other parts of the chain. Development actors and policy makers tend to agree that it is relatively easy to improve women's position by focussing on traditional female activities in agriculture and professionalize these activities (ibid, 2012).

In Ethiopia, women have a qualified advantage in the processing part of the red-pepper value chain. Red-pepper processing has been traditionally a female task. Besides, it is work that neither requires ownership of land nor a large amount of start-up capital. Red-pepper is a spice and vegetable crop produced by many farmers in Ethiopia as an important source of

income. Except for some commercial farming, the cultivation of red-pepper is predominantly performed by smallholder farmers (Rutgers, 2010).

The Ethiopian government considers red-pepper as one of the promising commercial spices that can foster the agricultural sector. Therefore, red-pepper is included as part of the Ethiopian Growth and Transformation Plan (MOFED, 2010). Large and high potential areas of land have been identified to grow red-pepper and other spices in different regions of the Ethiopia (EIA, 2010). Although Ethiopia's contribution to the global supply of red-pepper is so far negligible and irregular, it is increasing rapidly and has shifted from 3,088 kg in 2001 to 22,984 kg in 2008 (Rutgers, 2010; Roukens, 2005).

Red-pepper is part of the daily diet of most Ethiopians. Red-pepper average daily consumption is higher than that of tomatoes and many other vegetables (MARC, 2004). For centuries, the processing of the red-pepper into *berbere* (a mixture of grinded red-pepper with around 18 other different spices) has been a time and energy consuming home activity in Ethiopia, for which women traditionally have been responsible. In recent years, groups of entrepreneur women have recognized and upgraded their traditional responsibilities in the red-pepper processing as a business opportunity. They buy unprocessed red-pepper from the market, add value by processing it, and sell it back to the market. The increased demand for processed food, as a result of urbanization, has expanded the margin of the local *berbere* market. *Berbere* is now also exported to Ethiopians in foreign countries through formal channels, and people are also informally taking the product with them when travelling abroad (Rutgers, 2010).

1.3 Female workgroups in the red-pepper value chain

Given the business opportunities offered by the red-pepper and other spices processing industry, the Ethiopian government and developmental organizations have facilitated the

formation of female workgroups in this industry as a model strategy to develop women's empowerment and to enhance the women's capacity to act collectively (Alsop & Heinsohn, 2005; World Bank, 2013; ACDI, 2015). These workgroups consist of women who run these facilities together as business. The members of the workgroups are interdependent in their tasks, while the production, investment and savings decisions are taken together. In unison, these workgroups of women decide for example on, how much of the revenue will be reinvested back in the business; when and to whom to sell the output; when and where to buy inputs; and whether or not, to borrow money and how much money to borrow. The members share responsibility for the outcome of the decisions made in unison and for managing their business across organizational boundaries.

The government and developmental organizations have been providing massive support to enhance the capacity of these workgroups in terms of working places, business training, finances management, market integration, micro-finances and so forth (World Bank, 2013; ACDI, 2015). This thesis is focused on the development potential, the organizational behaviour and the performance of these entrepreneurial female workgroups.

1.4 Research problem

Despite great efforts made by the Ethiopian government and developmental organizations in organizing and supporting female workgroups in the spices processing business, limited research has been conducted on the way these workgroups are organized and on factors that contribute to their performance. The central aim of this thesis is therefore: to examine the factors that influence the performance of these red pepper processing workgroups and to find out whether and how their objective of empowering women is achieved.

Even while the workforce is fully composed of women, the groups show a wide diversity in terms of performance outcomes. Given the heterogeneity in socio-cultural and ethnic

background, different modalities for the coordination of internal activities and for joint engagement in external exchange emerge. We will identify the underlying drivers and mechanisms that ultimately link collective action and workgroup performance with prospects for women empowerment. To achieve this aim, we outlined the following four research questions.

(1) Are there differences between the individual versus group **risk choices**, and how do risk choices influence the performance of female workgroups in the red-pepper processing in Ethiopia?

(2) How does intra-group **trust and monitoring** relate to each other in the female workgroups, and how does this relation influence the performance of the workgroups?

(3) What are the effects of **ethnic diversity** on the performance of the female workgroups?

(4) Whether and to what extent is the **empowerment** gained by women forthcoming from the income gained from these workgroups (economic empowerment) related to other forms of empowerment (familial, psychological, legal, political and socio-cultural)?

In order to deal with these research questions, we have designed four different studies, which are presented in the following four chapters of this thesis. The outcomes of each of these chapters aim to combine insights from the literature in the field in general and to provide practical implications for female workgroups in low income countries in terms of reinforcing women's collective action that supports women's empowerment. In particular, they may offer important guidance for government and developmental organizations that promote women's empowerment in Ethiopia.

1.5 Materials and methods

Participants in the study were 508 women from 102 female workgroups in the red-pepper and other spices processing business in Addis Ababa, the capital of Ethiopia. Addis Ababa has ten sub cities (see Figure 1.1), and each sub city has a Micro and Small Scale Enterprise office. Based on information obtained from these offices, six sub cities were selected with a large number of workgroups. In the six selected sub cities, there are 64 *Woredas*. *Woreda* is the second level (next to sub city) administrative divisions in Addis Ababa. We listed all 270 female workgroups in 64 *Woredas* and randomly selected 102 workgroups to be included in the survey, and then due to budget constraints we randomly re-selected 72 workgroups to include in our field experiments.

We developed two independent questionnaires for the group and individual level interview. All members in the workgroups participated in the group interview. On average, five randomly selected women from each workgroup participated in the individual interview. The individual interview was conducted privately and independently. We first collected the survey data, and then conducted the experiments. Both the survey and the experimental data were collected within the time period of June 2013 to October 2013.

The data were collected by means of field experiments, a survey and face to face interviews. The field experiments were conducted to measure intra-group trust and risk-taking variables. The risk experiment was conducted based on Binswanger (1980) lottery choice task, and the intra-group trust experiment follows the original trust game designed by Berg *et al*. (1995). The remainder of the variables including indicators of workgroup performance, diversity, monitoring, empowerment, and individual and group characteristics were measured using group and individual structured questionnaires and face to face interviews.

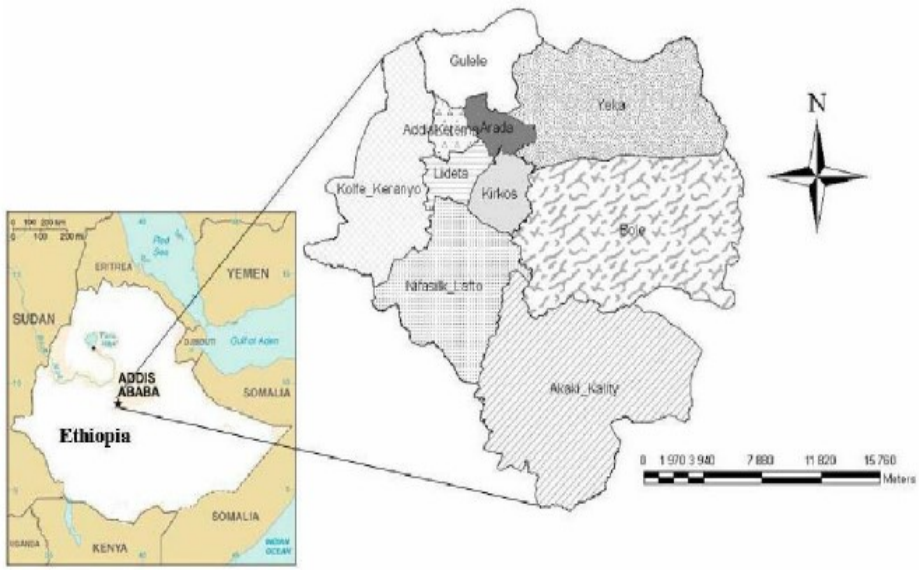

Figure 1.1: Map of Addis Ababa city and sub-cities

Source: research gate, retrieved from

https://www.researchgate.net/figure/281460707_fig1_Fig-1-Map-of-Addis-Ababa-City

1.6 Research approach and conceptual framework

We provide an overview of the four study topics that constitute the conceptual framework for our analysis on Workgroup Performance and Women Empowerment, as presented in Figure 1.2. The first three studies are focused on factors (risk-taking attitudes, intra-group trust and monitoring, and ethnic diversity) that may affect the performance of these female workgroups. The performance of these workgroups is directly related to the economic empowerment of the members of the workgroups, because income generated by women is one of the main components of their economic empowerment (Ganle *et al*., 2015; Weber & Ahmad, 2014; Garikipati, 2008). The fourth study is therefore focused on the relationships between the economic and other dimensions (familial, psychological, legal, political and socio-cultural) of

women's empowerment. In the following four sections, we discuss these key concepts, their theoretical underpinning and practical relevance of each study in relation to the existing literature and the social context of the study area.

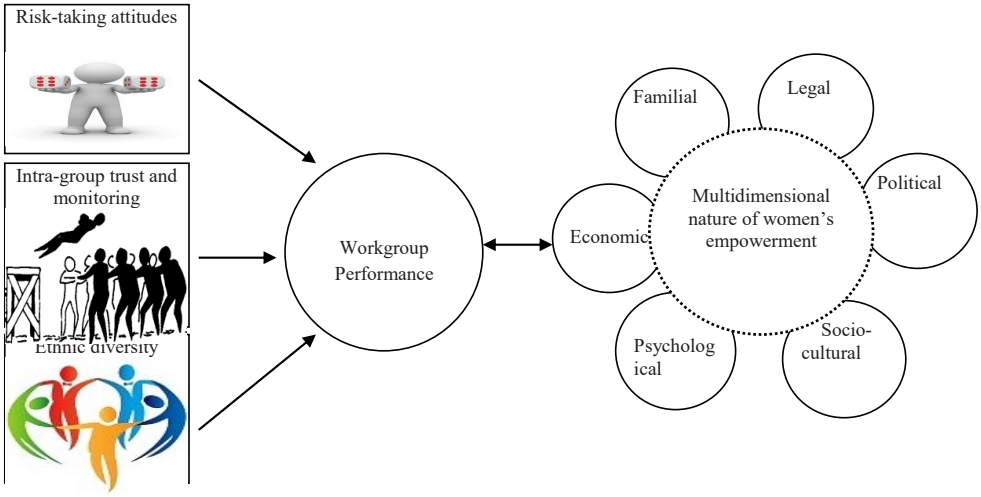

Figure 1.2: Conceptual framework of the study

a) Risk-taking attitudes and workgroup performance

The first study is focused on the way in which working as a group affects the women's risk taking behavior and on the potential consequence of their risk-taking behavior for the performance of the workgroups. Risk-taking attitude is one of the most important factors affecting business performance (Rachdi & Ben-Ameur, 2011; Wang & Poutziouris, 2010). This factor might be even more important for women running a workgroups in the Ethiopian social context, since they operate their businesses in a high risky setting. Their small and informal businesses have a high risk of failure (Njuki *et al.*, 2011) and the fact that these women are involved in income-generating activities may confront them with domestic, community and psychological risks (Heath, 2014; Vyas & Watts, 2009; Drinkwater, 2005;

Ahmed *et al*., 2001). Our study aims to shed light on how the women running a business under these circumstances handle risk choices. More specifically, we aim to find out whether the women involved in these workgroups have different risk choices when they make a certain decision in isolation compared to when they make the same decision together with other members of their workgroups. Furthermore, given that little is known about the determinants and consequences of risk-taking behaviour in a low-income context, we will also study how the individual risk choices of these women are related to their individual and family background characteristics, and to what extent the level of risk-taking in the group decisions is associated with businesses success. The research questions to be addressed in Chapter 2 are:

- *Is there a difference in risk taking behaviour between women taking a risky decision alone and the same women taking this decision as a group decision?*
- *To what extent does the risk taking behaviour of the women influence the workgroup's performance?*

Over the last 50 years of organizational studies, there has been intensive research on the difference in risk choices between individuals and groups. However, the outcomes of this research have been mixed. Some studies provide evidence indicating that groups are more risk-taking than individuals (e.g., Isenberg, 1986; Kogan & Wallach, 1967; Zhang & Casari, 2012). Other studies suggest that group decisions tend to be more cautious than individual decisions (e.g., Baker *et al*., 2008; Masclet *et al*., 2009; Shupp & Williams, 2008). Given the inconsistencies in the literature, we expect women in our study to be rather cautious when they have to make important decisions. This is due to the fact that these women are confronted with a multitude of risks, and also because our sample is dominated by poor, illiterate, and relatively old women.

Regarding effects of individual characteristics on risk-taking behaviour, there is evidence that women are less risk-taking than men (Mather & Lighthall, 2012; Weber *et al*., 2002), younger individuals more easily take risks than older individuals (e.g., Dohmen *et al*., 2011; Sepúlveda & Bonilla, 2014), and individuals with high income/more wealth and with higher educational levels more easily take risks than individuals with less wealth or education (e.g., Hardeweg *et al*., 2013; Knight *et al*., 2003). Moreover, given the fact that individual response tendencies tend to be exaggerated in group decisions (Myers & Aronson, 1972; Davis, 1992; Ambrus *et al*., 2015), we would expect these women to be even more cautious when they have to take decisions together with the other members of their workgroup.

Regarding the relationship between risk-taking behaviour and the success of the female-run businesses on which we focus, the outcomes are uncertain. In wealthier countries, risk-taking behaviour is often associated with success in business (Rachdi & Ben-Ameur, 2011; Wang & Poutziouris, 2010), but it remains to be seen whether this is also the case for the specific circumstances under which these Ethiopian women have to work. It is very well possible that in this high risk context moving in small cautious steps forward is a more effective strategy for enhancing business performance than more risk-taking behaviour.

b) Monitoring, intra-group trust and workgroup performance

The second study examines the relationship between monitoring of members performance and the level of trust within the workgroup, and how this relationship affect workgroup performance. In organizational studies, it is important to examine the relation between intra-group trust and monitoring, because trust is one of the main factors affecting group performance, and its effect is mainly mediated by monitoring (Costa & Anderson, 2011; Langfred, 2004; Webber, 2008; De Jong & Elfring, 2010; Bijlsma-Frankema *et al*., 2008). Scholars report mixed results for this relationship. Some studies (e.g. Langfred, 2004; Costa

& Anderson, 2011) have provided evidence for a negative relation, while others found the relationship to be positive (e.g. De Jong & Elfring, 2010; Bijlsma-Frankema *et al*., 2008; Webber, 2008).

These mixed findings might be explained by the social contexts in which the groups operate. For instance: Langfred (2004) found a negative relation between monitoring and intra-group trust, in a group setting where individuals have a high level of autonomy. De Jong and Elfring (2010) found a positive relation between intra-group trust and level of monitoring, and they explained their findings in relation to the distinct nature of ongoing groups. In Chapter 3, we examine the relation between intra-group trust and level of monitoring in the Ethiopian female workgroups in the spices processing business. The central research questions we want to address in this chapter are:

- *How does monitoring reinforce intra-group trust?*
- *To what extent does the relationship between intra-group trust and monitoring affects the workgroup's performance?*

This is important because of the unique social context where the workgroups operate, namely a low-income and patriarchal context, where women are commonly assumed to be poorer business performers than men (Eagly & Karau, 2002). The female entrepreneurs on which we focus experience stronger pressure to be successful than women in other contexts. The types of business that these women are typically involved in have a high risk of failure (Njuki *et al*., 2011) and failure of these women may be related with domestic violence (Vyas & Watts, 2009), social rejection (Drinkwater, 2005) and emotional stress (Ahmed *et al*., 2001). Because of these pressures, the women may do their utmost best to avoid failure, which may enable them to overcome negative gender stereotypes and to counteract the expectations of low performers (Flynn & Ames, 2006). Since both trust and monitoring are associated with enhanced group performance (Bijlsma-Frankema *et al*., 2008), these women

may use both of them together at one time to increase their performance. We therefore expect to find a positive relation between monitoring and intra-group trust, and an overall positive effect of both of them on group performance.

c) Ethnic diversity and workgroup performance

The third study aims to find out whether the performance of the women workgroups is influenced by the ethnic diversity of the members of the workgroup. This is a highly relevant issue, as Ethiopia is a very diverse country containing more than 80 different ethnic groups (New World Encyclopaedia, 2013). Given the diverse nature of the population and the emphasis of development organizations on workgroups as a way towards empowerment, it is important to know the effects of ethnic diversity on the performance of these female workgroups. Over the last 50 years there has been intensive research on diversity and workgroup performance (Shore *et al*., 2009). However, there are neither consistent theories nor data that show how ethnic diversity may affect workgroup performance. For instance: self-categorization and similarity-attraction theories predict negative effects of diversity on workgroup performance (Tsui *et al*., 1992; Jackson *et al*., 1991; Berscheid & Walster, 1978), while information and decision-making theories consider diversity as a way to increase workgroup performance (Michaéla *et al*., 2003; Wittenbaum & Stasser, 1996). The central research question of chapter 4 on diversity is:

What are the effects of ethnic diversity on the workgroup's performance?

Given the inconsistencies in the diversity literature, scholars agree that diversity is a specific characteristic that may be important in one social context while not in another, and it may also lead to different work-related attitudes depending on the social context in which the individuals operate (Jehn & Bezrukova, 2004; Riordan & Shore, 1997). This in turn indicates the importance of diversity research in various social contexts (Stahl *et al*., 2010; Joshi &

Roh, 2007). However, most of the diversity studies have been conducted in the US among people from different races (white, black, Hispanic, Asian, and American Indian; Richard, 2000) or in European states among people from different nationalities (Bellini *et al*., 2008). Only a few studies have been conducted in low-income countries (e.g. Ehimare & Ogaga-Oghene, 2011). Since low-income societies often suffer from ethnic fragmentation (Alesina & La Ferrara, 2005), diversity research in these societies is likely to focus on fragmented ethnic groups that have been living together for centuries in a given country. Since the fragmented ethnic groups in these societies have been living together for centuries, organizations in these societies may not realize the benefits of cultural diversity like higher level of innovation, enhanced problem solving ability, higher quality decisions (Singh & Point, 2006; Frink *et al*., 2005; Richard *et al*., 2004; Williams & O'Reilly, 1998; Pollar & Gonzalez, 1994; Cox, 1993; Cox *et al*., 1991), and its opportunities for increasing the varieties of goods, services and skills available for consumption, production and innovation (Lazear, 1999; Ottaviano & Peri, 2005; Williams & O'Reilly, 1998). However, the exchange of information, perspectives, goods and service among the fragmented ethnic groups have already been done for long time, so they may no longer provide new perspectives, goods, services or skills.

On the other hand, due to the historical complications in most low-income and ethnically fragmented societies, the costs of cultural diversity like racism, prejudices (Abadie & Gardeazabal, 2003), conflicts of preferences (Alesina *et al*., 1999), increases in turnover (Jackson *et al*., 2003; Webber & Donahue, 2001), low communication, less attachment, less social cohesion (Pelled *et al*., 1999), and less commitment to the organization (Harrison *et al.,* 1998; Watson *et al*., 1993; Tsui *et al*., 1992) may still exist. Hence, ethnic diversity possibly also has negative effects on workgroup performance in a low-income and ethnically fragmented social context.

d) The multidimensional nature of women's empowerment

The fourth study presented in this thesis focuses on empowerment as a multidimensional phenomenon and examines whether and to what extent economic empowerment derived from the workgroup's business outcomes contributes to empowerment of the women in other dimensions. In 2000, empowering women was set by the United Nations as one of the eight major Millennium Development Goals for the 15 years to come. However, despite great efforts and strong commitments among governments and developmental organizations, this target was not fully achieved and many women are still facing discrimination in access to resource and disempowerments in different aspects of their life (UN, 2015). This might in part be caused by the fact that most of the interventions that aimed to increase women's empowerment have been focused on the economic dimension (UNDP, 2011; World Bank, 2011). Empowerment is a multidimensional process, and the aim of this study is to find out to what extent empowerment in the economic dimension is essential for reinforcing empowerment in five other important constituting dimensions: the familial, psychological, legal, political and socio-cultural. To do so, in Chapter 5 of this thesis the following research questions will be answered:

To what extent and in which way is the amount of income the women receive from their workgroup activities (economic empowerment) associated with empowerment in other important dimensions (familial, psychological, legal, political and socio-cultural)?

There are a few empirical studies examining the interrelationships among the different dimensions of women's empowerment. For instance, Kishor (2000) conducted a study in Egypt on ten empowerment indicators and found that some of these indicators were comparatively better correlated than others. Williams (2005) conducted a factor analysis on six empowerment indicators in rural Bangladesh and found a similar result. However, these studies did not clearly differentiate between the economic and other dimensions of women's

empowerment. They also did not include income generated by women, one of the most important indicators of women's economic empowerment. To fully reflect the multidimensional nature of women's empowerment, different key indicators need to be specified and measured across various dimensions (Estudillo *et al*., 2001). Moreover, the economic dimension should comprise women's income as one of the main indicators, since in gender studies other human development and capability variables are often examined in relation to the indicator of female control over income (Garikipati, 2008; Heath, 2014; Weber & Ahmad, 2014; Ganle *et al*., 2015).

The need to study women's economic empowerment, in relation to other dimensions of empowerment, is informed by studies that report contradictory outcomes regarding the relationship between women's income and their wellbeing. There are many studies indicating that the opportunity to get engaged in paid work can increase women's autonomy and can make them economic actors who may control productive resources; who may invest in their own health and education, as well as in that of their family; and who may actively participate in politics (Kabeer, 2005; Esplen & Brody, 2007; DFID, 2010). However, there are also a growing number of studies indicating that the participation of women in paid work is an additional burden besides their care work, and that this 'double workload' is likely to have negative effects on the women's health, wellbeing and dignity (Esplen & Brody, 2007; Haile *et al*., 2012).

These controversies in the literature on women's participation in paid work may result from the multidimensional nature of women's empowerment: interventions that are narrowly focused on only one dimension of empowerment may not improve the other dimensions, and may sometimes even negatively affect them (Malhotra *et al*., 2002). In order to develop effective interventions, it is important to know how the different dimensions of empowerment are related to each other. More importantly, since many interventions are only focused on

economic dimension of women's empowerment, it is important to find out to what extent empowerment in this dimension is supportive for empowerment in other dimensions of empowerment.

1.7 Thesis outline

The rest of the thesis is organized into five chapters. The next four chapters present four independent studies, in which we answer the four research questions of the thesis (Table 1.1). The last chapter provides conclusions and summary of the thesis. The data for all studies were collected from the same participants (female workgroups in red-pepper and other spices processing business in Addis Ababa) and at the same time. We used different data collection method to answer the research questions of the studies (see Table 1.1). Three of the studies (Chapter 2, 3 & 5) are already published in peer-reviewed journals and thus presented be read independently. Hence, there remains some overlap between the studies, especially with regard to each study's introduction, description of the setting and methodology.

The first three studies examine factors that may affect the performance of these female workgroups (Chapter 2-4). The last study examines how income gained from these workgroups (economic empowerment) is related to other forms of empowerment (familial, psychological, legal, political and socio-cultural) (Chapter 5). The second chapter presents the first study, which provides evidence on the difference in risk-taking choices between individuals and groups. It also examines the effects of group risk taking choices on workgroup performance. The third chapter assess the relations between intra-group trust, monitoring and workgroup performance. Chapter four present evidence on the effects of ethnic diversity on workgroup performance. The fifth chapter examines the interrelations between the economic and other dimensions of women's empowerment. Chapter six

summarizes the main findings, contributions made to the literature and discusses the possible policy implications.

Table 1.1 Overview of chapters

Chapter	Research question	Key independent variable	Dependent variable	Data collection method
2	Are there differences between the individual versus group risk choices, and how do risk choices influence the performance of female workgroups in the red-pepper processing in Ethiopia?	Group risk-taking choices	Workgroup performance	Field experiment (A Lottery choice task; Binswanger, 1980) + Survey
3	How does intra-group trust and monitoring relate to each other in the female workgroups, and how does this relation influence the performance of the workgroups?	• Intra-group trust • Intra-group monitoring	Workgroup performance	Field experiment (Trust game; Berg *et al*., 1995) + Survey
4	What are the effects of ethnic diversity on the performance of the female workgroups?	Ethnic diversity	Workgroup performance	Survey
5	Whether and to what extent is the empowerment gained by women forthcoming from the income gained from these workgroups (economic empowerment) related to other forms of empowerment (familial, psychological, legal, political and socio-cultural)?	Economic empowerment	• Familial empowerment • Psychological empowerment • Legal empowerment • Political empowerment • Socio-cultural empowerment	Survey

Chapter 2

Group versus individual risk choices in female workgroups in Ethiopia *)

Abstract

A lottery choice task was conducted to examine the risk attitudes of 352 Ethiopian women who were members of 72 female workgroups in the spices processing business in Addis Ababa. The women were asked to make risk choices on their own, and the same choices together with the other members of their workgroup, as a group decision. Our study is different from earlier research in the field in that it focuses on poor women operating a business in a low-income patriarchal society. The data show younger and more educated women to be more risk-taking in their individual choices than older and less educated women. The group choices were more cautious than the (means of) the individual choices of the members, hence providing evidence of a cautious shift. Groups that were more risk-taking had better business performance in terms of capital gains, hired workers and income earned by the women.

Keywords: risk choices, female workgroups, a lottery choice task, group performance, Ethiopia.

*) Bayissa, F. W., Smits, J., & Ruben, R. (2017). Group versus individual risk choices in female workgroups in Ethiopia. *Group dynamics: theory, research and practice, 21*(3), 148-158.

2.1 Introduction

Ethiopia is one of the world's poorest countries and has a high level of gender inequality and women's disempowerment. According to the gender inequality index of the Human Development Report of 2015, Ethiopia ranked 129 of the 156 countries in the list (UNDP, 2015). Since the beginning of this century, the Ethiopian government and developmental organizations have facilitated the formation of female workgroups as a model strategy to increase women's empowerment and enhance their capacity to act collectively (Alsop & Heinsohn, 2005). These workgroups consist of women who run a business together. The members of the workgroups are interdependent in their tasks and take all production, investment and savings decisions together. They decide for example about how much of the revenue will be reinvested in the business; when and to whom to sell the output; when and where to buy inputs; and whether or not, how much and where to borrow money. The members share responsibility for the outcome decisions and for managing their business across organizational boundaries.

The workgroups on which the current study focuses are engaged in the red-pepper and other spices processing business. Red-pepper is a vegetable and spice crop produced by many farmers in Ethiopia. For centuries, red-pepper processing has been one of the most time and energy consuming home activities in Ethiopia, and women have traditionally been responsible for this activity. Over time, groups of entrepreneurial women have recognized their expertise in the red-pepper processing as a business opportunity. They started to buy unprocessed red-pepper from the market, to add value by processing it, and to sell it back to the market. In order to enhance the capacities of these female workgroups, the government and developmental organizations provided them with working places, business training, finance management, market integration, micro-finances and so forth.

A major factor that may influence the performance of these businesses is the way the involved women handle risk. This is important, as these women operate their businesses in a risky setting. The small and informal businesses they run have a high risk of failure (Njuki *et al.*, 2011) and the fact that they as women are involved in income-generating activities confronts them with domestic, community and psychological risks (Heath, 2014; Vyas & Watts, 2009; Drinkwater, 2005; Ahmed *et al*., 2001).

Given the importance of risk-taking behaviour for business performance (Rachdi & Ben-Ameur, 2011; Wang & Poutziouris, 2010), the current study aims to shed light on how the women running a business under these circumstances handle risk choices. More specifically, we aim to find out whether the women involved in these workgroups have different risk choices when they make a certain decision in isolation compared to when they make the same decision together with other members of their workgroups. Furthermore, given that little is known about the determinants and consequences of risk-taking behaviour in a low-income context, we will also study how the individual risk choices of these women are related to their individual and family background characteristics and to what extent the level of risk-taking in the group decisions is associated with businesses success.

To address these issues, we have held a survey and performed a lottery-choice task with 352 women from 72 female workgroups in the spices processing business in Addis Ababa. Given that our sample differs in terms of cultural dimensions and with regard to gender from the Western male-dominated samples typically used for research on risk attitudes, our data provide a unique opportunity to study the scope and validity of earlier findings in the field for women-run workgroups in a patriarchal low-income context.

2.2 Background

In the literature on organizational behaviour, the difference in risk choices between members of a group who make decisions in isolation and the same members making decisions together is generally referred to as a *group shift* (Ambrus *et al*., 2009). Over the last 50 years of organizational studies, there has been intensive research on these shifts. However, the outcomes of this research have been mixed. Some studies provide evidence indicating that groups are more risk-taking than individuals, hence for a *risky shift* (e.g., Isenberg, 1986; Kogan & Wallach, 1967; Zhang & Casari, 2012). Other studies suggest that group decisions tend to be more cautious than individual decisions, hence are in favour of a *cautious shift* (e.g., Baker *et al*., 2008; Masclet *et al*., 2009; Shupp & Williams, 2008). There are also studies reporting no evidence for a group shift at all (e.g., Ambrus *et al*., 2009; Deck *et al*., 2012).

The research over the years on group shift (e.g. Stoner, 1968; Myers & Aronson, 1972; Rao & Steckel, 1991; Davis, 1992; Ambrus *et al*., 2009; Roux & Sobel, 2015; Ambrus *et al*., 2015) has coalesced around the general prediction that group distributions can be described as exaggerations of the individual distributions. More specifically, when individuals have relatively risky initial tendencies, combining them into groups typically results in a shift toward even greater risk, and a cautious shift is expected when individuals have relatively cautious initial tendencies. Hence, it seems important to examine the (determinants of) participants individual risk choices to predict how they would behave in the group condition.

Individual differences in handling risks have been extensively studied in the last decades. Several studies have documented gender differences in risk-taking behaviour, whereby women were found to be less risk-taking than men (Mather & Lighthall, 2012; Weber *et al*., 2002). For age, a negative effect on risk-taking has been found; younger individuals more easily take risks than older individuals (e.g., Dohmen *et al*., 2011; Hardeweg *et al*., 2013; Sepúlveda & Bonilla, 2014). The effect of socio-economic status on risk-taking behaviour is

positive. Individuals with more income/wealth and with higher educational levels more easily take risks than individuals with less wealth or education (e.g., Hardeweg *et al*., 2013; Maccrimmon & Weh-rung, 1990; Knight *et al*., 2003; Sepúlveda & Bonilla, 2014). Given that our sample is dominated by poor, illiterate and rather old women, we expect to find the individual decisions to be rather risk-averse.

Besides in their individual characteristics, the women on which we focus differ also with regard to the context in which they operate from the respondents usually used in research on risk choices. The women in our sample are running their businesses in a patriarchal low-income context, where they face besides business risks also several forms of non-business risks. The business risks have to do with the fact that the small and informal businesses they are involved in have a high risk of failure (Njuki *et al*., 2011). The non-business risks are related to the specific cultural context in which they operate. These risks include family risk, community risk and psychological risk. Family risk is related to domestic violence elicited by the women's participation in income generating activities (Heath, 2014; Vyas & Watts, 2009). Community risk involves societal rejection because of disobedience to traditional gender roles (Drinkwater, 2005). Psychological risk is related to the tensions, anxiety and emotional stress caused by discrepancy between what they were expected to achieve in their business and their real achievement (Ahmed *et al*., 2001).

Given the multitude of risks that these women are confronted with, together with their individual characteristics, we expect them to be rather cautious when they have to make important decisions. Moreover, given the fact that individual response tendencies tend to be exaggerated in group decisions (Myers & Aronson, 1972; Davis, 1992; Ambrus *et al*., 2015), we expect these women to be even more cautious when they have to take decisions together with the other members of their workgroup. This leads us to the expectation that in our lottery choice task we will observe predominantly cautious shifts.

Regarding the relationship between risk-taking behaviour and the success of the female-run businesses on which we focus, we do not have strong expectations. In wealthier countries, risk-taking behaviour is often associated with success in business (Rachdi & Ben-Ameur, 2011; Wang & Poutziouris, 2010), but it remains to be seen whether this is also the case for the specific circumstances under which these women have to work. It is very well possible that in this high risk context moving in small cautious steps forward is a more effective strategy for enhancing business performance than more risk-taking behaviour.

2.3 Method

Participants

Participants in the study were 352 women from 72 ongoing female workgroups in the red-pepper and other spices processing business in Addis Ababa, the capital of Ethiopia. The workgroups had a median size of 11 (interquartile range 6–21.5), and a mean operation years of 5.4 (SD = 2.9; range 0.7–11.2). Participants had a mean age of 43.5 years old (SD = 9.3; range 20–75). Approximately half of the sample reported being married (51.7 %). The others were widowed (27.8%), divorced (5.7%), separated (9.4%), or had never been married (5.4%). The participants' educational levels were classified as illiterates (33.5%), only elementary school (42.9%), and high school or more (23.6%). Participants had a median wealth (asset, saving and remittance) level of 13,563 ETB (interquartile range 891–86,543).

Data were collected by means of a survey and a number of sessions in which the women participated in a lottery choice task. Data collection started in July 2013 and lasted until October 2013. In the first three months, we collected survey data. In the last month, the choice task was conducted. After permission was obtained to work with these workgroups of the Addis Ababa City Administration, Micro and Small Enterprise Development office (MSEDO),

we selected the six sub-cities of Addis Ababa with a large number of workgroups in the spices processing sector (based on information from MSEDO). In these sub-cities there are 64 *woredas*. *Woreda* is the second level (next to sub-city) administrative division of Addis Ababa. We listed all 270 workgroups in these 64 *woredas* and randomly selected 102 workgroups to be included in our survey. Contact information of the workgroups was subsequently obtained of the MSEDOs.

The survey was conducted by means of a structured questionnaire and face to face interviews. All members of the workgroups participate in the group interview and five members of each workgroup were randomly selected to participate in the individual interview. The individual interviews were conducted privately and independently. In those interviews, background characteristics of the women were collected, including their age, level of education, marital status, number of children, and household wealth. In the group interviews, information on the workgroup and its enterprise was collected, including group size, years of business operation, initial member contributions, average monthly income, number of hired employees, the value of raw materials, work-in-process and finished products for sale (inventory), total amount of loans taken by the workgroup, the value of items used for generating future revenues (assets), total savings in the group account, and total donations received from the government or other organizations.

The five women of each group who participated in the individual interviews were informed that they might be invited for playing a game, whereby each of them would receive 100 ETB (≈5 USD and on average 1/3 of their monthly salary) and would get the chance to receive up to 400 ETB. We also mentioned that these members would be playing the game as representatives of the group, and thus had to come together on a specific day and that they would be informed by phone about the exact date.

After collecting the survey data, we randomly selected 72 out of the 102 workgroups to be included in the choice task. These 72 workgroups were located in 25 *woredas* (between one and four workgroups per woreda). To play the game, the workgroups of a given *woreda* were invited to the *woreda's* MSEDO at a specific date. Four of the workgroups, in four different *woredas,* showed up with only three workgroup members. These workgroups were removed from the study and replaced by workgroups from the next *woreda*.

In each *woreda*, the choice task was conducted only once and on a different day. As the task was conducted in different *woredas* at different days, we checked the communication among workgroups to find out whether there were spillover effects. To do so, we asked for the name of the nearby workgroups in the same *woreda*, but only the names were known of the immediate neighbouring workgroups (in most *woredas* the working places provided by the government were abut). Then, we asked for information about the immediate neighbouring workgroups, but we got nothing except the workgroups' names. We, therefore, concluded that there was very little information exchange among the workgroups within a *woreda*, and thus probably even less exchange between workgroups in different *woredas*. Before conducting the choice task in a *woreda*, we also checked whether the participants had received any information about the game. No signs of the spill-over effects were found.

Procedure

Participants played the lottery choice game twice: one time individually and one time as a group member. Monetary incentives (50 ETB ≈ 2.5 USD) were provided for both conditions (see Ambrus *et al*., 2009). Participants were presented with a menu of six choices (Table 1). The menu was based on Binswanger's (1980) lottery choice game. The first choice (choice A) was an extremely low risk choice, because the participant choosing this option would be going home with the whole amount of 50 ETB. All other choices had two possible outcomes;

either losing money or gaining money. The outcomes were determined by a coin flip, with equal probability for each outcome. For instance, in the second choice (choice B), a participant would be playing with 5 ETB. If she would lose, there would remain 45 ETB in her pocket. If she would win, she would get a reward of 50 ETB, and together with the 45 ETB in her pocket, she totally receives 95 ETB. In this choice, the participant takes a small risk that can be seen as a risk-averse decision. If she would have opted for the most risky choice (F) she could have lost the whole amount of 50 ETB and nothing would have remained in her pocket. But if she would win, she would get a reward of 200 ETB. We explained these rules of the game several times using different examples, so that all possible options were known to all members before the decisions were made (see Pavitt, 2014).

Tabel 2.1: List of choices in the experimental task that measure the degree of risk-aversion

	Choices	Payoffs (Outcomes)				Risk-averse choices	Approximate partial risk aversion coefficient (r)
		Bad luck (Heads)		Good luck (Tails)			
		Lost	Remain in pocket	Reward	Total gain		$U(x) = (x^{1-r}/(1-r))$
A	No play	0	50	0	50	Extreme	∞ to 7.51
B	Playing with 5 ETB [a]	5	45	50	95	Severe	7.51 to 1.74
C	Playing with 10 ETB [a]	10	40	80	120	Intermediate	1.74 to 0.812
D	Playing with 20 ETB [a]	20	30	120	150	Moderate	0.812 to 0.316
E	Playing with 40 ETB [a]	40	10	180	190	Slight to neutral	0.316 to 0
F	Playing with 50 ETB [a]	50	0	200	200	Neutral to negative	0 to -∞

[a] 1 ETB ≈ .05 USD

In the first (individual) condition, each participant played the game separately in a private room. In this condition, neither talking nor asking questions was allowed and two people were present to enforce this rule. We received the amount of money they wanted to play with and

wrote it down on a paper. The outcome of the game in this first condition remained unknown until the game in the second condition was played, whereby we fixed the order of the two conditions.

In the second (group) condition, each participant received again 50 ETB and the five members of each workgroup were asked to come up with a joint decision. In this condition, unrestricted deliberation among the group members was allowed until the members agreed unanimously on a choice (in line with Baker *et al*., 2008). When the members of a group had reached a decision, they would give the amount of money they wanted to play with to the supervisors. For instance, if a group decided to play with 5 ETB (choice B), each member would give 5 ETB back, in total 25 ETB. If the group was lucky, each participant would get 50 ETB reward, but if the group had 'bad luck', all participant would lose the 5 ETB they were betting with.

After all groups made their decisions, we flipped a coin twice to determine the payoffs (outcome) of each condition. After this, those individuals (in the first condition) and groups (in the second condition) with 'good luck' were rewarded according to their bet, and the session was terminated.

Measures

Because most available enterprise performance measurement systems are designed for use in a large business context (Hudson *et al*., 2001), we created our own performance indicators for the workgroups on which we focus. As discussed in Bayissa *et al*. (2017), our indicators are capital gain per capita, employment creation and monthly income from the group business.

Capital gain per capita indicates the amount of stock capital gained by each member as a result of participating in the workgroup. It was measured over the whole life course of the workgroup since it was established according to the following formula:

$$CG = \frac{(I + A + S) - (IMC + DC + D)}{GS}$$

Whereby I is Inventory, A is Assets, S is Savings, IMC is Initial Members' Contributions, DC is Dept Capital, D is Donations, and GS is Group Size. If the capital gain per capita was negative this meant bankruptcy.

Of the groups in our sample, 12.5% (9 groups) was indebted as a result of their participation in the group business, as their capital gain was below zero. About 74% (53 groups) of women earned between 0 and 10,000 ETB from the group business, and 14% (10 groups) earned between 11,000 and 29,000 ETB. This indicator provides an overview of the group's performance over its life course, but is less informative about the current situation of the group.

As second performance indicator we use employment creation, a measure that was also used by Blackburn *et al*. (2013). We measure employment creation by the number of hired labour of a workgroup. Workgroups hiring more workers are supposed to have a higher performance. The workgroups in our study had a median number of hired employees of 2.5 (interquartile range 0–8.5).

Our third performance indicator is the average monthly income the group members obtained from the group business. This indicator might give the most current information on the workgroups' performances. The median monthly income from the group's business was 300 ETB (interquartile range 0–875).

Analysis

We used descriptive statistics to summarize the data. To determine the existence of a group shift, the Wilcoxon signed-rank test is used. This test is appropriate for ordered groups of data (Woolson, 1998). A group shift was calculated as the difference between the mean of

individual choices of the members of a workgroup in the first condition and the workgroup's choice in the second condition.

We used multilevel modelling (hierarchical linear modelling) to examine factors affecting individual risk choices, because it allowed us to control for the nesting of individuals within groups (see Bryk *et al*., 2002; Fidell *et al*., 2007). The independent variables in this model are the women's' age, educational level, marital status, number of children and household wealth. These variables were selected based on their importance in the literature on individual risk-taking behaviour (e.g., Dohmen *et al*., 2011; Hardeweg *et al*., 2013; Sepúlveda & Bonilla, 2014; Knight *et al*., 2014).

To study the relationship between the groups' risk choices and the performance of their spices processing businesses, we used OLS regression for the outcomes capital gain and monthly income from the group business. For the analysis with the number of hired employees as outcome, we used Poisson regression. To examine the appropriateness of the Poisson Model, we performed a likelihood-ratio test. Given that the over-dispersion parameter (alpha) was not significantly different from zero, we concluded that the distribution of hires did not display signs of over-dispersion and that the Poisson model was appropriate. As control variables we included the following group characteristics: size of the workgroup, number of business operation years, average age of the members, average years of education of the members and the percentage of members who were married. These control variables were selected based on their importance in the literature on firm performance and risk-taking (see Rachdi & Ben-Ameur, 2011; Wang & Poutziouris, 2010; Knight *et al*., 2003; Hardeweg *et al*., 2013). We performed multicollinearity tests for all independent variables. The tests results indicated that the maximum Variance Inflation Factor (VIF) was less than two, which according to Neter *et al*. (1989) indicates that multicollinearity is not a concern. The data was analyzed with STATA 13.

2.4 Results

The descriptive statistics are presented in Figure 1. Both individuals and groups generally preferred the more cautious choices. However, this tendency towards cautiousness was clearly stronger for the group decisions than for the individual decisions. For only 8 (11%) of the groups the means of the individual choices of the members fell into the two most cautious categories. However, in 27 (37.5%) of group decisions one of the two most cautious choices was chosen.

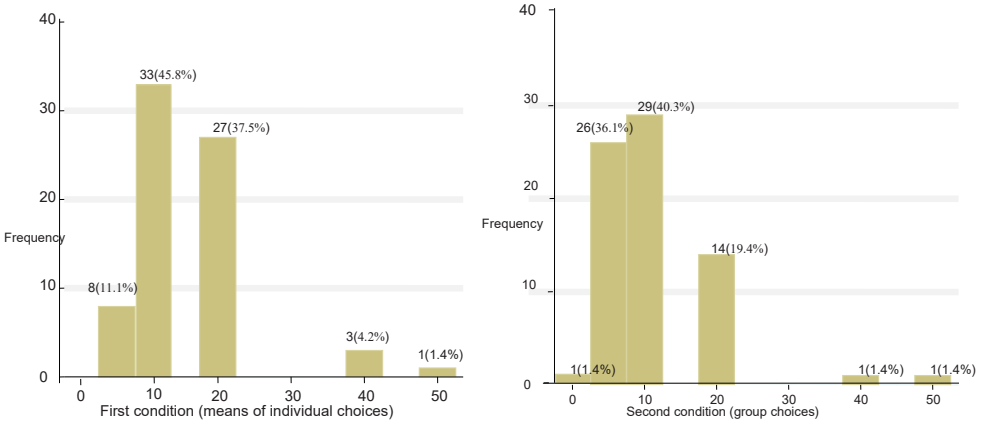

Figure 2.1: Frequencies and percentages for the means of individual choices in the first condition and group choices in the second condition

More detailed information about the group shifts is presented in Table 2. The results provide clear evidence in favour of a cautious shift. The majority of the workgroups, 54 (75%), had a cautious shift, whereas 5 (7%) of them had no shift and 13 (18%) had a risky shift.

Tabel 2.2: A group shift: the mean of individual choices in a workgroup in the first condition minus the workgroup choice in the second condition

Direction of shift		Obs.	Mean	Std. Dev.	Per.
Cautious shifts	Group shift >0	54	7.87	5.41	75.00
No shift	Group shift = 0	5	0	0	6.94
Risky shifts	Group shift < 0	13	-4.81	3.59	18.06
N		72			100

The Wilcoxon signed-rank test for dependent samples indicates that the means of individual choices in the first condition were statistically significantly larger than the group choices in the second condition (Z= 5.2, p < .0001, N = 72). These results confirm the existence of group shifts into the cautious direction.

Determinants of individual risk attitudes

The outcomes of the multilevel regression analyses are presented in Table 3. They indicate that the individual risk choices are associated with the women's age and level of education. Older women had a significantly lower tendency to take risks than younger women and more educated women had a significantly higher tendency to take risks than illiterates. These results are in line with findings from research on wealthier countries (e.g., Dohmen *et al*., 2011; Hardeweg *et al*., 2013; Sepúlveda & Bonilla, 2014; Knight *et al*., 2014). Wealth and marital status are not significantly related to the risk-taking behaviour of the women.

Tabel 2.3: Multilevel regression of the risk-taking tendency in the individual risk choices

	Individuals risk-taking behaviour
Fixed	
Intercept	22.30***
	(4.32)
Age	-0.22**
	(0.09)
Wealth	-0.01
	(0.47)
Education	1.83***
	(0.54)
Marital status	-0.57
(1=married, 0=others)	(1.5)
Number of children	0.15
	(0.39)
Random	
Variance estimate groups	29.38
	(11.13)
Variance estimate residual	161.28
	(13.71)
Log likelihood	-1416.93
N	352

Standard error in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Group decisions and business performance

The outcomes of the OLS and Poisson regressions with business performance as dependent variable are presented in Table 4. Group's risk-taking is positively associated with all three performance indicators. Workgroups that made more risky choices in the task had higher capital gains per capita ($p < .001$), hired more employees ($p < .01$) and their members earned higher monthly income from the group business ($p < .01$).

Tabel 2.4: OLS and Poisson regressions of workgroup performance

	Performance indicators		
	Capital gain per capita (OLS)	Number of hired workers (Poisson)	Monthly income per capita (OLS)
Intercept	-234.2***	-1.34	-4.64
	(60.7)	(0.75)	(2.5)
Group risk choices	2.98***	0.02**	0.09**
	(0.74)	(0.01)	(0.03)
Business operation years	5.00*	0.06*	0.19*
	(2.14)	(0.02)	(0.09)
Group size	0.41	0.03*	0.07
	(1.10)	(0.01)	(0.05)
Education (mean)	23.39**	0.29**	0.77*
	(7.63)	(0.09)	(0.32)
Age (mean)	3.92**	0.01	0.10*
	(1.16)	(0.01)	(0.05)
Percentage of married women	0.13	0.02	-0.01
	(0.22)	(0.01)	(-0.46)
R^2	0.46		0.32
Pseudo-R^2		0.16	
N	72	72	72

Standard error in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

2.5 Discussion and conclusions

We studied risk attitudes of women in a sample of 352 women who were member of 72 female workgroups in the spices processing business in Addis Ababa. We examined the difference in risk choices between women making a decision alone and the same women making a decision together with the members of their workgroup, as a group decision. We also analyzed the association between individual and family background characteristics of the women and their individual risk choices, as well as the relationship between the level of risk-taking in the group decisions and the performance of the workgroups. Our focus on women operating a business in a low-income patriarchal and high-risk context, adds a unique new

perspective to the literature on risk attitudes, which hitherto was mainly based on male dominated samples in wealthy countries.

The results of our study indicate that the majority of the women were relatively cautious in their individual choices. They were even more cautious in the group decision. Hence, we found evidence in favour of a cautious shift. With respect to the relationship between individual risk choices and the women's background characteristics, we found that older and illiterate women tend to make less risky choices than younger and educated women. No significant relationship was found for marital status and household wealth. The relationship between risk-taking behaviour in the group decision and workgroup performance was found to be positive. Groups which made more risky choices in the lottery choice task had higher capital gains per capita, a larger number of hired workers and the members earned a higher monthly income of the group business compared to the other groups.

The outcomes of our study are in line with earlier findings indicating that whatever response tendency seems to exist among group members in the individual decisions becomes exaggerated in a group decision (Stoner, 1968; Myers & Aronson, 1972; Rao & Steckel, 1991; Baker *et al*., 2008; Shupp & Williams, 2008; Ambrus *et al*., 2009; Masclet *et al*., 2009).

The dominance of cautious choices in the individual decisions and the subsequent cautious shift in the group decision finding of comes as no surprise, given the characteristics of our sample and the conditions under which the groups operate. Our sample consisted of poor, illiterate, middle-aged and older women, who operated their businesses in a high-risk patriarchal context. There are clear indications that women are more risk averse than men (Mather & Lighthall, 2012; Weber *et al*., 2002). There is also evidence in the literature that younger, educated and wealthier persons are more risk-taking than older, illiterate and poorer persons (e.g. Dohmen *et al*., 2011; Hardeweg *et al*., 2013; Knight *et al*., 2003; Sepúlveda & Bonilla, 2014; Maccrimmon & Weh-rung, 1990). Our finding that younger and more

educated women are more risk-taking in their choices than older and illiterate women is in line with this evidence. However, the positive effect of wealth is not confirmed in our data. This might be due to the patriarchal context on which we focus. In this social context, women have little control over productive assets and wealth might therefore not be an important factor for their risk-taking behaviour.

The risk-averse tendency among the women might also be explained by the situation in which they are operating. As discussed in the theoretical section, the small and informal businesses run by the women have a high risk of failure and the patriarchal Ethiopian context confronts them with high levels of domestic, community and psychological risks (e.g. Njuki *et al*., 2011; Heath, 2014; Vyas & Watts, 2009; Drinkwater, 2005; Ahmed *et al*., 2001). Under these circumstances, it is not very surprising that the women have a low tendency to gamble with their money and that they opt for certainty over risk.

At the same time, this risk-aversion tendency might reduce their business success, as the positive relationship between risk-taking and business performance suggests. In this respect, the businesses of these women do not differ much from businesses in more developed regions, where risk-taking behaviour tends to be positively related to performance, as for example was found by Wang and Poutziouris (2010) for family firms in the UK and by Rachdi & Ben-Ameur (2011) for Tunisian commercial banks. It is important to note, however, that the direction of causality is not clear. It is possible that the higher level of risk-taking of these workgroups contributed to their business success, but it might also to a certain extent be that business success made them prepared to take more risks.

The generalizability of our findings might to a certain extent be limited by the procedure used in the lottery choice task. For instance, we provided the choice task money just before the participants made their decisions, and this might have influenced the women into the risk-averse direction. There is evidence that the value of the choice task money increases when it

becomes a part of the women's endowment, the so-called 'endowment effect' (Kahneman *et al.*, 1991). This might make the women more risk-averse, because attitudes towards risk concerning gains might be quite different from attitudes towards risks concerning losses (Kahneman & Tversky, 1979). We therefore suggest for future research to bring more variation into the moment the choice task money is provided. Another restriction of our study is that we let the outcome of the choice task in the first condition unknown until the end of the second condition. This might have created a fixed order problem. We thus suggest for future research to change the choice task setting to solve this problem.

The findings of our study are of practical importance for the literature on entrepreneurial teams and in particular for enhancing the performance of such teams in low-income countries. Although risk-taking behaviour is associated with better workgroup performance, the women involved in the workgroups have a risk-averse tendency when making decisions alone and even more when making such a decision as a group. This risk-averse tendency is understandable given the characteristics of the team members as well as of the context in which they operate, but it does not seem very favourable for their business success. Given that individual tendencies seem to be strengthened in the group context, we suggest that organizations that aim to improve the performance of such workgroups develop strategies that improve individual's risk-taking behaviour, which then in turn might improve the level of the workgroups risk-taking and performance.

Chapter 3

The importance of monitoring for developing intra-group trust in Ethiopian female workgroups *)

Abstract

We examine the relation between intra-group trust and monitoring in a patriarchal society, and how this relation affects workgroup performance. Data were collected from 352 women who were members of 72 female workgroups in Addis Ababa by means of field experiments and a survey. The data are analyzed using multiple mediation analysis. We find that intra-group trust needs time to develop, and that trust is higher in workgroups with more monitoring. The positive relation between monitoring and trust might be explained by women's ambition to overcome disempowerment and negative gender stereotypes. The results also indicate positive effects of intra-group trust and monitoring on workgroup performance, and that the effect of monitoring runs through its relation with trust. The last finding stresses the importance of monitoring for developing intra-group trust in these female workgroups.

Keywords: intra-group trust; monitoring; female workgroups; performance; Ethiopia

*) Bayissa, F. W., Smits, J., & Ruben, R. (2017). The Importance of Monitoring for Developing Intra-Group Trust in Ethiopian Female Workgroups. *Journal of African Business. Advance online publication.*

3.1 Introduction

Since 1993, the Ethiopian federal constitution has granted equal rights to women with men in all spheres of life including marriage, property rights, inheritance and bodily integrity (Women's Affairs Sub Sector, 2004). Cultural practices that reduce the women's welfare (e.g. genital mutilation, polygamy and early marriage) have legally been prohibited (Bevan & Pankhurst, 2007). However, Ethiopia is still among the countries with the highest level of gender inequalities. According to the gender inequality index of the Human Development Report of 2013[1], Ethiopia is ranked at 121 of the 151 countries in the list. The UN Women 2011-2012 report shows that 49% of women in Ethiopia have experienced physical violence from a partner, and 59% of them have experienced sexual violence. Around 74% of the Ethiopian women have undergone female genital mutilation (WHO, 2011), and 41% of girls are married before they are 18 (UNICEF, 2013). Ethiopian women have a low level of political representation and their political movement is small and weak (Biseswar, 2008). Few women in Ethiopia own productive assets and even for these women the assets are often controlled by men (Lim *et al*., 2007).

In the last two decades, the Ethiopian government and developmental organizations have facilitated the formation of female workgroups as a model strategy to develop women's empowerment and to change the position of women in the country (Alsop & Heinsohn, 2005). These female workgroups are a collection of women who run a business together. That it fits with Cohen and Bailey's (1997) group definition. Members of these workgroups are interdependent in their tasks; they make all production and investment decisions together; they share responsibilities for outcomes decisions and manage their businesses across organizational boundaries. The Ethiopian government and developmental organizations have

[1] Available from: http://hdrundporg/en/content/table-4-gender-inequality-index (Accessed 20 December 2014).

been supporting these female workgroups in terms of providing working places, access to credit, business training, financial management, market integration and so forth. However, until now there has been little research on the factors that contribute to the performance of these workgroups. The current study aims to address this gap in our knowledge by examining the relation between intra-group trust and monitoring, and how this relation affects the performance of these female workgroups.

In organizational studies, it is important to examine the relation between intra-group trust and monitoring, because trust is one of the main factors affecting group performance (Steiner, 1972), and there is evidence that its effect may be mediated by monitoring (Costa & Anderson, 2011; Langfred, 2004; Webber, 2008; De Jong & Elfring, 2010; Bijlsma-Frankema, De Jong, & van de Bunt, 2008). Scholars report mixed results for this relationship. Some studies (e.g. Langfred, 2004; Costa & Anderson, 2011) have provided evidence for a negative relation, while others found the relationship to be positive (e.g. De Jong & Elfring, 2010; Bijlsma-Frankema *et al*., 2008; Webber, 2008).

These mixed findings might be explained by the social contexts in which the groups operate. For instance: Langfred (2004) found a negative relation between monitoring and intra-group trust, in a group setting where individuals have a high level of autonomy. De Jong and Elfring (2010) found a positive relation between intra-group trust and level of monitoring, and they explained their findings in relation to the distinct nature of ongoing groups. In this study, we examine the relation between intra-group trust and level of monitoring in female groups in a patriarchal and low-income social set up. As far as we know, there is no similar study in female workgroups or in this specific social context.

In research on organizational behaviour, the impact of context is mostly kept constant or not well exploited (Johns, 2001). On the other hand, several studies predict the effects of context. For instance, Johns (2006) made a point that context can have both subtle and

powerful effects on research results. Context has the capacity to explain anomalous organizational phenomena and may provide constraints that prevent theoretical predictions to be confirmed or the variation among units of study to be restricted (Johns, 2001). It might also set limits on the range of relationships to be expected in a given study (Johns, 2001). Nkomo and Zoogah (2015) stress the urgency of scholarly attention towards exploiting the potential behaviour of micro organizations in the African context, where one can observe great diversity in terms of socio-economic status and cultural values.

This study is important because of the unique social context we focus on, namely a low-income and patriarchal context, where women are assumed to be poorer business performers than men (Eagly & Karau, 2002). The female entrepreneurs on which we focus experience stronger pressure to be successful than women in other contexts. The types of business that these women typically are involved in have a high risk of failure (Njuki *et al*., 2011) and failure of these women may be associated with domestic violence (Vyas & Watts, 2009), social rejection (Drinkwater, 2005) and emotional stress (Ahmed et al., 2001). Because of these pressures, the women may do their utmost best to avoid failure, which may enable them to overcome negative gender stereotypes and to counteract the expectations of low performers (Flynn & Ames, 2006). Since both trust and monitoring are associated with enhanced group performance (Bijlsma-Frankema *et al*., 2008), these women may use both of them together at a time to increase their performance. We therefore expect to find a positive relation between monitoring and intra-group trust, and an overall positive effect of both of them on group performance. To examine these relations, we collected experimental and survey data from 352 women who were member of 72 female workgroups engaged in the spices processing business in Addis Ababa.

3.2 Theories and hypotheses

Definitions

This study examines the relation between intra-group trust and monitoring, and how this relationship affects group performance. Theoretical statements and empirical arguments about the relation between trust and monitoring often start from the definitions of the terms. One of the most cited definitions of trust is proposed by Mayer *et al*. (1995) "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party" (p.712). The term intra-group trust is commonly used to refer to the aggregate level of trust that members of a group have in their group mates (Langfred, 2004; De Jong & Dirks, 2012). Here, we use this term to denote the aggregate level of members' willingness to be vulnerable to the action of other members of the group.

Monitoring can be defined as a formal control mechanism that sets behavioural standards. It commonly includes feedback, rewarding behaviour and sanctioning deviance (Bijlsma-Frankema & Woolthuis, 2005). In a group setting, monitoring is defined as "the group members' surveillance and awareness of other members' activities" (Langfred, 2004, p.386) or "the extent team members feel a necessity to control other members' work and be surveillant" (Costa *et al*., 2001, p.229). Monitoring in groups involves awareness of what others are doing during task execution (Marks & Panzer, 2004), assessment of the current states and needs of group members (Endsley, 1988), and assistance to group mates when members make mistakes or perform inadequately (McAllister, 1995).

Conceptual framework

The conceptual framework of our study is presented on figure 1. As indicated in this figure, we set four hypotheses (H_1-H_4). The first hypothesis (H_1) is about the relation between intra-group trust and monitoring. The second hypothesis (H_2) is about the relation between intra-group trust and workgroup performance. The third hypothesis (H_3) refers to the relationship between monitoring and workgroup performance. With the last hypothesis (H_4), we test for a mediation effect of intra-group trust on the relation between monitoring and workgroup performance.

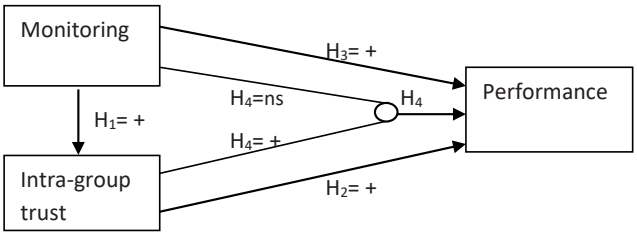

Figure 3.1: Conceptual framework on the relationships among intra-group trust, monitoring and performance

Intra-group trust and monitoring

Intra-group trust and monitoring are commonly understood to be negatively related: Monitoring comes into play when trust is not present (Costa, 2003). In groups with high level of trust, often a norm of non-monitoring reigns and social forces may make it difficult for individual group members to discuss about the possibility of monitoring one another (Langfred, 2004). Hence, if members of a group trust each other completely, generally no monitoring takes place (Costa & Anderson, 2011). Because monitoring signals low trust, a suggestion to monitor could be perceived as a violation of trust itself and lead to anger, hurt

and fear on the part of the group members (Lewicki & Bunker, 1996). Elements of groupthink often induce a norm of non-monitoring within high-trust groups which prevents monitoring to develop (Langfred, 2004).

Sometimes, groups may have a high level of trust immediately after the group was formed (Berg *et al*., 1995; Kramer, 1994). This high level of trust may emerge naturally from group membership and social categorization processes (Williams, 2001). However, such groups are an exception. Often the level of trust is low immediately after a group is formed and it takes time for trust to develop (Blau, 1964; Rempel *et al*., 1985; Zand, 1972). Intra-group trust can emerge from group members' shared experiences (Shamir & Lapidot, 2003) and from contextual factors that affect their interactions (McKnight *et al*., 1998). If a group has a low level of initial trust, members will be less hesitant to discuss the necessity to monitor one another (Langfred, 2004). Then, over time, monitoring may increase the level of group trust, because it may help to create intimacy and well developed interpersonal relations among the group members (Jehn & Shah, 1997) and promote helping group mates in need of assistance (McAllister, 1995).

Our study focuses on female groups in a patriarchal and low-income social set up. In this setting, even in groups with a high level of initial trust, a norm of monitoring can reign, because in this context negative gender stereotypes are prevalent (Eagly & Karau, 2002). For women in this social setting, low performance in business or in other activities is associated with risk of domestic violence (Vyas & Watts, 2009), social rejection (Drinkwater, 2005) and emotional stress (Ahmed *et al*., 2001). To reduce these risks and overcome the negative gender stereotypes, women may use any strategy that increases their performance (Flynn & Ames, 2006). Hence, in spite of a relatively high level of trust, they can be expected to still use monitoring to enhance performance. In the context of our study, discussing the necessity of monitoring each other may therefore not signal a violation of trust, but rather indicate the

group members' ambition to be successful. This might also explain why women have a higher tendency to collaborate and cooperate in groups than men (van Vugt *et al*., 2007). We therefore expect the relationship between intra-group trust and monitoring for the female workgroups included in our study to be positive.

Hypothesis 1: The relationship between intra-group trust and monitoring will be positive.

Intra-group trust and performance

In the organizational behaviour literature, several benefits of intra-group trust are mentioned that may enhance group performance. These benefits can take the form of smooth information flows, openness to discuss critical issues, encouraging innovative and original solutions and solving communication problems effectively (Zand, 1972; Morgan & Hunt, 1994). Thus, trust may bring about good faith, reliability and fairness in the behaviour of group members (Zaheer *et al*., 1998); it leads to constructive interpretation of the partner's motives (Uzzi, 1997), and it reduces conflict potential (Zaheer et al., 1998; Morgan & Hunt, 1994).

Intra-group trust can also increase cooperative group behaviour, by increasing satisfaction and commitment to own groups (Morgan & Hunt, 1994) and by promoting effective coordination of activities that favour shared goals (Bijlsma-Frankema *et al*., 2008; March & Olsen, 1975). Moreover, Intra-group trust can increase the willingness of the group members to take risks, because it is in the nature of trust to convey risks (Mayer *et al*., 1995; McAllister, 1995). Higher levels of cooperation and risk taking are often associated with increased group performance (Wang & Poutziouris, 2010).

In general, scholars seem to agree on the importance of trust for the functioning of organizations, but they do not all agree on how and when intra-group trust affects group performance. A number of studies (e.g. Dirks & Ferrin, 2001; Mayer *et al*., 1995) reports

direct and positive effects of trust on group performance (Costa, 2003; Porter & Lilly, 1996). However, there are also some studies (e.g. De Jong & Elfring, 2010; Dirks, 1999) that only find indirect effects of trust on group performance, and there are even some studies (e.g. Aubert & Kelsey, 2003; Kegan & Rubinstein, 1973) that find no effects of trust on group performance or even negative effects (e.g. Langfred, 2004).

These differences may result from the social settings in which the groups operate. For instance: Aubert and Kelsey (2003) found insignificant effects of trust on group performance in a setting of information symmetry, and Langfred (2004) found a negative effect of trust on group performance in a situation where individual members had a high level of autonomy. These studies suggest that the trust and performance relation depends on the organizational setting, which furthermore implies that performance benefits derived from trust may magnify under certain conditions and diminish under other conditions (Krishnan *et al*., 2006).

The women in our study work under more risky circumstances (Ahmed *et al*., 2001), have lower access to information (Njuki *et al*., 2011), lower ability to process information and lower level of education (MOWA, 2006) than men in the same context. We therefore think that the performance benefits derived from trust in terms of increased communication, information flow, risk taking and cooperation will be particularly strong for them, and thus expect a positive relation between intra-group trust and group performance.

Hypothesis 2: Intra-group trust has a positive effect on workgroups performance.

Monitoring and performance

Scholars indicate both benefits and costs of monitoring for group performance. The benefits may include improved coordination and feedback processes, through which information about the actions of other group members can be obtained (Dickinson & McIntyre, 1997; Marks & Panzer, 2004). Monitoring can increase members' ability to harmonize their contributions in

ways that maximize the group's goal attainment (Rico *et al*., 2008). It improves the likelihood that free riding is detected, which helps to promote a group's efforts to realize group goals over individual interests (Jones, 1974). It can also prevent process losses by correcting mistaken actions of group members and by helping them to improve their performance (Rico *et al*., 2008). Members who monitor effectively tend to be more aware of the situation the group is in (Salas *et al*., 1995). These members may also be better able to analyze rhythm, timing, and pace of the other member's activities, which may facilitate coordination and improve performance (Kozlowski, 1998). The costs of monitoring for group performance may include rigidity and reduction of cooperation (Bromiley & Cummings, 1995; McAllister, 1995).

Given that the women on which we focus have restricted access to information and low individual information processing capacity, we expect that the knowledge they obtain through monitoring will be particularly important for their functioning and will help them to improve their performance.

Hypothesis 3: Monitoring has a positive effect on group performance.

Intra-group trust, monitoring and performance

Given the recognition that both trust and monitoring affect group performance, there has been a growing interest on how trust, monitoring and performance are related to each other in a group setting (De Jong & Dirks, 2012; Langfred, 2004; De Jong & Elfring, 2010; Bijlsma-Frankema *et al*., 2008). Scholars disagree about the direction of the relations between trust and monitoring and about the causal direction of their relationship (Bijlsma-Frankema *et al*., 2008). Langfred (2004) suggested that monitoring mediates the trust-performance relationship and that monitoring affects trust negatively. Particularly in groups with a high level of individual autonomy monitoring in this way may reduce performance. A study conducted by

Costa *et al*. (2001) on social care groups shows similar results. They find that trust and monitoring are inversely related and that high levels of monitoring can damage group performance. On the other hand, some studies (e.g. De Jong & Elfring, 2010; De Jong & Dirks, 2012) indicate that performance benefits of trust may come about through increased levels of monitoring. Regarding the causal direction of the relationship, De Jong and Elfring (2010) consider monitoring as a mediator between trust and group performance, while De Jong and Dirks (2012) argue that intra-group trust mediates the relations between monitoring and group performance.

Given our expectation of a positive relationship between intra-group trust and monitoring in the female groups on which we focus (H1), we expect that monitoring affects performance through developing trust among the group members. In other words, if monitoring affects trust, and trust affects performance, monitoring and performance have an indirect relation.

> **Hypothesis 4:** Intra-group trust mediates the positive relationship between monitoring and group performance.

3.3 Methods and data

Sampling

Data were collected by means of a field experiment and a survey within the time period of July 2013 to October 2013. Participants in the study were 352 women from 72 female workgroups in the spices processing business in Addis Ababa. Addis Ababa has ten-sub-cities, and each sub-city has a Micro and Small Enterprise Development office (MSEDO). Based on the information from these offices, we selected six sub-cities with large number of workgroups in the spices processing sector. In the six selected sub-cities, there are 64 *woredas*. *Woreda* is the second level (next to sub-city) administrative divisions in Addis Ababa. We

listed all 270 workgroups in the 64 *woredas* and randomly selected 102 workgroups to include in our survey. The survey was conducted by means of a structured questionnaire and face to face group and individual interviews. In each workgroup, all members were participant in the group interview. Finally, we randomly selected five members from each workgroup to include in the individual interview. The individual interviews were conducted privately and independently.

We also explained to the five members, who were participant in the individual interview, that after some time they might be playing a game, whereby each participant would receive 50 ETB (≈2.5 USD and on average 1/6 of their monthly salary) and one might get the chance to receive up to 150 ETB. We also mentioned that these members would be playing the game as representatives of the group, and thus they should come together on a specific day about which they would be informed by phone.

After finishing collecting the survey data, we then randomly re-selected 72 workgroups out of 102 workgroups (which were already part of our survey) to include in the field experiment. We thus gathered the re-selected workgroups of a given woreda in the same place (in halls of each *woreda's* MSEDO, which also had partitions of separate private rooms) to conduct the experiment. (In some woredas, up to four workgroups were involved in the experiment, but in some woredas only a workgroup). During the field experiment, only four workgroups in four different *woredas* showed up with three workgroup members. These workgroups were sent back and substituted by workgroups from the next *woreda*, because the field experiment was conducted only once in a given *woreda*.

We conducted the field experiment in the 23 *woredas* on 23 different days. To control for spill-over effects due to conducting the game on different days, we checked the communications among women in the different workgroups. First, we asked for the name of the nearby workgroups in the same *woreda* and found that only the names of the immediate

neighbouring workgroups were known (in most *woredas* the working places provided by the government were abut). Then, we asked some information about the immediate neighbouring workgroups. However, besides the name they couldn't give us any other information. We therefore concluded that the exchange of information among workgroups within a given *woreda* is very low, and thus the exchange of information between workgroups in different *woredas* would be negligible. In addition, before starting the experiment in each *woreda*, we re-checked whether the women had received any information about the game, but no signs of spill-over effects were found.

Measures of variables

Intra-group trust: We measured intra-group trust with a widely used trust game designed by Berg *et al*. (1995). The game was designed as follows: a respondent, called "trustor", is given a sum of money. In the first move, the trustor is asked to decide how much, if any, of this money she decides to send to an anonymous trustee. The money sent to the trustee is then tripled by the experimenter. The trustee then makes the second move in which she is asked to decide how much, if any, money she wants to return back to the trustor. The amount of money sent by the trustor was used to measure her level of trust that the anonymous trustee, who was a member of her workgroup, will return a reasonable amount back.

The five selected members in 72 workgroup played the above game two times, first as a sender (trustor) and then as a receiver (trustee). Each participant received an endowment of 50 ETB and an envelope with her name. Each envelope had a hidden number (1 to 5) that could only be identified by us. We used these secret numbers to identify who played the game with whom, and to make sure that a participant played the two games with two different anonymous group mates.

In the first game, each participant sent (put inside the envelope) any amount of money from the endowment (50, 45, 40, 35, 30, 25, 20, 15, 10, 5 or 0) to an anonymous group mate. The participants made this decision one at a time and in a private room. We tripled the money that the participant sent to anonymous group mates and put it back in the envelope. After that, we covered the names on the envelopes with paper plaster to conceal who got whose envelope in the second game.

In the second game, each participant, one at a time, came back to the private room and opened the envelope of an anonymous group mate and counted the bills inside, if any. The participant then could keep an amount for herself and put the remaining, if any, back in the envelope. After all participants of a group had played this second game, they received their original envelope back (which could be identified by pilling off the paper plaster and reading the name on it). Then, the women could take all money, if any, from the envelope and the game ended.

The rules and protocols of the game were explained to the participants repeatedly and using different examples. Before starting the games, we gave four important instructions: (1) each participant would be playing the game separately and in a private room. (2) No talk was allowed until the end of the game, but a player could ask any question about the game, if needed, in the private room. We assigned two people to would enforce this rule. (3) The game would be played with money, and all money received during the game could be kept and taken home. (4) The rules of the game were explained very carefully, because only people who understood the game were able to play.

Intra-group monitoring*:* Most studies that focus on monitoring and intra-group trust relation are measured monitoring by asking three to five questions related to whether everyone meets his/her obligations, progress and deadlines of activities (e.g. Langfred, 2004; De Jong & Elfring, 2010; De Jong & Dirks, 2012). However, in our study, members of the workgroups

were performing every activity together, so it was difficult to measure how each member meets her obligations or deadlines. These workgroups have a flat organization structure, and they set some rules that enable them to monitor one another. Based on the participants response, we identified three items to measure monitoring: “we have a proper financial recording system, so we monitor whether everyone records every buying and selling activities”, “we have clear internal rules to monitor whether everyone participated or was present during the production, buying and selling activities”, “we monitor whether everyone get her punishment, as exactly written in our rules, when she was absent from the production, selling and buying activities”.

These items were measured using a five point likert type scale, ranged from *strongly disagree* to *strongly agree* and weighted into a single value using Principal Component Analysis. The first principal component explains 73 per cent of the variations in the data. Kaiser Meyer Olkin (KMO) measure of sampling adequacy was 0.73, and when KMO values greater than 0.5 are considered as adequate (Kaiser & Rice, 1974). The internal consistency was assessed using Cronbach’s alpha coefficient (Cronbach, 1951). The coefficient was 0.82. Commonly, when an alpha coefficient is 0.6 or higher that indicate an acceptable level of internal consistency (Black & Porter, 1996).

Workgroups performance indicators: The dependent variables of our study are performance indicators of the female workgroups on which we focus. It was not easy to find good performance indicators for these groups, as most performance measurement systems are designed for the use in a large business context (Hudson *et al*., 2001). Given that no ready-to-use performance indicators were available, we created our own three indicators, namely (1) capital gain per capita, (2) employment creation and (3) monthly income from the group business.

Capital gain per capita of the workgroup indicates how much stock capital each member had gained because of joining the group business. It was measured based on the financial history of the business since its establishment. A workgroup's Capital Gain per capita (CG) was calculated as Inventory (I) plus Assets (A) and Savings (S) minus Initial Members' Contributions (IMC), Dept Capital (DC) and Donations (D), and then divided by the Group Size (GS). Negative capital gain per capita might indicate bankruptcy. Some scholars have measured performance of small business based on bankruptcy in the business (e.g., Lussier & Corman, 1996; Lussier, 1995). Of the 72 groups in our sample, nine groups (12.5%) had negative capital gain from the group business, and were thus indebted because of involving in the group business. Of the other groups, 53 (74%) had earned between 0 and 10 thousand ETB from the group business, and 10 groups (14%) had earned between 11 and 29 thousand ETB. Capital gain per capita gives an overall picture of the workgroup performance during its existence, but provides less information about the current performance of the group.

The indicator "employment creation" is based on the total number of hired labour in the workgroup. Being able to hire (more) workers, indicates better performance (e.g. Blackburn *et al*., 2013). The workgroups in our study on average hired 2.92 employees (SD = 2.35; range 0–14).

The third performance indicator is the monthly income the members earn from the group business. This indicator gives better information on the current situation of the workgroup performance than capital gain. On average each participants of our study obtained 369.25 ETB monthly income from the group business (SD = 230.16; range 0–1500).

Control variables: As control factors, we included group size, business operation time and the mean age of the group members (De Jong & Dirks, 2012; Langfred, 2004; De Jong & Elfring, 2010). Business operation time refer to the total number of years a group business exists since its establishment. The workgroups had a mean size of 12.14 members (SD = 5.17; range 6–

38), and a mean business operation time of 5.53 years (SD = 2.93; range 0.7–11.2). The workgroups had members mean age of 43.32 years old (SD = 5.55; range 27.2–57).

Analysis

We analyzed the data using a hierarchical multiple mediation procedure, outlined by Baron and Kenny (1986). This procedure is a commonly used method to test mediation effects in the relations among intra-group trust, monitoring and group performance (e.g. De Jong & Elfring, 2010; Langfred, 2004).

Multicollinearity is one of the major econometric problems that may arise in attempting to examine the relations among intra-group trust, monitoring and group performance (De Jong & Elfring, 2010). We checked for the multicollinearity and found the variance inflation factors for all variables in each regression model to be below two. This indicates that multicollinearity is not a major concern (Neter *et al*., 1989). The data was analyzed with STATA 13.

3.4 Results

Table 1 provides descriptive statistics and correlations for all variables used in the study. Intra-group trust and monitoring have positive and significant correlations with all performance indicators. Moreover, trust and monitoring are positively and significantly correlated with each other. Intra-group trust is also positively and significantly correlated with group business operation years.

Tabel 3.1: Correlations of dependent and independent variables

	Mean	SD	1	2	3	4	5	6	7
1) Capital gain	4520.62	6174.61	1						
2) Monthly income	369.28	230.16	0.61***	1					
3) Hired labour	2.92	2.35	0.46***	0.64***	1				
4) Age (mean)	43.32	5.55	0.28*	0.22	0.04	1			
5) Group size	12.14	5.17	-0.02	0.11	0.19	-0.03	1		
6) Business operation years	5.53	2.93	0.39***	0.32**	0.21	0.31**	-0.13	1	
7) Intra-group monitoring	-	-	0.33**	0.40***	0.35**	0.10	0.01	0.21	1
8) Intra-group trust	20.66	11.01	0.43***	0.46***	0.41***	-0.09	-0.09	0.47**	0.46***

* $p < .05$, ** $p < .01$, *** $p < .001$

Regression results

The results of the hierarchical multiple regressions for trust, monitoring and performances are presented on Table 2. The multiple mediation procedure, which is outlined by Baron and Kenny's (1986) for the mediating role of intra-group trust, involves four steps, in each of which a regression model is estimated. In the first step, intra-group trust is regressed on monitoring and the control variables. We find a significant positive effect of monitoring on intra-group trust ($\beta = 2.89$, $p < .001$). We also see that the level of trust among the group members is higher if the business has been operating for more years ($\beta = 1.77$, $p < .001$). This might mean that intra-group trust has increased over time.

The second step of the analysis involves regressing group performance indicators on intra-group trust and the control variables. The results show that intra-group trust has a positive and significant effects on all performance indicators, i.e. on capital gain ($\beta = 223.2$, $p = < .01$), on monthly income ($\beta = 9.95$, $p = < .001$), as well as on hired labour ($\beta = 73.44$, $p = < .01$).

In the third step, group performance is regressed on monitoring and the control variables, because mediation requires the existence of a direct effect to be mediated. The regression results indicate positive and significant effects of monitoring on all performance indicators, i.e. on capital gain ($\beta = 1050.9$, $p = < .05$), on monthly income ($\beta = 53.08$, $p = < .01$), and on hired labour ($\beta = 394.6$, $p = <.01$).

The fourth step of the analysis involves regressing group performance on monitoring, intra-group trust and the control variables. We observe that the significant relation between monitoring and group performance found in the third step loses its significance when intra-group trust is entered into the equations, whereas the positive effects of intra-group trust on group performance found in the second step remain significant. This indicates that intra-group trust mediates the effect of monitoring on group performance, as predicted by hypothesis 4.

Tabel 3.2: Hierarchical multiple mediation analysis of intra-group trust, monitoring and performance

	1st step	2nd step			3rd step			4th step		
	Intra-group trust	Capital gain	Monthly income	Hired labour	Capital gain	Monthly income	Hired labour	Capital gain	Monthly income	Hired labour
Intercept	35.38***	-15159.2**	-390.3	-2160.1	-6779.3	-9.310	655.4	-13419.3*	-286.0	-1377.9
Age (mean)	-0.54**	302.2*	10.39*	27.10	176.5	4.72	-14.83	278.1*	8.95	16.27
Group size	-0.09	45.35	7.20	83.15*	22.20	6.11	75.04	38.25	6.77	79.95*
Business operation years	1.77***	258.0	2.96	4.49	612.0*	18.12*	116.1	280.6	4.31	14.62
Intra-group monitoring	2.89***				1050.9*	53.08**	394.6**	508.2	30.46	228.5
Intra-group trust		223.2**	9.95***	73.44**				187.7*	7.82**	57.46*
R^2	0.43	0.29	0.30	0.23	0.24	0.25	0.18	0.30	0.33	0.25
Adj-R^2	0.39	0.25	0.26	0.19	0.19	0.21	0.14	0.25	0.28	0.19
F	12.48***	6.92***	7.24***	4.85***	5.28***	5.61***	3.78**	5.76***	6.54***	4.40***
N	72	72	72	72	72	72	72	72	72	72

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

3.5 Discussion and conclusions

This study contributes to the literature on organizational behaviour by studying the relationships between intra-group trust, monitoring and group performance in female workgroups in a patriarchal and low-income context. The workgroups on which we focus are active in the spices processing business in Addis Ababa in Ethiopia. The results of the hierarchical multiple mediation analysis in our study indicates that intra-group trust had a positive and significant relation with monitoring; it also mediated the positive relation between monitoring and performance. Moreover, it had a direct and positive effect on the performance of female workgroups in the study area. Another important finding is that there exists a significant positive relationship between the number of operation years of the groups and intra-group trust, which indicates that in these groups, trust needs time to develop.

The positive relation between intra-group trust and monitoring found in our study deviates from findings (e.g. Langfred, 2004; Costa & Anderson, 2011). This deviation might be explained by the social setting in which our study was done. In this setting, success in business is masculine stereotyped. If women fail in their business activities, they may suffer from domestic violence (Vyas & Watts, 2009), social rejection (Drinkwater, 2005) and emotional stress (Ahmed *et al*., 2001). In such a situation, women can be expected to use any strategy that may enhance their performance (Flynn & Ames, 2006). The suggestion to monitor each other may therefore not signal a lack of trust, but rather indicate the group member' strong ambition to reduce social distresses and overcome the negative gender stereotypes.

Another explanation for the positive relation between monitoring and trust in these groups might be found in the initial level of trust when the groups are formed. Our finding that trust develops over time seems to indicate that the level of trust among the group

members was relatively low when the groups started. In general, scholars suggest that if members of a group have low level of initial trust (e.g. Blau, 1964; Rempel *et al*., 1985; Zand, 1972), there is probably a monitoring system (Costa & Anderson, 2011). Thus, over time, monitoring can increase the level of trust among members of the group. This is due to the power of monitoring to create intimacy and well developed interpersonal relations (Jehn & Shah, 1997) and to encourage group mates helping one another in need of assistance (McAllister, 1995).

Another important finding of our study is the existence of a positive association between trust and group performance. This finding may contradict with several studies (e.g. Aubert & Kelsey, 2003; Kegan & Rubinstein, 1973) did not find such an effect. We think that here the social context of the study area plays an important role. As discussed before, individuals in a low-income social setting may face high risks and information costs (Rosenzweig, 1988). This is particularly the case for women. Conditions are more risky for them (Ahmed et al., 2001); they have less access to information (Njuki *et al*., 2011); and they are less educated and have lower information processing capacity (MOWA, 2006). Intra-group trust can reduce these obstacles imposed by the social context and increase the performance of women by enhancing communication and sharing of information between them (Zand, 1972; Morgan & Hunt, 1994), by bringing good faith, reliability and fairness (Zaheer *et al*., 1998), by allowing for constructive interpretations of members motives (Uzzi, 1997), by reducing the potential for conflict (Zaheer *et al*., 1998; Morgan & Hunt, 1994) and by increasing cooperative and risk taking behaviour (Morgan & Hunt, 1994).

Regarding the relation between monitoring and group performance, our findings indicate that workgroups whose members are better able to monitor one another perform better. In the literature, both the costs and benefits of monitoring for group performance are mentioned. The costs associated with monitoring include aversion against change and reduced

cooperation (Bromiley & Cummings, 1995; McAllister, 1995). The benefits of monitoring include improved coordination and feedback processes (Dickinson & McIntyre, 1997; Marks & Panzer, 2004), increased likelihood of detecting free riding (Jones, 1984), and prevention of losses by creating the possibility to correct and help one another (Rico *et al.,* 2008). Given the restricted access to information these women have and their relatively low information processing capacity, the benefits of monitoring seem more important for them than the costs. The information which these women get through monitoring one another might even play an important role for the functioning and performance of these workgroups.

More importantly, the benefits of monitoring on group performance run through its relation with intra-group trust. This in turn indicates an indirect relation between monitoring and group performance. Moreover, this finding might shed a new light on the benefits of monitoring on group performance, and that is developing trust among members of a group.

The generalizability of our study is limited by its focus on the spices processing business. In spite of this limitation, it provides new empirical evidence in terms of examining how trust, monitoring and performance are related to each other in female workgroups in a patriarchal and low-income social context. The findings are useful for organizations aim to empower women in this social settings, in particularly in Ethiopia.

Chapter 4

Ethnic diversity and performance of female workgroups in Ethiopia *)

Abstract

This study examines the effects of ethnic diversity on the performance of female workgroups in Ethiopia. Data were collected from 508 women in 102 workgroups in the spices processing sector in Addis Ababa. Findings indicate negative effects of ethnic diversity on workgroup performance. These negative effects can be explained by the social context in which the workgroups operate. We focus on fragmented ethnic groups in a low-income setting which have been living together for centuries. The innovative aspects of interethnic exchange may therefore have long been gone. On the other hand, due to historical complications, the costs of cultural diversity like conflicts, racism, and prejudices may still exist. We therefore suggest that the government and developmental organizations promote women's empowerment through collective action in Ethiopia probably need to develop effective strategies to mitigate ethnic conflict that can possibly arise within ethnically diversified workgroups.

Keywords: diversity, ethnicity, workgroup, performance, Ethiopia

*) Bayissa, F. W., Smits, J., & Ruben, R. (submitted). The Importance of Monitoring for Developing Intra-Group Trust in Ethiopian Female Workgroups. *Journal of human resource development international.*

4.1 Introduction

Ethiopia is a very diverse country containing more than 80 different ethnic groups (New World Encyclopaedia, 2013). According to the national census conducted in 2007, the main ethnic groups include Oromo (34.4%), Amhara (27%), Somali (6.2%), Tigray (6.1%), Sidama (4%), Gurage (2.5%) and others (21.5%). There have been complex transitions in the history of Ethiopian states that have helped to shape the internal relations amongst various ethnic groups in the country. For centuries, the Ethiopian government was associated with only two major ethnic groups (Amhara & Tigray). Since 1995, this has changed as the new federalist constitution, and Ethiopia became a secular state by law. Since then, there has been a high pressure on the Ethiopian government to treat all ethnic groups equally (Karbo, 2013). The secularization of the state, however, has not been able to entrench itself in the society, rather it produced a number of significant tensions among different ethnic groups (Karbo, 2013).

Ethiopia is also known as one of the world's poorest countries with a high level of gender inequality and of women's disempowerment. According to the gender inequality index of the Human Development Report of 2015, Ethiopia ranked 129 of the 156 countries in the list (UNDP, 2015). In the last two decades, the Ethiopian government and developmental organizations have facilitated the formation of female workgroups as a model strategy to develop women's empowerment and to change the women's condition in the country (Alsop & Heinsohn, 2005; World Bank, 2013). A workgroup is a collection of women who run a business together as an intact entity embedded in a larger social system. Members of a workgroup are interdependent in their tasks; they make all the production and investment decisions together; they share responsibilities for outcomes decisions and for managing their businesses across organizational boundaries. Most of these workgroups are engaged in the red-pepper and other spices processing business. Red-pepper is a vegetable and spice crop produced by many farmers in Ethiopia. For centuries, red-pepper processing has been one of

the most time and energy consuming home activities in Ethiopia and women have traditionally been responsible for this activity. Over time, groups of entrepreneurial women have recognized their expertise in the red-pepper processing as a new business opportunity that buy unprocessed red-pepper from the market, add value by processing it, and sell it back to the market. The Ethiopian government and developmental organizations have been supporting these workgroups in terms of providing working places, business training, finances management, market integration, micro-finances and so forth.

Given the diverse nature of the country and the emphasis of development organizations on workgroups as a way towards empowerment, it is important to know the effects of ethnic diversity on the performance of these female workgroups. Over the last 50 years, there has been intensive research on diversity and workgroup performance. However, there are neither consistent theories nor data that show how diversity affects workgroup performance (Shore et al., 2009). For instance, self-categorization and similarity-attraction theories predict a negative effect of diversity on workgroup performance (Tsui, Egan, & O'Reilly, 1992). These negative effects may take the form of racism, prejudices (Abadie & Gardeazabal, 2003) and conflicts of preferences (Alesina, Baqir, & Easterly, 1999), increases in turnover (Jackson, Joshi, & Erhardt, 2003; Webber & Donahue, 2001), low communication, less attachment, less social cohesion (Pelled, Eisenhardt, & Xin, 1999), and less commitment to the organization (Harrison, Price, & Bell, 1998). On the other hand, information and decision-making theories predict a positive effect of diversity on workgroup performance (Michaéla, Deanne, Paul, & Janique, 2003; Wittenbaum & Stasser, 1996). The benefits of cultural diversity may include increase in the varieties of perspective that in turn may yield more creativity, higher level of innovation, enhanced problem solving ability, higher quality decisions (Singh & Point, 2006; Frink et al., 2005; Richard, Barnett, Dwyer, & Chadwick, 2004; Pollar & Gonzalez, 1994; Cox, 1993; Cox, Lobel, & McLeod, 1991), and increase in

the varieties of goods, services and skills available for consumption, production and innovation (Lazear, 1999; Ottaviano & Peri, 2005).

The reasons of the inconclusive outcomes might be explained by the moderating effects of contextual conditions (Ehimare & Ogaga-Oghene, 2011). Diversity in a specific individual characteristic may lead to different work related attitudes depending on the social context in which the individuals operate (Riordan & Shore, 1997; Tatarko, Mironova, & Vijver, 2017). Most of the diversity studies are rather been focused on the Western countries (e.g. Bellini, Ottaviano, Pinelli, & Prarolo, 2008; Molleman, 2005; Richard, 2000; Erhardt, Werbel, & Shrader, 2003; Brodbeck, Guillaume, & Lee, 2011). Hardly any studies in the field that focus on fragmented ethnic groups in a low-income setting which have been living together for centuries. The literature gained from the western analyses may not be applied to a low-income context that suffers from ethnic fragmentation and historical complications. In this context, we expect negative effects of cultural diversity on workgroup performance. This is because organizations in low-income societies may not realize the benefits of cultural diversity. As the ethnic groups in these societies have been living together for centuries, the exchange of information, perspectives, goods and services among them has already been taking place for a long time. The innovative aspects of interethnic exchange may therefore have long been gone. On the other hand, due to historical complications, the costs of cultural diversity like conflicts, racism, and prejudices may still exist. Thus, our data provide a unique opportunity to study the scope and validity of earlier findings in the field for workgroups in this social context. This study is conducted on the basis of survey data collected from 102 female workgroups engaged in the red-pepper and other spices processing in Addis Ababa.

4.2 Background

In this study, we use Steiner's *(*1972*)* model of group productivity as a theoretical starting point. In Steiner's model, diversity is one of the most important factors that affect the performance of workgroups (Jung & Sosik, 1999). Over the last 50 years there has been intensive research on diversity and workgroup performance. However, there are neither consistent theories nor data that show how diversity affects the performance of workgroups (Shore et al., 2009). In the literature on workgroup diversity, there are two major categories of theories. The first category includes self-categorization and similarity-attraction theories that predict negative effects of diversity on workgroup performance (Tsui, Egan, & O'Reilly, 1992; Jackson et al., 1991). The second category combines information and decision-making theories into a 'positive diversity theory', which sees diversity as a way to increase workgroup performance (Michaéla et al., 2003; Wittenbaum & Stasser, 1996). In the next section, we will discusses these theories in detail and derive hypothesis from them.

Negative effects of diversity

Self-categorization theory (Turner, 1987) states that in the context of a given social unit, the categorization of people based on salient attributes are relevant categories that individuals use as part of their self-identity (Tsui et al., 1992). The basic assumption of self-categorization theory is that people evaluate the self-defining categories positively and are motivated to maintain such evaluation. That is also associated with positive evaluation of others who fit within the same category (Jackson et al., 1991). Self-categorization theory predicts that individuals are more attracted to a workgroup that has a majority of others whose characteristics are consistent with theirs (Riordan & Shore, 1997; Tsui et al., 1992). The degree of consistency, in turn, affects the individuals' work-related attitudes and behaviours

in the group, and their degree of support and commitment to maintain the group cohesiveness (Wharton & Baron, 1987; Lincoln & Miller, 1979). On the other hand, individuals with a minority characteristic will become increasingly self-aware of their social identity (Ethier & Deaux, 1994). That makes them feel uncomfortable in the group, resulting in negative attitudes and behaviour towards the workgroup (Mullen, 1983).

The similarity-attraction theory (Berscheid & Walster, 1978) provides explanations which are rather similar. It states that individuals in a given social unit with similar attributes will be attracted to each other. If a work unit is composed of individuals with similar characteristics, the members' group identification is enhanced. The members will perceive one another as similar, which in turn will bind and hold them up together (Riordan & Shore, 1997). Individuals in a given social unit with similar attributes have the desire to endure the existence of the social unit (Lincoln & Miller, 1979). Several studies support the self categorization and similarity attraction theories, by reporting negative effects of diversity on group performance (Thomas, 1999; Jackson & Joshi, 2004; Kirkman, Tesluk, & Rosen, 2004; Staples & Zhao, 2006). These negative impacts may take the form of conflicts, increases in turnover (Jackson et al., 2003; Webber & Donahue, 2001), low communication, less attachment, less social cohesion (Pelled et al., 1999), and less commitment to the organization (Harrison et al., 1998).

Positive effects of diversity

The 'positive diversity theory' (derived from information and decision-making theories) examines the effects of diversity on a workgroup performance in relation to the distribution of information and expertise among the workgroup's members (Wittenbaum & Stasser, 1996). This theory stresses the importance of varieties in perspective, with more diverse workgroups being expected to process information from different angles (Singh & Point, 2006). These

various perspectives in turn may yield more creativity, higher level of innovation, enhanced problem solving ability and higher quality decisions, which are also the key variables of success or of increased performance (Singh & Point, 2006; Frink et al., 2005; Richard et al., 2004; Pollar & Gonzalez, 1994; Cox, 1993; Cox et al., 1991). There is abundant empirical evidence that shows diversity to be a source of productive activities, innovative ideas and better organizational performance (Shore et al., 2009; Mannix & Neale, 2005).

Hypothesis

Given the inconsistencies in the diversity literature, scholars agree that diversity in a specific individual characteristic may be important in one social context while not in another, and it may also lead to different work related attitudes depending on the social context in which the individuals operate (Jehn & Bezrukova, 2004; Riordan & Shore, 1997; Tatarko et al., 2017). This in turn indicates the importance of diversity research in various social contexts (Stahl et al., 2010; Joshi & Roh, 2007). Given the high flow of migration to western countries, most of the diversity studies have been conducted on the US among people with various races (white, black, Hispanic, Asian, and American Indian; Richard, 2000) or on European states among people from different nationalities (see Bellini et al., 2008). On the other hand, unlike to the western countries, diversity research in low-income countries is likely to focus on fragmented ethnic groups that have been living together for centuries in a given country, since low-income societies often suffer from ethnic fragmentation (Alesina & La Ferrara, 2005).

We argue that organizations in low-income societies may not realize the benefits of cultural diversity. As the ethnic groups in these societies have been living together for centuries, the exchange of information, perspectives, goods and services among them has already been taking place for a long time. The innovative aspects of interethnic exchange may therefore have long been gone. On the other hand, due to the historical complications in most

low-income and ethnically fragmented societies, the costs of cultural diversity like racism, prejudices (Abadie & Gardeazabal, 2003) and conflicts of preferences (Alesina et al., 1999), increases in turnover (Jackson et al., 2003; Webber & Donahue, 2001), low communication, less attachment, less social cohesion (Pelled et al., 1999), and less commitment to the organization (Harrison et al., 1998) may still exist. Hence, ethnic diversity possibly has negative effects on workgroup performance in a low-income and ethnically fragmented context.

Hypothesis: The greater ethnic diversity among individuals in a workgroup the lower the workgroup's performance.

4.3 Methods

Sampling

Participants in the study were 508 women from 102 female workgroups in the spices processing business in Addis Ababa, the capital of Ethiopia. Addis Ababa has ten sub-cities and each sub-city has a Micro and Small Scale Enterprise office. Based on the information obtained from these offices, six sub-cities were purposively selected with a large number of workgroups. In the six selected sub-cities, there are 64 *woredas*. *Woreda* is the second level (next to sub-city) administrative divisions in Addis Ababa. We listed all 270 workgroups in the 64 *woredas* and randomly selected 102 workgroups to be included in our survey.

Data were collected by means of structured group and individual face to face interviews. All members in each of the 102 workgroups participated in the group interview. On average, five women from each workgroup were randomly selected to be included in the individual interview. In the individual interviews, background characteristics of the women were collected, including their ethnicity, age, level of education, marital status, number of children

and household wealth. In the group interviews, information on the workgroup and its enterprise was collected, including group size, years of business operation, initial member contributions, average monthly income, number of hired employees, the value of raw materials, work-in-process and finished products for sale (inventory), total amount of loans taken by the workgroup, the value of items used for generating future revenues (assets), total savings in the group account, and total donations received from the government or other organizations. The individual interview was conducted privately and independently on 508 randomly selected women.

Dependent variables

The dependent variables of the study are performance indicators of the female workgroups. Most performance measurement systems are designed for the use in a large business context (Hudson, Smart, & Bourne 2001), so it was difficult to find a well established performance measuring system for the small enterprises on which we focus. Given that no ready-to-use performance indicator was available, we created our own set of three indicators, based on our data. As discussed in Bayissa, Smits, and Ruben (2017), our indicators are capital gain per capita, employment creation and monthly income from the group business.

The first of these performance indicators is capital gain. It indicates how much stock capital each member gains because of joining the group business. The capital gain of a workgroup was measured based on the financial history of the business since its establishment. Capital Gain per capita (CG) was calculated as Inventory (I) plus Assets (A) and Savings (S) minus Initial Members' Contributions (IMC), Dept Capital (DC) and Donations (D), then all divided by Group Size (GS).

$$CG = \frac{(I+A+S)-(IMC+DC+D)}{GS}$$

Negative capital gain may indicate bankruptcy. This indicator shows the overall picture of the workgroup's performance. However, it may have less information about the current situation of the workgroup, because the current condition may be lapped by the overall picture.

The second and third performance indicators -- monthly income each member gains from the group business and the degree of employment creation for others -- do give information on the current situation of the workgroup performance. Employment creation measures the total number of employees in a workgroup. A workgroup that has a larger number of hired workers most likely has a higher performance. In this we followed Blackburn, Hart, and Wainwright (2013), who used employment growth a small business performance indicator.

Independent and control variables

The key independent variable of the study is ethnic diversity. The degree of diversity of the variable was calculated by Simpson's Diversity Index (SDI) also called Blau's (1977) index of diversity, given by the following equation:

$$SDI = 1 - \frac{1}{N(N-1)} \sum_{j=1}^{s} nj(nj-1)$$

Where N is the total number of individuals in a workgroup, s is the total number of categories in the variable described, and n_j is the number of individuals belonging to the j^{th} category.

We controlled for group size, business operation years, typical diversity measures and average characteristics of group members. In workgroup diversity literature group size is used as one of the main control variables (Baer, Niessen, & Ruenzi, 2007; Zhang & Tsui, 2013). This is because group size can influence decision making and group outcomes (Simons, Pelled, & Smith, 1999), and because larger teams have more potential for heterogeneity (Jackson et al., 1991). The business operation years is another control variable used by some

diversity studies (Pelled et al., 1999), because age of an enterprise is one of the important determinants of small business performance (Blackburn, Hart, & Wainwright, 2013).

We also controlled for several typical diversity measures, including age diversity, education diversity and wealth diversity, and controlling these diversity variables enable us to ensure the effects were because of the ethnic diversity alone. These diversity variables were also controlled by Zhang and Tsui (2013) to investigate the role of functional diversity in influencing intergroup relations in American and Chinese workgroups. To calculate the Blau's diversity index of the continuous control variables of age and wealth, we first categorized them into quintiles. The last variables we controlled for are the average characteristics of the group members, because diversity variables may partly capture the influence of the average characteristics of the group members (Baer et al., 2007).

Methods of data analysis

The two performance indicators i.e., capital gain per capita and monthly income from the group business are continuous variables, we thus used OLS regressions. For the third performance indicator (number of hired employees), we used Poisson regression. We performed a likelihood-ratio test to examine the appropriateness of the Poisson Model. The results of the likelihood-ratio test indicate that the over-dispersion parameter (alpha) was not significantly different from zero. We therefore concluded that the distribution of hires did not display signs of over-dispersion and that the Poisson model was appropriate.

There were significant correlations among the independent variables (see Appendix 1). We therefore made test for multicollinearity in all variables. The test results indicated that VIF (Variance Inflation Factor) for all variables were below five. According to Neter, Wasserman, and Kutner (1989) if the maximum VIF is less than 10, multicollinearity is not a

concern in least squares estimates. The regression results of this study were thus not seriously affected by the multicollinearity problem. The data were analyzed with STATA 13.

4.4 Results

Descriptive statistics of variables

The descriptive statistics of the study is presented in Table 1. Around half of the workgroups (48.5%) had a business operation period of more than five years; the longest period was 11.2 years; and the shortest period was seven months. Around 35% of the workgroups had less than 10 group members; the smallest group size was five members and the largest was 38. The first performance indicator, capital gain per capita, had a minimum value of -16 thousands ETB per capita (a thousand ETB ≈ 50.69 USD), a maximum value of 42 thousands ETB per capita and a mean value of 4.2 thousands ETB per capita. Around 19% of the workgroups had less than zero capital gain, so the members of these workgroups were indebted as a result of their participation in the group business. The second performance indicator, i.e. monthly income from the group business, had a range from zero to 1.5 thousands ETB. On average, each individual got 334 ETB per month, and 11 groups had zero monthly income from the group business. The mean of employment creation, the third performance indicator, was three workers per workgroup, and only 9% of the workgroups hire no labour.

The largest ethnic group in the sample was Amhara (42%) followed by Gurage (21%), Oromo (21%), Tigray (10%) and others (6%). The participants' educational levels were classified as illiterates (33.1%), 1-4 standard (17.1%), 5-8 standard (23.4%) and standard nine and above (25.8%). Participants had a mean age of 43.6 years old (SD = 9.3; range 20–75).

Tabel 4.1: Descriptive statistics of variables

Variable Name	M	SD	Min.	Max	Categorization	Freq.	Per.
Group characteristics							
Operation period (Years)	5.4	3.1	0.7	11.2	Less than 5 years	52	51.5
					Greater than 5 years	49	48.5
Group size (Number of members)	11.7	5.3	5	38	Small groups <10	36	35.3
					Large groups	66	64.7
Employment creation (Number of hired workers)	2.7	2.5	0	14	No hired workers	8	7.8
					Hired workers	94	92.2
Capital Gain [a] (Per capita)	4.2	7.4	-16.1	42.3	Less than zero (bankrupt)	19	18.6
					Positive capital gain	83	81.4
Monthly income [a] (Per capita)	0.3	0.3	0	1.5	No monthly income	11	10.8
					Positive	91	89.2
N	102					102	100
Individual characteristics							
Ethnicity					Oromo	105	20.7
					Amhara	214	42.1
					Guragie	107	21.1
					Tigray	51	10.0
					Others	31	6.1
Education					Illiterate	168	33.1
					1-std4	90	17.1
					std 5-8	119	23.4
					std 9 & above	131	25.8
Age (years)	43.6	9.5	20	75	Less than 40 years old	191	37.6
					Greater than 40 years	317	62.4
Household or individual Wealth [a]	55.2	14.1	-0.89	157.5	Poor <20	317	62.4
					Rich >20	191	37.6
N	508					508	100

[a] (A thousand ETB ≈ 50.69 USD).

Results of regression analysis

The regression results of the study, which are presented in Table 2, show that ethnic diversity had negative and significant effects on all performance indicators such that the higher ethnically diversified workgroups the lower performance. Age diversity had positive and significant effects on capital gain such that workgroups with a high level of age diversity had high performance. Wealth diversity had negative and significant effects on capital gain and on monthly income.

Tabel 4.2: Regression results of capital gain, monthly income and employment creation

	Indicators of workgroup performance		
	Capital Gain	Monthly Income	Employment Creation
Intercept	-112.83	-1.25	-0.62
	(93.46)	(3.18)	(0.99)
Ethnic diversity	-193.61*	-5.94*	-2.30**
	(79.77)	(2.71)	(0.86)
Group size	-0.17	0.07	0.03**
	(1.42)	(0.05)	(0.01)
Business operation	5.80*	0.16	0.09***
years	(2.37)	(0.08)	(0.03)
Age (mean)	3.06*	0.09	0.01
	(1.42)	(0.05)	(0.01)
Education (mean)	27.91*	0.58	0.30*
	(11.36)	(0.38)	(0.12)
Wealth (mean)	0.43	0.04	0.01
	(0.94)	(0.03)	(0.01)
Age diversity	501.10**	10.52	2.09
	(189.14)	(6.44)	(1.99)
Education diversity	-5.05	1.10	0.59*
	(24.24)	(0.82)	(0.28)
Wealth diversity	-437.00*	-13.19*	-4.11*
	(191.06)	(6.51)	(2.00)
R^2	0.32	0.31	-
Log likelihood	-	-	-189.63
N	101	101	101

Standard error in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.5 Discussion and conclusions

This study contributes to our understanding of the role of ethnic diversity on group performance in a low-income context with fragmented ethnic groups living together for centuries. The results of our study revealed negative effects of ethnic diversity on all workgroup performance indicators. The more ethnically diversified workgroups the lower capital gain per capita, the lower monthly income the members obtain from the group business and the lower number of employees. Our study focuses on a low-income setting with ethnic groups living together for centuries, and thus the outcomes of our study are in contradict with some studies on Western samples that show positive relations between cultural diversity and performance (e.g. Richard, 2000; Bellini et al., 2008). The results of our study can be explained by the social context in which our study is focused. In the rest part of this section, therefore, we will provide possible explanation for the results of our study in relation to the social context of the study area.

In the literature on workgroup diversity, both the benefits and costs of cultural diversity are indicated. The benefits of cultural diversity explained in terms of varieties in perspective, with more diverse groups being expected to process information from different angles (Singh & Point, 2006), and in terms of varieties in goods, services and skills available for consumption, production and innovation (Lazear, 1999; Ottaviano & Peri, 2005). The varieties in perspective are likely to provide more creativity, higher level of innovation, enhanced problem solving ability and higher quality decisions (Cox, 1993; Cox et al., 1991; Frink et al., 2005; Pollar & Gonzalez, 1994; Richard et al., 2004; Singh & Point, 2006).

The costs of cultural diversity explained in terms of individuals' work-related attitudes and behaviours in the group, and their degree of support and commitment to maintain the group cohesiveness (Lincoln & Miller, 1979; Wharton & Baron, 1987). Individuals are more attracted

to a group that has a majority of others whose characteristics are consistent with theirs (Riordan & Shore, 1997; Tsui et al., 1992) and thus individuals with a minority characteristic will become increasingly self-aware of their social identity (Ethier & Deaux, 1994). The inconsistency in the group may result in negative attitudes and behaviours towards the group (Mullen, 1983). These negative behaviours may take the form of conflicts, increases in turnover (Jackson et al., 2003; Webber & Donahue, 2001), low communication, less attachment, less social cohesion (Pelled et al., 1999), and less commitment to the organization (Harrison et al., 1998; Watson et al., 1993; Tsui et al., 1992).

The results of our study show negative effects of ethnic diversity on workgroup performance, which in turn indicate the costs of diversity over dominated the benefits. This may be explained by the social setting in which our study is focused. Our study focuses on a low-income setting with fragmented ethnic groups living together for centuries. Organizations in these setting are less likely to benefit from cultural diversity, because these fragmented ethnic groups have been living together for centuries, so they may provide neither new perspective nor new varieties of goods, services or skills. On the other hand, there are likely historical complications among these ethnic groups while living together for centuries. These historical complications in turn may create negative attitudes and behaviours among the ethnic groups. These negative attitudes and behaviours may be expressed in the form of racism, prejudices, conflicts, increases in turnover, low communication, less attachment, less social cohesion, and less commitment to the organization (Abadie & Gardeazabal, 2003; Alesina et al., 1999; Jackson et al., 2003; Webber & Donahue, 2001). For instance: in Ethiopia, Amhara and Tigray ethnic groups have controlled the political and social space for long time. The historical dominance of these ethnic groups in turn might create a dominance feeling on some people from these ethnic

groups, and one can recognize this feeling to be expressed in terms of speech and manner. This dominance feeling, on the other hand, might create anger, emotional hurt, racism and prejudices on others, and hence resulting in low performance.

The generalizability of our study is limited by its focus on female participants and by relatively small size of our sample. However, the study provides valuable new insights into the role of ethnic and religious diversities for developing effective female workgroups in low income social context and in particularly in Ethiopia. Easterly (2001) argues that the negative effects of ethnic diversity can be mitigated by 'good' institutions. Hence, based on our findings, we conclude that the Ethiopian government and developmental organization promote women's empowerment through formation of workgroups probably need to develop effective strategies to abate conflict that can possibly arise among members of ethnically diversified workgroups.

Appendix

Correlations of variables

		1	2	3	4	5	6	7	8	9	10	11
1	Capital-gain	1										
2	Monthly-Income	0.56***	1									
3	Employment-creation	0.64***	0.70***	1								
4	Ethnic-diversity	-0.29**	-0.36***	-0.28**	1							
5	Group size	-0.02	0.18	-0.05	-0.33***	1						
6	Operation year	0.30**	0.27**	0.25*	-0.04	-0.18	1					
7	Mean age	0.09	0.19	-0.04	0.02	-0.05	0.40***	1				
8	Mean education	0.24*	0.07	0.23*	-0.14	-0.01	-0.21*	-0.56***	1			
9	Mean wealth	0.19	0.23*	0.20*	-0.12	-0.06	0.16	0.08	0.14	1		
10	Age-diversity	-0.05	-0.25*	-0.04	0.44***	-0.37***	-0.07	-0.34***	0.08	-0.14	1	
11	Education-diversity	-0.15	0.05	-0.05	0.02	-0.05	0.09	0.24*	-0.49**	-0.13	-0.08	1
12	Wealth-diversity	-0.24*	-0.36***	-0.21*	0.49***	-0.37***	-0.06	-0.13	-0.14	-0.19	0.80***	0.05

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Chapter 5

The multidimensional nature of women's empowerment: beyond the economic approach *)

Abstract

Most interventions promoting women's empowerment focus on the economic dimension. Economic improvement is supposed to lead automatically to improvements in other dimensions. To test this assumption, we collected data from 508 women working in women groups in Addis Ababa. Besides the economic dimension, five other dimensions of empowerment were studied (familial, legal, psychological, political and socio-cultural). Findings show that the relationships between these six dimensions of empowerment are weak and that the psychological dimension is most central. The economic dimension is hardly connected to other dimensions. Hence, a broad package of interventions seems needed to achieve empowerment in all respects.

Keywords: women's empowerment; multidimensional; economic dimension; Ethiopia

**)* Bayissa, F. W., Smits, J., & Ruben, R. (2017). The multidimensional nature of women's empowerment: beyond the economic approach. *Journal of international development. Advance online publication.*

5.1 Introduction

Empowering women is a multidimensional process with economic, socio-cultural, familial, legal, political and psychological dimensions (Malhotra *et al*., 2002; Mahmud *et al*., 2012). However, most interventions aimed at increasing empowerment are focused on the economic dimension (e.g. access to credit, ownership of productive resources, paid work; UNDP, 2011; World Bank, 2011). It is assumed that economic inequality is the cause of wider inequalities (Bradshaw, 2013), and that if the economic dimension improves, other dimensions will follow automatically (Malhotra *et al.*, 2002). However, there is a growing body of literature emphasizing that women's economic empowerment might be a necessary, but not a sufficient condition for realizing overall (or other forms of) empowerment (Khan, 2013; Denney, 2015). It is stressed that women can be empowered in one area of life and not in others, which would imply that women's empowerment is a multidimensional concept (Mahmud *et al*., 2012; Tsikata & Darkwah, 2014).

The aim of this study is to test these ideas and to find out how central the economic dimension of women's empowerment is, to what extent empowerment in this dimension is essential for empowerment in other dimensions, and – more generally – to what extent there is a relationship between the major dimensions of women's empowerment. To do so, we will focus, besides on the economic dimension, on five other important empowerment dimensions: the familial, psychological, legal, political and socio-cultural dimensions. Understanding the relationships among these dimensions is important because it may help us to evaluate the success of 'income focused' interventions in terms of outstretching in other dimensions as well and to develop interventions aimed at empowering women in all dimensions.

There are a few empirical studies examining the interrelationships among the different dimensions of women's empowerment. For instance, Kishor (2000) conducted a study in Egypt on ten empowerment indicators and found that some of the indicators were comparatively better correlated than others. Williams (2005) conducted a factor analysis on six empowerment indicators in rural Bangladesh and found a similar result. However, these studies did not clearly differentiate between the economic and other dimensions of women's empowerment. They also did not include income generated by women, one of the most important indicators of women's economic empowerment. To fully reflect the multidimensional nature of women's empowerment, indicators need to be specified and measured across various dimensions (Estudillo *et al*., 2001). Moreover, the economic dimension should comprise women's income as one of the main indicators, because in gender studies other development variables are often examined in relation to this indicator (Garikipati, 2008; Heath, 2014; Weber & Ahmad, 2014; Ganle *et al*., 2015).

The need to study women's economic empowerment, in relation to other dimensions of empowerment, is highlighted by contradictory outcomes regarding the relationship between women's income and their wellbeing. There are many studies indicate that the opportunity to engage in paid work can increase women's autonomy and can make them economic actors who may control productive resources; who may invest in their own health and education, as well as in that of their family; and who may actively participate in politics (Kabeer, 2005; Esplen & Brody, 2007; DFID, 2010). However, there are also a growing number of studies indicating that the participation of women in paid work is an additional burden besides their care work, and that this 'double workload' is likely to have negative effects on the women's health, wellbeing and dignity (Esplen & Brody, 2007; Haile *et al*., 2012).

Findings also differ regarding the relationship between women's economic empowerment and domestic violence. On the one hand, in its Beijing declaration, the United Nations strongly recommended economic empowerment of women as a protective factor against domestic violence (MAHR, 1996). Women who are economically dependent on their partner are supposed to be at a greater risk of violence, because they cannot easily leave their partner, and they are less able to negotiate changes (Tauchen & Witte, 1995; Holvoet, 2005).Women's employment reduces this dependency as it generates more economic resources for them, which may also lead to a decrease in domestic violence (Kim *et al*., 2007). On the other hand, there are studies indicating that economic empowerment cannot always protect against domestic violence (Atkinson & Greenstein, 2005; Dalal *et al*., 2009; Heath, 2014). In fact, violence may even increase as husbands attempt to compensate for the enhanced women's status and independence due to employment (Hindi & Adair, 2002). Hence, the participation of women in paid work might worsen their situation instead of enhancing their capacity to exercise control over their lives. These controversies in the literature on women's participation in paid work may result from the multidimensional nature of women's empowerment: interventions that are narrowly focused on only one dimension of empowerment may not improve the other dimensions, and may sometimes even negatively affect them (Malhotra *et al*., 2002).

In order to develop effective interventions, it is important to know how the different dimensions of empowerment are related to each other. To contribute to this growing literature, we have conducted a survey among 508 entrepreneurial women who are members of female workgroups in the spices processing business in Addis Ababa. These female workgroups have been organized by the Ethiopian government and developmental organizations as a model strategy to promote women's empowerment in Ethiopia. In our study, we use 35 qualitative and

quantitative indicators to measure women's empowerment at six important dimensions: the economic dimension (indicators of earnings of income and assets ownership), the familial dimension (indicators of decision-making power), the psychological dimension (self-esteem indicators), the legal dimension (indicators of the knowledge of women's rights on Ethiopian constitution), the political dimension (political representation, participation in public protests or political campaigning) and the socio-cultural dimension (female genital mutilation, believe in the equal effectiveness of boys and girls at school). To determine to what extend the economic dimensions is related with each of these other dimensions, we use regression analysis in which for each indicator of the other dimensions its relationship with the economic dimension, while controlling for relevant personal traits, family characteristics and community level indicators.

The paper is organized as follows: in the next sections, we first present background information on the study area, followed by the conceptual framework that will be used in the paper. Then we describe the data collection, measurement of women's empowerment and methods that will be used. In the result section, first descriptive statistics are presented, after which the results of the regression analysis are provided. Finally, the results of the study are discussed, and conclusions are drawn.

5.2 Background of the study area

In 1993, the Ethiopian federal constitution has granted equal rights to women with men in all spheres of life including marriage, property rights, inheritance and bodily integrity (Women's Affairs Sub Sector, 2004). Cultural practices that reduce the women's welfare (e.g. female genital mutilation, polygamy and early marriage) have legally been prohibited (Bevan & Pankhurst, 2007). However, Ethiopia is still among the countries with the highest level of gender

inequalities. According to the gender inequality index of the Human Development Report of 2013[2], Ethiopia is ranked 121 of the 151 countries in the list.

Ethiopian women do not enjoy their legal rights, because of social, cultural, political and economical disadvantages in accessing opportunities, decision-making and ownership of basic resources (Ogato, 2013). The UN Women 2011-2012 report shows that 49% of women in Ethiopia have experienced physical violence from a partner and 59% has experienced sexual violence. The Ethiopian Demographic and Health Survey (EDHS) 2011 data show that 68% of Ethiopian women believe that their husbands have a right to beat them. Around 74% of the Ethiopian women have undergone female genital mutilation (WHO, 2011), and 31% of them supports its continuation (EDHS, 2005). Polygamy still occurs (Bevan & Pankhurst, 2007), and 41% of girls are married before they are 18 (UNICEF, 2013). Ethiopian women have a low level of political representation and the women's political movement is also small and weak (Biseswar, 2008). Few women own productive assets and even for these women the assets are often controlled by men (Lim *et al*., 2007).

In the last two decades, the Ethiopian government and developmental organizations have facilitated the formation of female workgroups as a model strategy to develop women's empowerment and to change the position of women in the country (Alsop & Heinsohn, 2005). Most of these workgroups are engaged in the red-pepper and other spice processing business activity. Red-pepper is a vegetable and spice crop produced by many farmers in Ethiopia. For centuries, red-pepper processing has been one of the most time and energy consuming home activities in Ethiopia, and women have traditionally been responsible for this activity. Over time, groups of entrepreneurial women have recognized their expertise in the red-pepper processing as

[2] Available from: http://hdrundporg/en/content/table-4-gender-inequality-index (Accessed 20 December 2014).

a business opportunity. These women buy unprocessed red-pepper from the market, add value by processing it, and sell it back to the market. The activities of these groups are supported by the government and developmental organizations and provided them with working places, business training, finance management, market integration, micro-finances and so forth. The current study is focused on these entrepreneurial female workgroups.

5.3 Conceptualization of women's empowerment

The aim of this study is to find out whether and to what extent the economic dimension of women's empowerment is interrelated with other dimensions in the social context of the study area. Empowerment is defined by Kabeer (2001) as 'The expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them' (p.19). On its PovertyNet, World Bank (2011) defined the word empowerment as 'the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes'. In this study, we define women's empowerment as: expanding women's necessities and transforming these necessities into outcomes that have positive effects on women's wellbeing. The necessities include material resources, self esteem, knowledge about their legal rights, domestic decision-making, perception about socio-cultural practices that reduce women's welfare, and political participation. In the rest of this section, we conceptualize women's empowerment based on previous studies and in relation to the intent of our study.

A widely accepted way of conceptualizing women's empowerment comprises three essential and interrelated elements: preconditions (resources), agency (processes) and outcomes (achievements) (Kabeer, 1999; Malhotra & Schuler, 2005; Garikipati, 2008). The framework used in the current study (Figure 1) is primarily based on these three elements. The distinction of

these elements is important, but in practice it is not always easy to completely separate them (Kabeer, 2001). Depending on the subjects of interest, a given element may be an indicator of women's access to resources, their agency, or an outcome, so the meaning of an element depends on its interrelationships with other elements in the conceptualization process (Malhotra *et al*., 2002).

The first element in our framework is preconditions, which are defined as enabling factors of empowerment, or resources (Kabeer, 1999). We identified three categories of preconditions in the social context of the study area: interventions, gendered institutions and individual characteristics. We distinguish two main interventions: employment opportunities and access to credit (OECD, 2012). These interventions are widely used by organizations to promote women's empowerment in the study area (Alsop & Heinsohn, 2005; Ogato, 2013). Gendered institutions may be formal -- e.g. national administrative and legal frameworks related to land, inheritance and property rights (OECD, 2012) or informal -- e.g. social norms, ethnicity, religion (Mabsout & van Staveren, 2010). Regarding individual characteristics, we distinguish relatively fixed and relatively flexible characteristics. The relative fixed individual characteristics include education (Chakrabarti & Biswas, 2012), age, marital-status (Trommlerova *et al*., 2015), and number of children (Dito, 2011). The relatively flexible individual characteristics include watching TV (Ting *et al*., 2014), listening to the radio, gender training (Mahmud *et al*., 2012), chairperson-experience, shock-experience and close-friendships.

The second element of our framework is agency. Agency refers to empowerment indicators that determine outcomes in the process of empowerment (Kabeer, 1999; Malhotra *et al*., 2002). Preconditions expand women's agency in the process of empowerment (Malhotra & Schuler, 2005). Agency refers to women's necessities in our definition of women's empowerment. The

process of women's empowerment can be captured by a wide range of multidimensional empowerment indicators (Mahmud *et al*., 2012; Imai *et al*., 2014; Tsikata & Darkwah, 2014). We distinguish six interrelated dimensions of women's empowerment: economic, familial, legal, psychological, political and socio-cultural (e.g. Malhotra *et al*., 2002; Charmes & Wieringa, 2003; Mahmud *et al*., 2012). Each dimension is measured with several empowerment indicators, because a single empowerment indicator is usually not sufficient to measure a given dimension (Estudillo *et al*., 2001). We have done our best to choose indicators with which the dimensions can be measured independently. However, it is difficult to neatly separate each dimension of empowerment (Malhotra *et al*., 2002), and there might remain some overlap in our measurement.

The economic dimension, takes a central position in our framework, because most interventions aimed at increasing women's empowerment are focused on this dimension. The economic dimension is supposed to be strengthened by creating employment opportunities and access to credit, as well as by improving national administrative and legal frameworks related to land, inheritance and property rights (OECD, 2012).

The third element in our framework is the outcomes of empowerment. Empowerment outcomes are results of empowerment indicators or agency (Kabeer, 2005), and they have direct effects on women's wellbeing (Kabeer, 1999). Although our study focuses on empowerment dimensions, it is important to consider also the outcomes of the process of women's empowerment, because they enable us to explain the possible relation among the empowerment dimensions. The literature mentions two types of outcomes in relation to women's wellbeing, intended and unintended outcomes.

Intended outcomes have positive effects on women's wellbeing. Examples are autonomy and the possibility to leave abusive relationships (Kabeer, 2005; Esplen & Brody, 2007), the

opportunity of women to invest in their own health and education as well as in that of their family (DFID, 2010), the opportunity to speak for their rights (Malhotra *et al*., 2002; Mahmud *et al*., 2012), being respected and have social status (Garikipati, 2008) and reduced risk of experiencing marital violence (Panda & Agarwal, 2005).

Unintended outcomes are associated with negative effects on women's wellbeing, such as a heavy workload that is likely to affect their health and dignity (Kabeer, 2005; Esplen & Brody, 2007), societal rejection caused by disobedience to traditional gender roles (Drinkwater, 2005), tension, anxiety and emotional stress (Ahmed *et al*., 2001), increasing domestic violence (Atkinson & Greenstein, 2005; Heath, 2014), greater responsibility for the family, divorce and loneliness (Argyle, 1999) and having little free time for doing things for themselves like watching TV (Basu & Koolwal, 2005).

The two elements of our conceptual framework (resources and agency/empowerment indicators) were used in our regression analysis, and the third element (empowerment outcomes) to explain the results of our study in part of discussion.

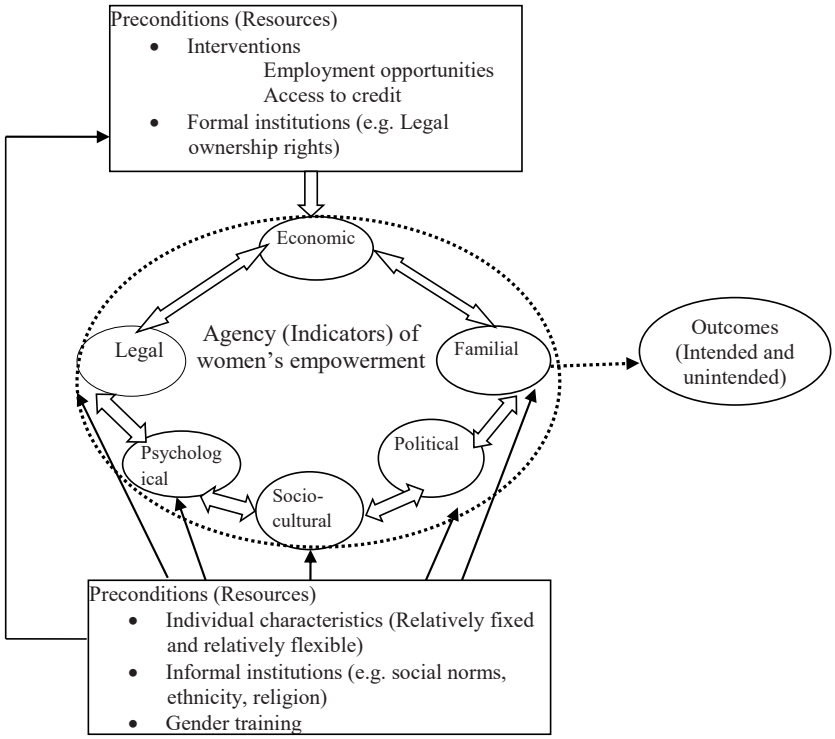

Figure 5.1: Conceptual framework on the relationship among resource, agency and outcomes of women's empowerment

5.4 Methods

Data

Participants in the study were 508 women from 102 workgroups in the red-pepper and other spices processing business in Addis Ababa, the capital of Ethiopia. Addis Ababa has ten sub-cities and each sub-city has a Micro and Small Scale Enterprise office. Based on the information obtained from these offices, six sub-cities were selected with a large number of workgroups. In

the six selected sub-cities, there are 64 *Woredas* (*Woreda* is the second-level administrative division in Addis Ababa). We listed all 270 workgroups in the 64 *Woredas* and randomly selected 102 workgroups to be included in our study.

The data were collected by means of structured group and individual interviews. All members of the selected workgroups participated in the group's interview. From each workgroup, five women were randomly selected to be included in the individual interview. The individual interview was conducted privately and independently with 508 selected women. The survey data was collected between July, 2013 and September, 2013. Given the context specific nature of women's empowerment (Hashemi *et al*., 1996; Garikipati, 2008; Mahmud *et al*., 2012) we started with a pilot study in which we interviewed 50 women in 10 workgroups. On the basis of their answers we could fine-tune the questions in relation to the various aspects of women's life in the particular situations of the study area.

Measuring women's empowerment

As discussed in the introduction, we measure women's empowerment using six interrelated dimensions: economic, familial, psychological, legal, political and socio-cultural dimensions (e.g. Malhotra *et al*., 2002; Charmes & Wieringa, 2003). Each dimension is measured with several indicators. Detailed descriptions of these indicators are given in Appendices A-E.

The economic dimension comprises of two main components: (1) income generated by women (total monthly income and share from the group business) and (2) women's asset ownership (household/individual assets, savings, net gifts and remittances). Income generated by women and asset ownership are mentioned as important indicators of women's empowerment in several studies (e.g. Garikipati, 2008; Weber & Ahmad, 2014; Ganle *et al*., 2015; Samarakoon &

Parinduri, 2015). For married women, the value of their household's assets is divided by two, because the Ethiopian constitution grants equal ownership rights for husbands and wives. The two components of the economic dimension are related to each other; as income generated by women is often spend on assets and savings (Garikipati, 2008).

The familial dimension comprises decision-making power regarding certain aspects of women's life. In several studies (Weber & Ahmad, 2014; Ganle *et al*., 2015; Samarakoon & Parinduri, 2015) decision-making power of women is considered as the main indicator of empowerment. We use both financial and non-financial decisions. The financial decisions are buying and selling of furniture, buying clothes and medication, and the spending of income generated by women. The non-financial decisions have to do with being a victim of violence, work and religion related choices, and choices regarding membership of social or political associations.

The questions regarding decision making power used a five point likert-type scale: (1) someone else, (2) spouse, (3) jointly with someone, (4) respondent and spouse jointly, (5) respondent. The first two options had to be dropped, because the participants choosing these options in all decision making indicators were less than 5%. Some studies place women's income and financial decisions along the economic dimension (e.g. Bhuiyan *et al*., 2013; Weber & Ahmad, 2014), but other studies (e.g. Mahmud *et al*., 2012; Heath, 2014) place these decisions together with non-financial decisions on the familial dimension. We follow the latter studies and brought them together under the familial dimension. If a woman is powerful enough to make non-financial decisions; she can take financial decisions as well, even if she earns no income.

The legal dimension, which comprises women's awareness of their legal rights, is also an important indicator of empowerment (Hashemi *et al*., 1996). We included nine indicators

regarding the women's knowledge about their rights under the Ethiopian constitution. These include knowledge about the legal age of marriage for a female, knowledge about women's legal property rights, about their rights with respect to employment opportunities, about their rights regarding promotion opportunities, about their rights regarding the transference of pension entitlements, and about their rights regarding prenatal and maternity leave.

The psychological dimension was measured by eight self-esteem indicators, as mentioned by Ryff and Singer (1996). These include confidence to speak in public, the ability to be a leader in a given social or economic group, confidence regarding own opinions, feeling in charge of situations, being open to new experiences and having positive feeling that she would be described by the group or community as a good person. According to Goldman and Little (2015), changes in beliefs and attitudes are important indicators of empowerment.

Four indicators were selected to measure the socio-cultural dimension of women's empowerment. These include believing that boys and girls are equally effective at school, being prepared to report to legal bodies if someone in the community practices female genital mutilation, feeling that women like them can change socio-cultural things in their community and their preferences for sons or daughters. These indicators were selected based on Malhotra *et al*. (2002) conceptualizations of women's empowerment. Accepting the equal effectiveness of men and women reflects the cultural acceptance of women's socio-economic status and achievements (Bericat, 2012). Given that one of the indicators (preference for son/daughter) had to be dropped, because 86% of the women were in the same category (equal preference for son/daughter), this dimension is measured by three indicators.

For the political dimension of women's empowerment, three indicators were selected: whether the woman was a representative in a legal body of government, whether she has

participated in public protests and/or political campaigning, and whether she exercised her right to vote. However, the last one (exercising the right to vote) had to be dropped, as around 95% of the sample was allocated in one category (vote many times). Participation in public protest and political camping are important indicators of women's empowerment (Hashemi *et al*., 1996) and women's political representativeness has been used as an indicator of women's empowerment in many recent studies (e.g. Tsikata & Darkwah, 2014; Samarakoon & Parinduri, 2015).

For the computation of the familial, legal and psychological dimensions, principal components analysis with varimax rotation was used. Components with eigenvalues equal or greater than 1.0 and items with factor loadings of more than plus or minus 0.3 were retained (Field, 2005). For the familial dimension, one item (decision on the type of religion to follow) was dropped because its factor loading was less than 0.3, and the remaining ten items were reanalyzed. Three clean factors appeared which together accounted for 65.9% of total variance. Four items were included in the first factor (major decisions): decision regarding income generated from group business, decisions regarding buying and selling furniture, and decisions regarding the kind of job to work in. The second factor (medium decision) includes three items: decision regarding serious health problems of respondent, decisions regarding experiencing violence, and decisions regarding the type of association to be a member of. The third factor (minor decisions) included three items: decisions regarding buying clothes, regarding small health issues, and regarding simple violence.

For the legal dimension, one item (knowledge about the legal rights of pension entitlements) had a factor loading under 0.3 and was dropped. The remaining eight items formed two factors that together explained 52.4% of total variance. The first factor included items related to

maternity and prenatal visits in the private and public sector. The second factor included items related to property rights, employment, promotion and the female legal age of marriage.

The eight items of the psychological dimension formed two factors, which together explained 43.4% of total variance. The first factor (confidence in their ability) included six items: confidence to speak in public, the ability to be a leader in a social or economic group, confidence regarding own opinions, having positive feeling to be described by the group or community as a good person, being aimful in life, being happy to be a female. The second factor included two items: feeling in charge of situations and being open to new experiences.

The internal consistency among the indicators was assessed using Cronbach's alpha (Cronbach, 1951). The Cronbach's alpha coefficients for the three dimensions were above 0.6 (Table 1), thus reflecting an acceptable level of internal consistency (Black & Porter, 1996). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was greater than 0.5, which reflects an acceptable level (Kaiser & Rice, 1974).

For the other two qualitative dimensions (socio-cultural and political), the measures of internal consistency and sample adequacy were below the critical values. For these dimensions therefore the separate indicators were used.

Tabel 5.1: Tests of internal consistency and sampling adequacy in principal component analysis

Empowerment Dimensions	Number of indicators	Chronbach's alpha	Total variation explained by the items	Kmo test
Familial	10	0.85	65.9	0.81
Legal	8	0.68	52.4	0.61
Psychological	8	0.68	43.4	0.76

Analysis

The key variables of the study are the six dimensions of women's empowerment described above. Four of the dimensions (economic, familial, legal and psychological) are continuous, and the other two (socio-cultural and political) are ordinal. To examine the relationships between the economic and other dimensions of empowerment, we first present Pearson correlations between the dimensions. After that, we estimate regression models with the score of the women on the five non-economic dimensions as dependent variables and the women's score on the economic dimension plus a set of relevant background characteristics as independent variables. For the dimensions that are measured by a continuous scale (familial, legal and psychological) we use OLS regression analysis. For the dimensions that are measured by an ordinal scale (socio-cultural and political), we use ordered probit analysis (Greene, 2003).

The control variables are enabling factors of empowerment (Kabeer, 1999), which include education (Chakrabarti & Biswas, 2012), age, marital-status (Trommlerova *et al*., 2015), and number of children (Dito, 2011), watching TV (Ting *et al*., 2014), listening to the radio, gender training (Mahmud *et al*., 2012), chairperson-experience, shock-experience and close-friendships, ethnicity and religion (Mabsout & van Stavere, 2010).

We tested for nonlinearities in the effect of income on the other dimensions by adding quadratic terms to the model. None of these terms were significant. Also interactions between

income and important background characteristics of the women (education and age) were found insignificant. Multicollinearity tests were done for all independent variables. The maximum Variance Inflation Factor (VIF) was less than five for all variables, which is far below the critical value of 10. Hence multicollinearity is not a concern in our regression analyses (compare Neter *et al*., 1989). The data was analyzed with STATA 13.

5.5 Results

Empowerment indicators

Descriptive information for the six dimensions is presented in Table 2. Regarding the economic dimension, 13.6% of women obtained less than zero ETB, hence were indebted because of involving in the group business. Around 55% of the women earned between 0 and 5 thousand ETB from the group business, 26% earned between 5 and 20 thousand ETB and 5% of the women earned more than 20 thousand ETB. Assets ownership is another economic indicator, and 5% of the women had up to five thousand ETB worth of assets, and 9.1% of women had above 100 thousand ETB worth of assets. Regarding the familial dimension, 45.9% of the women make all financial and non financial decisions just by themselves, and 27.3% make all decisions together with their partner.

Regarding the legal dimension, 68.5% of the sample gave the right answers for all the legal indicators measuring the women's knowledge about their rights in the Ethiopian constitution. Of the others, 15.6% gave the wrong answer and 15.9% answered 'I don't know'. Regarding the socio-cultural dimension, 10% of the women strongly agreed on equal effectiveness of boys and girls at school and 60.2% agreed. Regarding female genital mutilation, if someone in the community practiced it, 23.4% of the women strongly agreed that they would have reported it to

the police and 64.8% agreed. Around 10% of the women state that they feel that they can change socio-cultural things in the community fairly or very easily.

The indicators for the political dimension show that about 79% of the women had neither been a political representative in any legal body of government, nor participated in public protests or political campaigns. Around 6% had been a political representative quite often, and around 12% of women have been participant in political camping many times. Regarding the psychological dimension, 8.8% of the women strongly agreed with all self-esteem indicators.

Tabel 5.2: Summary of the familial, legal, socio-cultural, political, psychological and economic dimension of women's empowerment (detail in the appendices)

Dimensions	Indicators	Categorization	Average%
Economic	Income generated by women	< zero	13.6
		0-4,099 ETB[a]	55.5
		5,000-19,099 ETB	26.3
		20,000-43,000 ETB	4.6
	Asset ownership	< 5,000 ETB	31.4
		5,000-19,099 ETB	41.7
		20,000-100,000 ETB	17.8
		100,001-1059,000 ETB	9.1
Familial	Decision-making power	Someone else only	1.1
		Spouse only	0.8
		Respondent +someone else	25.0
		Respondent +spouse	27.3
		Respondent only	45.9
Legal	Knowledge of women's legal rights on Ethiopian constitution	I don't know	15.9
		Wrong answers	15.6
		The correct answer	68.5
Socio-cultural	Equal effectiveness of boys and girls at school	Strongly agree	10.0
		Agree	60.2
		Neither agree nor disagree	7.9
		Disagree	20.7
		Strongly disagree	1.2
	Report to legal bodies if the community practice female genital mutilation	Strongly agree	23.4
		Agree	64.8
		Neither agree nor disagree	4.5

		Disagree	6.3
		Strongly disagree	0.8
	Changing socio-cultural things in the community	No, not at all	4.5
		Yes, but very difficult	72.2
		Yes, and difficult	13.2
		Yes, fairly easy	8.5
		Yes, very easy	1.6
Political	Political representation	Never	79.9
		Very few times	5.1
		Few times	5.5
		Sometimes	3.5
		Many times	5.7
	Participation in public protests and/or political campaigning	Never	78.5
		Very few times	0
		Few times	0.2
		Sometimes	9.7
		Many times	11.6
Psychological	Self esteem indicators	Strongly disagree	8.8
		Disagree	23.9
		Neither agree nor disagree	16.3
		Agree	42.6
		Strongly agree	8.4
N=508			100

[a] One ETB ~20 US Dollar

Background characteristics

The descriptive statistics for the background characteristics are presented in Table 3. Over half (52%) of the women were married. Around 32% of women were illiterate, and 26% had attended high school or more. The mean age of the sample was 43, with a minimum age of 20 and a maximum age of 75. Of the respondents, 34% had a chairperson experience in any social or economic organizations, and 37% participated in gender training. The largest ethnic group in the sample was Amhara (42%), and the dominant religion was Christianity (92%).

Tabel 5.3: Definitions and descriptive statistics of the independent variables

Variables Name	Definitions	Frequency	Percent
Categorical variables			
Marital status	Other than married	245	48.2
	Married	263	51.8
Education	Illiterate	162	31.9
	Grade 1-4	81	16.0
	Grade 5-8	134	26.4
	Grade 9 & above	131	25.8
Chairperson	Never	336	66.1
experience	At least once	172	33.9
Watching Television	No	46	9.1
	Sometimes	264	52.1
	Often	197	38.9
Listen to Radio	No	246	48.5
	Sometimes	183	36.1
	Often	78	15.4
Shock-experience	No	356	70.2
(over the past year)	Yes	151	29.9
Gender training	No	321	63.3
(participation)	Yes	186	36.7
Hired house assistant	No	462	90.9
	Yes	46	9.1
Ethnicity	Oromo	105	20.7
	Amhara	214	42.1
	Gurage	107	21.1
	Others	71	16.1
Religion	Christian	469	92.4
	Muslim	39	7.7
Continuous variables	Mean	Std. Dev.	Min/Max
Age	43.0	9.9	20/75
Children below 18	1.0	1.1	0/5
Children above 18	2.4	2.1	0/9
Close friends	0.70	1.0	0/6
N=508			

Correlations among the dimensions

The correlations matrix of the empowerment dimensions is presented in Table 4. The correlations among the empowerment dimensions are generally low, i.e. the correlation coefficients are small, and only some of them are significant. The two indicators of the economic dimension (income & assets) have significant correlations with one political indicator (political representation=.21 & .10), and assets has significant correlations with one socio-cultural indicator (genital-mutilation=.10), and with the first psychological factor (confidence in their ability=.13). The psychological dimension is significantly correlated with all other dimensions and the correlations are relatively large. For instance: the first psychological factor (confidence in their ability) has significant correlations with one economic indicator (assets=.10), with the first two familial factors (major decisions=.25, medium decisions=.10), with the first legal factor (property and employment related rights=.19), with the two political indicators (camping=.28, representation=.28), and with two socio-cultural indicators (girls & boys school effectiveness=.22, genital-mutilation=.20).

Tabel 5.4: Correlation among the economic, familial, legal, socio-cultural, political and psychological dimensions of women's empowerment

			1	2	3	4	5	6	7	8	9	10	11	12	13
Economic	1	Income	1												
	2	Assets	0.15**	1											
Familial	3	Major decisions	-0.05	-0.05	1										
	4	Medium decisions	-0.05	0.01	0.37***	1									
	5	Minor decisions	0.01	-0.01	0.35***	0.31***	1								
Legal	6	Maternity related rights	-0.01	0.02	0.03	-0.01	-0.03	1							
	7	Property and employment related rights	0.01	0.03	-0.01	-0.08	-0.11*	0.15**	1						
Political	8	Political camping	-0.02	0.07	0.10*	-0.01	0.07	-0.04	0.07	1					
	9	Political representations	0.10*	0.21***	-0.14**	0.04	0.01	-0.05	0.03	0.16***	1				
Socio-cultural	10	boys & girls effectiveness	0.01	0.09	0.01	-0.09	0.01	0.14**	0.16***	0.02	-0.01	1			
	11	genital mutilation	0.04	0.13**	-0.11*	0.01	-0.14**	0.12**	0.03	0.06	0.22***	0.09	1		
	12	Changing socio-cultural things	0.05	0.02	0.15**	0.14**	-0.01	0.01	0.08	0.06	-0.02	-0.01	0.05	1	
Psychological	13	Confidence in new experience	0.02	0.08	0.15**	0.14**	0.06	0.07	0.02	0.01	0.02	0.19***	0.02	0.15**	1
	14	Confidence in their ability	-0.02	0.10*	0.25***	0.10*	0.01	0.03	0.19***	0.28***	0.28***	0.22***	0.20**	0.09	0.18***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.00$

Regression results

The regression results for the relation between the economic and other dimension of women's empowerment are presented in Table 5 and Table 6. The two indicators of the economic empowerment (income and assets) had no significant relations with any of the other dimensions. There are also no background factors that affect all the dimensions significantly. However, some of the background factors -- education, media, gender training and the proxies for gendered institutions (ethnicity and religion) – seem to be important background factors of women's empowerment in our study area. For instance, better educated women had higher economic power, higher psychological empowerment, better knowledge of their rights, and better political representation than women with lower level of education. Watching TV improved women's psychological empowerment, knowledge about their legal rights, their participation on political camping and believe on girls as equally effective as boys at school. Gender training improved women's confidence in their ability and their participation in politics. Oromo women had lower level of assets ownership than women in other ethnic groups. Muslim women had lower knowledge about their rights and lower believe on equal effectiveness of boys and girls at school than Christian women.

Tabel 5.5: The associations between the economic dimension of women's empowerment with familial and psychological dimensions

	Economic dimension		Familial dimension			Psychological dimension	
	Income	Assets	Major decisions	Medium decisions	Minor decisions	Confidence in their ability	Confidence in exercising new things and changing working environment
Income	-	-	-0.25	-0.80	0.80	0.69	0.45
Assets	-	-	-0.02	0.03	0.04	0.03	0.05
Education (ref=Illiterate)							
Grade 1-4	0.02	0.16	0.08	0.10	-0.10	-0.11	0.09
Grade 5-8	0.02*	0.17	0.22	0.28*	-0.05	0.18	0.28*
Grade 9 & above	0.04***	0.32*	0.16	0.27	-0.15	0.17	0.31*
Marital status (ref=other than married)	-0.01	-0.18*	0.16	0.19	0.59***	0.07	0.14
Chairperson experience (ref=no)	0.01	0.13	-0.09	0.11	0.03	0.29**	-0.14
Age	0.09*	0.49	-0.35	0.49	-0.37	-0.36	-0.63
Television watch (ref=no)							
Sometimes	0.02	0.11	-0.22	-0.13	-0.27	0.14	0.18
Often	0.01	0.12	0.05	-0.20	-0.13	0.24	0.19
Radio listen (ref=no)							
Sometimes	-0.01	0.10	-0.23*	-0.18	-0.02	0.25**	-0.02
Often	-0.01	0.26*	-0.12	0.01	-0.07	0.37**	0.17
Ethnicity (ref=Oromo)							
Amhara	-0.01	0.27*	0.01	-0.24	-0.20	-0.17	-0.08
Gurage	0.02	0.31*	-0.09	-0.24	-0.46**	-0.18	0.04
Others	0.01	0.40**	0.04	-0.12	-0.19	-0.30*	0.05
Religion (ref=Christian)							
Muslim	-0.01	-0.09	0.19	0.16	0.25	0.28	0.29
Hired house assistant (ref=no)	0.03**	0.65***	0.02	0.07	-0.24	-0.01	0.35*

Children below 18 years old	0.01	-0.03	-0.05	-0.01	-0.03	0.05	-0.09*
Children above 18 years old	0.01	0.02	-0.10**	-0.06	-0.06*	0.02	0.04
Close friends	0.01	-0.03	-0.05	0.01	-0.01	-0.02	-0.02
Gender training (ref=no)	-0.01	0.08	0.11	0.01	0.08	0.45***	-0.05
Shock experience (ref=no)	0.01	0.09	-0.40**	-0.28**	-0.01	0.01	-0.18
Constant	-0.03	-0.50	0.58	0.09	0.42	-0.51	-0.09
N	503	503	441	441	503	502	503
R^2	0.10	0.11	0.15	0.08	0.12	0.08	0.17
F	2.55**	3.06***	3.29**	1.64*	2.69**	1.98**	4.72***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Tabel 5.6: The association between the economic dimension of women's empowerment with legal, political and socio-cultural dimensions

	Legal dimension		Political dimension		Socio-cultural dimension		
	Property and employment related rights	Maternity related rights	Political campaign	Political representation	Believing in boys & girls equal effectiveness	Against genital mutilation	Changing socio-cultural things
Income	-0.22	-0.30	0.90	1.22	0.02	-0.28	1.15
Assets	-0.01	0.03	0.04	0.10	0.08	0.10	-0.03
Education (ref=Illiterate)							
Grade 1-4	-0.23	0.14	-0.18	0.41	-0.21	0.24	0.15
Grade 5-8	0.19	0.30*	-0.03	0.69**	0.27	0.42**	0.43**
Grade 9 & above	0.15	0.25	-0.07	1.11***	-0.05	0.48**	0.30
Marital status (ref=other than married)	-0.10	0.01	-0.16	-0.04	0.02	-0.05	0.08
Chairperson experience (ref=no)	-0.03	0.20*	-0.01	0.63***	-0.06	0.26*	0.12
Age	0.07	0.41	0.21	1.88	-0.84	1.50*	-1.35
Television watch (ref=no)							
Sometimes	0.77***	0.30	0.15	-0.12	0.51**	0.28	-0.04
Often	0.83***	0.23	1.63***	0.05	0.56**	0.31	0.06
Radio listen (ref=no)							
Sometimes	0.03	-0.05	-0.15	0.15	-0.16	0.03	0.03
Often	0.04	-0.07	-0.17	0.20	0.16	0.09	0.11
Ethnicity (ref=Oromo)							
Amhara	-0.11	-0.03	-0.23	0.05	0.13	0.08	-0.02
Gurage	0.25	-0.05	-0.41*	0.02	0.49**	0.44*	0.10
Others	0.11	-0.04	-0.30	-0.10	0.38*	0.62**	0.12
Religion (ref=Christian)							
Muslim	-0.41*	-0.07	0.39	-0.19	-0.47*	-0.32	-0.21
Hired house assistant (ref=no)	0.08	-0.31	-0.27	-0.12	0.43*	0.02	0.20

Children below 18 years old	0.02	-0.01	0.09	0.11	0.01	0.06	-0.09
Children above 18 years old	0.01	-0.02	0.03	0.04	-0.03	-0.02	0.07*
Close friends	-0.08	-0.01	-0.03	0.11	-0.07	0.13*	0.01
Gender training (ref=no)	0.01	-0.10	0.19	0.40**	-0.18	-0.01	0.02
Shock experience (ref=no)	0.16	-0.08	0.09	0.17	0.08	0.03	-0.29*
Constant	-0.75*	-0.45	2.48***	3.43***	-0.38	0.28	0.81*
N	501	501	503	502	503	502	502
R^2	0.11	0.05					
F	2.65***	1.02*					
Log likelihood			-353.65	-309.27	-510.99	-445.94	-558.30
LR chi2(21)			179.72**	116.60**	50.45***	58.63***	36.28**

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5.6 Discussion

In 2000, empowering women was set by the United Nations as one of the eight major Millennium Development Goals for the 15 years to come. However, despite great efforts and strong commitments among governments and developmental organizations, this target was not fully achieved and many women are still facing discrimination in access to resource and disempowerments in different aspects of their life (UN, 2015). This might in part be caused by the fact that most of the interventions that aimed to increase women's empowerment have been focused on the economic dimension. Empowerment is a multidimensional process, and it remains to be seen to what extent interventions promoting empowerment along the economic dimension also lead to empowerment in the other dimensions.

In this study, we examine the relations between the economic dimension and five other dimensions of empowerment: the psychological dimension, familial dimension, legal dimension, political dimension and socio-cultural dimension. Our findings make clear that – at least for the

women participating n our study -- the economic dimension is not strongly related to these other five dimensions. There are some significant correlations, in particular between the economic dimension and the political, socio-cultural and psychological dimensions, but these correlations are rather weak. Women who have been political representatives score higher on the economic dimension, and there is also a positive association between the psychological and the economic dimension. However, these correlations are with .21 and .10 respectively rather weak. Moreover, all significant associations between the economic and other dimensions of empowerment were found to disappear when studied with regression models that control for other factors relevant for women's empowerment.

A possible explanation for these findings is that in relation to the other five dimensions, the economic dimension works as a double-edged sword, whereby negative and positive effects of income on the other dimensions may cancel each other out. In the rest of this section, we elucidate this double-edged sword explanation in light of previous studies and in relation to the social context of the study area.

Regarding the effects of women's income (economic dimension) on their decision-making power within the household (familial dimension) there is a vast literature that finds positive relationships between women's income and decision-making power (e.g. Panda & Agarwal, 2005; Allendorf, 2007). These studies indicate that women's income increases their autonomy, engenders freedom of choosing their own life style and encourages uplifted and strong feelings. Women with income can control productive resources, invest in their own health and education as well as in that of their children, and are able to leave abusive relationships (Kabeer, 2005; Esplen & Brody, 2007; DFID, 2010).

However, there are also some studies that find negative relationships between women's income and decision-making power; strong gender ideologies may prevent the translations of women's assets or income into decision-making power (Bradshaw, 2013). These gender ideologies come into play when income earned by women is insufficient to allow them independence from men (Elson, 1992); when women's income is unable to make them move out of confined roles and see themselves differently (Bruce, 1989); and when women are needed to do things to reconcile the contradictions between traditional gender norms and women's actual situations or 'gender deviance' (Tiano, 2001). For instance, Bittman *et al*. (2003) found Australian women who earned more to actually do more housework to make up for their 'gender deviance' than women who earned less.

These gender ideologies may be especially important for the women who participated in our study. An increase in women's income is often related to longer working hours, overburden and busyness. When women are very busy running their business, they may have less time to spend with their family and do domestic work. Their family members then may feel neglected and put negative pressure on them. Given that these women already have too much burden of business, they may let their partners or children decide on important things in their life, simply to reduce negative outcomes from decision-making, like regrets, responsibilities and disappointments (Zeelenberg *et al*., 1998). The insignificant relations between income and decision-making power, in our study, may result from the women's autonomy and these gender ideologies counterbalancing each other.

Regarding the psychological dimension of women's empowerment, we did not find any significant associations with income. There are indications that income increases women's respect and social status (Garikipati, 2008), which in turn may boost their self-esteem. In general,

people with more self-esteem are supposed to be more likable, have better relationships, make better impressions on others, show stronger in-group favouritism, and have enhanced initiative and pleasant feelings than people with low in self-esteem (Baumeister *et al*., 2003). However, this might not be true for women in patriarchal societies. In those societies, women are perceived as less competent and shyer than men, so women with high self-esteem might counteract gender stereotypes in these areas. Empirical studies indicated some counterfactual effects of women's high self esteem, for instance women with high self-esteem were hated by their peers (Powers & Zuroff, 1988), suffered from social rejection (Rudman, 1998), attacked by fear of being judged unfeminine, pushy, and domineering (Janoff-Bulman & Wade, 1996). Hence, income might increase women's self-esteem, but the positive effects of a higher self-esteem might be outweighed by negative effects, so that the women might end up in zero-sum game.

The legal dimension of women's empowerment refers to women's knowledge about their rights in the Ethiopian constitution. It is an important factor in women's life. For instance, Stevenson and Wolfers (2006) found that women's knowledge of divorce laws has improved their wellbeing in terms of lower domestic violence and less women murdered by their partners. However, in our study no significant effects were found of income on women's knowledge about their rights in the Ethiopian constitution. Here also the double-edge sword character of income might play a role. On the one hand, women's income increases the possibility to buy assets, which in turn might increase their access to the media. Ethiopian women mainly get legal and political information through the media, as was also confirmed in our study. We found watching television to be one of the main factors affecting women's knowledge about their rights in the Ethiopian constitution (legal dimension). On the other hand, earning more income is associated with an increase in women's workload (Esplen & Brody, 2007; Haile *et al*., 2012), which in turn

might reduce the time to follow the media (Basu & Koolwal, 2005). This might indicate that even if these women have better access to the media they may not have the time to use them to improve their knowledge about their rights. This might explain to a certain extent why no effects of income on the legal dimension of women's empowerment were found.

Women's representation in politics is one of the indicators of women's political empowerment. A study (Biseswar, 2008) in Ethiopia revealed a low level of women's political representation and a weak women's political movement. Our study finds similar results for our small business women. Nearly 80% of them has never been a political representative in any legal bodies of government nor participated in public protests or political campaigns. Also our regression results show insignificant effects of income on women's political representation. Hence, even though women's income may enhance their respect and social status (Garikipati, 2008) -- which increases their possibility to be elected as a political candidate -- they do not use this 'capital' to participate in politics. The reason for this might be that while on the one hand participation in politics might give personal satisfaction and enhance the opportunity to fight for their rights, on the other hand, the political, public, cultural and social environment in a patriarchal society like Ethiopia is often hostile to them.

5.7 Conclusion

There is a general assumption that women's economic disempowerment is the major cause of their disempowerment in other dimensions of life and an improvement in the economic dimension will lead to improvement in those other dimensions as well. Our analyses, however, show that this assumption is not always correct. Among the Ethiopian women included in our study, we found the economic dimension of empowerment to be only weakly related to five other

important dimensions of empowerment. To explain this finding, we argued that income might work as a double-edged sword in its relation with those other dimensions and that the positive and negative effects of income on empowerment in those dimensions might cancel each other out.

Most correlations among the other dimensions of empowerment were also rather low, which suggests that each of those other dimensions is important on its own. The only exception was the psychological dimension, which was found to be more strongly correlated with all other dimensions. This result points towards a central role played by psychological empowerment for achieving progress in all other dimensions of empowerment. It confirms earlier studies (e.g. Landig, 2011; Narasimhan, 1999) indicating that empowering women psychologically (with confidence, information and motivation) might be more effective than empowering them (only) in economic respect.

Our study has several limitations. First, the generalizability of our findings is restricted by our focus on female workgroups in the red-pepper processing business and the relatively small size of our sample. Hence, we cannot rule out the possibility that in other context or when using more powerful samples clearer associations will be found. A second, potential limitation is that data are used for one point in time, whereas the underlying processes are dynamic in character. It may take years before an improvement in one dimension of empowerment (e.g. the economic dimension) has spread towards other fields of life and leads to improvements in the other empowerment dimensions. However, most of the women groups in our study were already active for prolonged periods of time. This means that the increase of the women's income due to their participating in the group business has had some time to spread to other fields of life. The fact

that we found only weak correlations thus indicates that an effect of income on the other empowerment dimensions -- if it exists -- is in any case not very strong.

We therefore conclude that the findings of our study -- in spite of these restrictions -- can be seen as new empirical evidence indicating that interventions focused on the economic dimension of women's empowerment will not by itself lead to improvements in the other dimensions of empowerment. Or, with other words, that each dimension of empowerment requires specific attention in order to achieve improvement in it. We would thus argue that, for promoting women's empowerment in the study area, a broad package of interventions will be needed in order to achieve improvement in all dimensions.

Appendices

Appendix A: Indicators of the familial dimension of women's empowerment

Codes: 1= jointly with someone else 2= respondent and spouse jointly 3= respondent	1(%)	2(%)	3(%)
When decisions are made regarding the following aspects of your life, who normally takes the decision?			
Financial decisions			
a) When you want to buy of furniture	31.50	34.45	33.07
b) When you want to sell of furniture	32.48	39.76	26.18
c) When you want to buy own clothes	11.02	8.66	80.12
d) Whether or not to go to health center, when you have a simple health problem	16.54	14.57	68.50
e) Whether or not to go to health center, when you have a serious health problem	40.63	38.86	17.55
f) When you want to decide over income from the group business	17.25	24.44	58.32
Non-financial decisions			
g) What to do when you are a victim of simple violence	18.31	14.76	66.54
h) What to do when you are a victim of serious violence	41.14	37.40	16.93
i) What kind of job you want to do	29.72	27.56	41.54
j) What type of religion or faith to follow[+++]	9.06	11.81	78.94
k) What type of economic, social or political associations to be a member of	26.77	48.23	17.52
Average percentage	24.95	27.32	45.93

[+++] a variable dropped during principal component analysis

Appendix B: Indicators of the political and socio-cultural dimensions of women's empowerment

Different codes for each indicators	1(%)	2(%)	3(%)	4(%)	5(%)
a) Have you ever been a representative in any legal bodies of government?	78.94	6.10	5.51	3.54	5.71
Code*: 1= Never 2= Very few times 3=Few times 4= Sometimes 5= Many times					
b) Have you ever participated in public protests and/or political campaigning? Use Code*	78.54	0	0.20	9.65	11.61
a) Boys and girls can be equally effective if they go to school	1.18	20.67	7.87	60.24	10.04
Code**: 1=Strongly disagree; 2=Disagree; 3=Neither agrees nor disagree; 4=Agree; 5=Strongly agree					
b) If someone in the community practice female genital mutilation, I will report to legal bodies. Use Code**	0.79	6.30	4.53	64.76	23.43
c) Do you feel that women like you can generally change socio-cultural things in your community if they want to?	4.53	72.24	13.19	8.46	1.57
Code: 1= no, not at all, 2= yes but with a great deal of difficulty 3=yes but with a little difficulty 4= yes fairly easy 5= yes very easy					

Appendix C: Indicators of the legal dimension of women's empowerment

Different codes for each indicators	I don't know (%)	Other answers (%)	The right answer (%)
a) What is the minimum legal age of marriage for a female Codes: 1= I don't know 2= below 18 3=19-24 4=25 and above 5= 18 (correct)	10.83	23.82	65.35
b) What do you know about (men and women's) legal property rights or resource ownership rights? Codes: 1=I don't know 2=men should own all 3= men should own much 4=women should own much 5= women should own all 6=men and women have equal ownership rights (correct)	9.06	16.33	80.91
c) What do you know about (men and women's) legal rights of employment opportunity Codes: 1= I don't know 2=men should have all the employment opportunities 3=men should have higher 4=women should have higher 5=women should have all 6= men and women should have equal employment opportunities (correct)	4.34	31.96	63.71
d) What do you know about (men and women's) legal rights of promotion opportunity Codes: 1= I don't know 2=men should have all the promotion opportunities 3=men should have higher 4=women should have higher 5=women should have all 6= men and women should have equal promotion opportunities (correct)	13.58	22.25	64.17
e) What do you know about (men and women's) legal rights of pension entitlements Codes: 1= I don't know 2=only men have the rights to transfer pension entitlements 3=only women have the rights 4=both men and women have equal rights of transfer pension entitlements (correct)[+++]	29.53	13.78	56.69
f) What do you know about legal rights to maternity leave Codes[***]: 1= I don't know 2=no maternity leave 3=maternity leave with no pay 4=maternity leave with full pay (correct)	7.69	1.78	90.53
g) What do you know about legal rights to maternity leave, in private company? use Codes[***]	25.20	20.08	54.72
h) What do you know about legal rights to prenatal leave Codes****: 1= I don't know 2=no prenatal leave 3=prenatal leave with no pay 4=prenatal leave with full pay (correct)	13.58	2.17	84.25
i) What do you know about legal rights to prenatal leave, in private company? Use Codes****	29.53	14.37	56.10
Average percentage	15.93	15.57	68.5

[+++] a variable dropped during principal component analysis

Appendix D: Indicators of the psychological dimension of women's empowerment

Code: 1=Strongly disagree 2=Disagree 3=Neither agrees nor disagree 4=Agree 5=Strongly agree	1%)	2%)	3(%)	4(%)	5(%)
a) I have the confidence to speak in public	21.85	29.53	7.09	37.80	3.74
b) I have the ability to be a leader in a given social or economic group	9.25	42.72	14.37	31.69	1.97
c) I have confidence in my opinions, even if all the members are contrary to my opinion.	1.38	39.96	14.37	41.93	2.36
d) In general, I feel I am in charge of the situation in which I work.	0.79	22.44	24.02	49.41	3.35
e) I am open to exercise new experiences.	31.10	21.85	25.98	19.88	1.18
f) Most people in the group or community would describe me as a giving person, willing to share my time with others.	1.18	9.65	20.28	62.99	5.91
g) Some group members or community members may wander aimlessly through life, but I am not one of them.	0.79	9.06	2.76	66.93	20.47
h) I am always happy to be a female	4.34	15.98	21.30	30.18	28.21
Average percentage	8.84	23.90	16.27	42.60	8.4

Appendix E: Indicators of economic dimension of women's empowerment

Indicators	Measurement of each variables for each indicator	Mean	Std.	Min	Max
a) Total monthly income (MI) [a]	Average monthly income from the group business and from all other income generating activities	0.45	0.43	0	5.25
b) Capital Gain or amount of share from the group business (CG) [a]	Inventory: summation of the quantity of each item in the inventory multiplied by selling price of the respective item (I)	14.3	26.25	0.19	176.4
$CG = \frac{(I + A + S) - (IC + DC + D)}{GS}$	Assets: summation of the quantity of each group's asset multiplied by the current estimated price of the respective asset (A)	26.59	37.18	0.06	210.0
	Savings: summation of all money in cash form (in-hand, banks, saving and credit institutions etc. (S)	39.19	51.00	0.40	350.0
	Contribution: total amount of money that the members invested on the group business (IC)	6.16	10.60	0	46.00
	Debt Capital: summation of all money that is owed (DC)	13.13	29.84	0	142.0
	Donations: total donations they have received since the start-up of the business (D)	11.03	29.36	0	250.0
	Group Size: number of current group members (GS)	11.7	5.3	5	38
c) Other income generated by women (OI)[a]	Average income generated by women other than the group business	0.11	0.35	0	5
d) Household /individuals wealth (W) [a]	Expected value of household assets plus savings minus total money owed	50.63	136.1	0	1575.5
e) Net gifts and remittance (GR) [a]	Over the past year, if you have received/given gifts/remittances, what was the total value of all in monetary value? (value of gift/remittance relieved minus value of gift/remittance given)	0.89	6.89	-4.00	149.6
Income generated by women (WI)[a]	MI+CG	4.69	7.37	-15.83	43.42
Household /individuals wealth, net gifts and remittance (WG)[a]	W+GR	51.52	136.90	-5.45	1579.34

Women's Asset ownership (AO)[a]	WG (for married women divided by two, equal ownership right)	35.84	96.41	-5.54	1058.24
Economic empowerment (EE) [a]	EE= WI + AO	40.53	97.63	-14.06	1058.57

[a] In thousand Ethiopian ETB (one thousand Ethiopian ETB ~50 US Dollar)

Chapter 6

Findings and conclusions

6.1 Analysing the effectiveness of female workgroups

In developing countries, including Ethiopia, widespread poverty and women's disempowerment are two persistent development problems. On the bright side, it is a possible strategy to eradicate poverty through empowering women (DFID, 2011; Manfre & Siegmann, 2010; Glenbow, 2011). One of the commonly used development approaches for empowering women is increasing their participation in more profitable parts of agricultural value chains (Pionetti *et al*., 2011; KIT, APF & IIRR, 2012). Therefore, in the last two decades, the Ethiopian government and developmental organizations have followed this strategy by organizing female workgroups in the red-pepper value chain. In Ethiopia, red-pepper is one of the most promising commercial crops. Women have a comparative advantage in red-pepper processing, because it is traditionally a female activity and requires neither the ownership of land nor a large amount of start-up capital. To enhance the capacities of the female workgroups in this business, they have been provided with working places, business training, finance management, market integration, micro-finances and so forth.

Little is known about the way these workgroups work and on factors that contribute to their performance. The central aim of this thesis is to increase our understanding of the factors influencing the performance of these workgroups and to find out whether their objective of empowering women is achieved. To achieve this aim, we have performed four empirical studies in which the following research questions have been addressed:

1) Are there differences between the individual versus group **risk choices**, and how do risk choices influence the performance of female workgroups in the red-pepper processing in Ethiopia?
2) How does intra-group **trust and monitoring** relate to each other in the female workgroups, and how does this relation influence the performance of the workgroups?
3) What are the effects of **ethnic diversity** on the performance of the female workgroups?
4) Whether and to what extent is the **empowerment** gained by women forthcoming from the income gained from these workgroups (economic empowerment) related to other forms of empowerment (familial, psychological, legal, political and socio-cultural)?

The first three research questions are focused on important factors that may affect the performance of these female workgroups. The performance of these workgroups is directly related to the economic empowerment of the members of the workgroups, because income generated by women is one of the main components of their economic empowerment (Ganle *et al*., 2015; Weber & Ahmad, 2014; Garikipati, 2008). There is a growing body of literature emphasizing that women's economic empowerment might be a necessary, but not a sufficient condition for realizing overall forms of empowerment (Khan, 2013; Denney, 2015). The fourth research question, therefore, examines the relationships between the economic and other dimensions of women's empowerment. To address these questions, we have collected data from 508 women, who are members of 102 female workgroups in the red-pepper and other spices processing business in Addis Ababa. The data was collected by means of a survey and by using field experiments. In the following section (6.2), we summarize the main findings and answer the central research questions. After this, we provide an overview of the contributions made to the

literature (6.3) and to society and we discuss the possible policy implications (6.4). The chapter ends with a discussion of the limitations of our research, our recommendations for future research, and some concluding thoughts.

6.2 Main findings

Individual versus group risk-taking and workgroup performance

The first study of this thesis (Chapter 2) is focused on the way in which working as a group affects the women's risk taking behaviour and on the potential consequence of their risk taking behaviour for the performance of the workgroups. Our analyses reveal that the female members of the workgroups are rather cautious in their individual choices and even more cautious when they make the same choice as a group decision. We argue that the unique characteristics (gender, education, age, and income) of the women in our sample and the fact that they are operating in a high-risk environment makes the majority of the women in our sample cautious in their individual decisions. The fact that the women were even significantly more cautious when making the group decision provides evidence in favour of a cautious shift. These findings are in line with earlier studies arguing that whatever response tendency exists among group members in an individual decision tends to become exaggerated when they have to take a group decision (Myers *et al*., 1970; Stoner, 1968; Teger & Pruitt, 1967).

The results of our study also indicate that the women's age and educational level are significantly associated with their individual risk choices. Older women had a significantly lower tendency to take risks than younger women, and more educated women had a significantly higher tendency to take risks than illiterates. These results are in line with findings from research

on wealthier countries (e.g., Dohmen *et al*., 2011; Hardeweg *et al*., 2013; Sepúlveda & Bonilla, 2014; Knight *et al*., 2014).

Regarding the relationship between group risk choices and performance of the groups, we found that groups taking more risks had significantly better performance. This finding is in line with studies using data from Western countries (Wang & Poutziouris, 2010; Rachdi & Ben-Ameur, 2011).

Intra-group trust, monitoring and workgroup performance

The second study of this thesis (Chapter 3) examines the relationship between monitoring of the members performance and the level of trust within the workgroup, and how this relationship affect workgroup performance. Our research made clear that intra-group trust is positively and significantly associated with monitoring and that monitoring is positively and significantly associated with workgroup performance. The positive relation between trust and monitoring can be explained by the social conditions of the study area. The female entrepreneurs on which we focus experience stronger pressure to be successful than women in other contexts. The types of business that these women are involved in have a high risk of failure (Njuki *et al*., 2011), and failure of these women may be associated with domestic violence (Vyas & Watts, 2009), social rejection (Drinkwater, 2005) and emotional stress (Ahmed *et al*., 2001). Because of these pressures, the women may do their utmost best to avoid failure, which may enable them to overcome negative gender stereotypes and counteract the expectations of low performance (Flynn & Ames, 2006). Since both trust and monitoring are associated with enhanced group performance (Bijlsma-Frankema *et al*., 2008), these women may use both of them together to increase their performance (see Chapter three).

We also find a direct and positive relationship between intra-group trust and performance. We argue that the social context of the study area may play a major role in terms of magnifying performance benefits derived from trust. Conditions for women in a low-income setting are more risky (Ahmed *et al*., 2001). They also have less access to information (Njuki *et al*., 2011), and less education and thus lower capacity to process information (MOWA, 2006). Intra-group trust can reduce these obstacles and increase the performance of the women by enhancing communication and sharing of information between them (Zand, 1972; Morgan & Hunt, 1994), by bringing good faith, reliability and fairness (Zaheer *et al*., 1998), by allowing for constructive interpretations of the members motives (Uzzi, 1997), by reducing the potential for conflict (Zaheer *et al*., 1998; Morgan & Hunt, 1994) and by increasing cooperative and risk taking behaviour (Morgan & Hunt, 1994).

Another finding of this study is that workgroups whose members were better able to monitor one another perform better. The literature shows both costs and benefits of intra-group monitoring on group performance. The costs associated with monitoring include aversion against change and reduced cooperation (Bromiley & Cummings, 1995; McAllister, 1995). The benefits include improved coordination and feedback processes (Dickinson & McIntyre, 1997; Marks & Panzer, 2004), increased likelihood of detecting free riding (Jones, 1984), and prevention of losses by creating the possibility to correct and help one another (Rico *et al*., 2008). Given the restricted access to information these women face and their relatively low information processing capacity, the benefits of monitoring may be more important for them than the costs. The information which these women get through monitoring one another strengthen the functioning and performance of the groups. Our study also indicates that the benefits of monitoring on group

performance run through its relation with intra-group trust. Hence the relationship between monitoring and group performance may be indirect.

Ethnic diversity and workgroup performance

Our third study (Chapter 4) aimed to find out whether the performance of the workgroups is influenced by ethnic diversity of their members. We find negative effects of ethnic diversity on performance. These negative effects can be explained by the social context in which the workgroups operate. We focus on fragmented ethnic groups in a low-income setting which have been living together for centuries. In the diversity literature, both the benefits and costs of cultural diversity are indicated. The benefits of cultural diversity include varieties of perspective that may yield more creativity and innovation, enhanced problem solving ability, higher quality decisions (Singh & Point, 2006; Frink *et al*., 2005; Richard *et al*., 2004; Williams & O'Reilly, 1998; Pollar & Gonzalez, 1994; Cox, 1993; Cox *et al*., 1991), and more variation in the goods, services and skills available for consumption, production and innovation (Lazear, 1999; Ottaviano & Peri, 2005; Williams & O'Reilly, 1998). The costs of cultural diversity include racism, prejudices (Abadie & Gardeazabal, 2003) and conflicts of preferences (Alesina *et al*., 1999), increases in turnover (Jackson *et al*., 2003; Webber & Donahue, 2001), low communication, less attachment, less social cohesion (Pelled *et al*., 1999), and less commitment to the organization (Harrison *et al.,* 1998; Watson *et al*., 1993; Tsui *et al*., 1992).

We argue that organizations in low-income societies may not realize the benefits of cultural diversity. As the ethnic groups in these societies have been living together for centuries, the exchange of information, perspectives, goods and services among them has already been taking place for a long time. The innovative aspects of interethnic exchange may therefore have long

been gone. On the other hand, due to historical complications, the costs of cultural diversity like conflicts, racism, and prejudices may still exist. This might offer a possible explanation for the negative effects that we found of ethnic diversity on workgroup performance.

The multidimensional nature of women's empowerment

In the fourth study presented in this thesis (Chapter 5) we focused on empowerment as a multidimensional phenomenon and examined whether and to what extent economic empowerment derived from the workgroup business outcomes contributes to empowerment in other dimensions. Findings make clear that the economic dimension of women's empowerment is not strongly related to five other dimensions (familial, legal, psychological, political and socio-cultural). This indicates that the income generated from these workgroups is not effectively translated into other forms of empowerment. We argue that the economic dimension of women's empowerment may work as a 'double-edged sword' and can lead to positive as well as negative outcomes. Possible positive outcomes include autonomy and the opportunity to leave an abusive relationship (Esplen & Brody, 2007; Kabeer, 2005), the possibility to invest in the women's own health and education as well as in that of their family (DFID, 2010), the opportunity to speak for their rights (Malhotra *et al*., 2002; Mahmud *et al*., 2012), respect and social status (Garikipati, 2008), and lower risk of marital violence (Panda & Agarwal, 2005). Negative outcomes include a heavy workload that may affect the women's health and dignity (Esplen & Brody, 2007; Kabeer, 2005), societal rejection caused by disobedience to traditional gender roles (Drinkwater, 2005), tension, anxiety and emotional stress (Ahmed *et al*., 2001), domestic violence (Atkinson & Greenstein, 2005; Heath, 2014; Vyas & Watts, 2009), divorce and loneliness (Argyle, 1999), greater responsibility for their family, and less time for activities related to the women's own

well-being, like watching TV (Basu & Koolwal, 2005). If these positive and negative outcomes cancel each other out, this may explain why we did not find a clear relationship between the economic dimension and the other dimensions of empowerment.

Regarding the relations among the other dimensions of empowerment, most of the correlations were rather low, except for those with the psychological dimension. This suggests that psychological empowerment plays a central role for achieving progress in other dimensions of empowerment. This result confirms findings of other studies (e.g. Landig, 2011; Narasimhan, 1999) which indicate that empowering women psychologically (with confidence, information and motivation) might be more effective than empowering them (only) in economic respect.

6.3 Contributions to the literature

In research on organizational behaviour, the influence of the context is mostly kept constant or not well exploited (Johns, 2001). However, there is a growing number of studies (Johns, 2006; Nkomo & Zoogah, 2015) arguing that there are subtle, or even powerful, effects of context on research results in the field. Given that most organizational studies are focused on Western and male-dominated samples, this study contributes to the literature by focusing on women-run enterprises in a low-income country and patriarchal social context. In this context, women are sometimes assumed to be poorer business performers than men (Eagly & Karau, 2002). The types of business that the women typically are involved in have a high risk of failure (Njuki *et al*., 2011). The failure of these women may be associated with domestic violence (Vyas & Watts, 2009), social rejection (Drinkwater, 2005) and emotional stress (Ahmed *et al*., 2001). Thus, these women may experience not only stronger pressures, but also more constraints than women in other contexts. Nevertheless, if they are successful, they may overcome negative gender

stereotypes and counteract the expectations of being low performers (Flynn & Ames, 2006). By providing evidence on the situation of female entrepreneurs in this special context, our study provides a unique new perspective to the literature in the field.

In addition to the unique context, this study contributes to the literature by examining the differences in risk-taking behaviour between individuals and groups and by establishing important links between group risk-taking behaviour and performance. It also sheds a new light on the benefits of monitoring on group performance. Our finding that monitoring may help developing trust among the members of workgroups (chapter 3) is important and new. This is also the case with our finding of negative effects of ethnic diversity on workgroup performance (chapter 4).

Finally, the empowerment analysis of Chapter 5 provides new empirical evidence for the argument that women's economic empowerment is not a sufficient condition for realizing other forms of empowerment. This finding enriches the literature by providing evidence in favour of the 'double edge sword' nature of women's economic empowerment in relation to other dimension of empowerment, whereby positive and negative outcomes of women's income may counterbalance each other. It provides empirical evidence regarding the multidimensionality of women's empowerment by showing that women who are empowered in one area of life need not also be empowered in other areas.

6.4 Policy implications

One of the dominant approaches of empowering women is through establishing female (work)groups, which might also teach women to act collectively. In the last two decades, the Ethiopian government and developmental organization have been organizing such workgroups to

improve the situation of women in the country. This thesis provides valuable new insights into the role of behavioural change in risk attitudes and intra-group trust and workgroup organizational diversity for developing effective workgroup governance in a low-income social context, in particularly in Ethiopia. It shows that there is a tendency towards risk-averse behaviour among the women participating in these workgroups and how risk-aversion is associated with lower workgroup performance. It also shows that by examining individual risk choices we may gain information about how these women will behave in a group condition. Findings indicate that it is important for organizations that facilitate the formation of female workgroups in a low-income context to develop strategies aimed at improving individual risk-taking behaviour, which in turn may improve the level of risk-taking at the workgroups level and through this the performance of the groups.

Another important finding of this thesis is that in the female workgroups studied there is a positive association between intra-group trust and monitoring, and that the effect of monitoring on group performance runs through its relation with intra-group trust. We thus argue that organizations promoting women's empowerment through the formation of workgroups should stimulate the development of monitoring systems in order to enhance intra-group trust and through this improve the groups' performance.

This thesis also provides evidence for a negative effect of ethnic diversity on workgroup performance. Easterly (2001) argues that such negative effects of ethnic diversity can be mitigated by 'good' institutions. We thus recommend the development of effective strategies to abate conflict that can possibly arise among members of ethnically diversified workgroups.

Our findings regarding the (lack of) association between different dimensions of women's empowerment might have important implications for existing empowerment interventions. Given

the tendency to focus such interventions on the economic dimension, it remains to be seen whether empowerment in other dimensions will also improve. Our findings make clear that the relationships between the six dimensions of women's empowerment are weak and that the economic dimension is hardly connected to the other dimensions. Hence, economic empowerment does not necessarily mean empowerment in other dimensions as well. In fact, our results point towards a more central role for the psychological dimension than for the economic dimension, as the psychological dimension was found to be correlated with all other dimensions. This result points towards a central role played by psychological empowerment for achieving progress in all other dimensions of empowerment. It confirms earlier studies (e.g. Landig, 2011; Narasimhan, 1999) indicating that empowering women psychologically (with confidence, information and motivation) might be more effective than empowering them (only) in economic respect.

6.5 Limitations

When considering our findings, it should be kept in mind that they are based on a specific sample -- female workgroups in the spices processing sector – and that the number of workgroups is not very large. The procedures used in the lottery choice experiment might also set certain limits on our findings. For instance, we provided the experimental money before the participants made their decisions, and this might have influenced women's decisions into the risk-averse direction, because the value of the experimental money increases when it becomes a part of the women's endowment, the so-called 'endowment effect' (Kahneman *et al*., 1991). We therefore suggest for future research to bring more variation into the moment the experimental money is provided.

Another potential limitation is related to the fact that women's empowerment was measured at one point in time, whereas the underlying processes are dynamic in character. It may take some time before an improvement in one dimension of empowerment (e.g. the economic dimension) has spread towards other fields of life and led to improvements in other empowerment dimensions. However, most of the women groups in our study were already active for prolonged periods of time, which means that the increase of the women's income due to their participating in the group business has had some time to spread to other fields of life. The fact that we found only weak correlations thus indicates that an effect of income on the other empowerment dimensions -- if it exists -- is not very strong.

6.6 Concluding thoughts

This thesis identifies important factors that influence the performance of female workgroups, which is an important instrument for improving women's economic empowerment in patriarchal and low-income social contexts. The studies presented here are innovative in that they introduce this unique social context in the literature on organizational behaviour. It is also among the first studies providing empirical evidence indicating that economic empowerment is not a sufficient condition to achieve other forms of empowerment. We thus argue that this study provides important guidance for governments and developmental organizations aiming to promote women's empowerment through formation of female workgroups in a low-income context.

Summary

Women's empowerment and collective action

Since the mid-1970's, women's empowerment has become an important goal of governments and developmental organizations. In 2000, it was set as one of the eight major millennium development goals for the 15 years to come, and considered to be the key to achieve the other seven (UNFPA, 2005). In the UN System Task Team Report on the post-2015 UN development agenda, it was indicated that "The empowerment of women and girls and the protection of their rights should be centre-pieces of the post-2015 agenda" (UN, 2012, p. 25). The need to focus on women's empowerment was not only considered important for the women themselves, but also as a means to reduce poverty, promote growth, and advance better governance (DFID, 2011).

Ethiopia is one of the world's poorest countries. It is characterized by a high level of gender inequality and a weak position of women within society (UNDP, 2015). To empower Ethiopian women and reduce the country's poverty, the government and development organizations have organized female workgroups, aimed at enhancing the women's capacity to act collectively. These workgroups received support in terms of working places, market integration, micro-finances and so forth (World Bank, 2013; ACDI, 2015). Most of these workgroups were involved in the red-pepper processing industry, traditionally a female activity that does not require ownership of land nor a large amount of start-up capital. This thesis focuses on these female workgroups, analyses factors that influence their performance and determines to what extent their objective of empowering women is achieved. To do this, we have developed four studies, which are discussed in the four central chapters of this thesis. The first three studies are focused on important factors that may influence the performance of the workgroups, namely

risk-taking attitudes of the women, intra-group trust and monitoring, and ethnic diversity of the groups. The economic performance of these workgroups is directly related to the economic empowerment of their members, because income generated by women is considered one of the main components of economic empowerment (Ganle *et al*., 2015; Weber & Ahmad, 2014; Garikipati, 2008). It remains however to be seen whether economic empowerment also contributes to other dimensions of empowerment, like the familial, psychological, legal, political and socio-cultural dimensions. This will be addressed in the fourth study of this thesis. In the next section, we present the overview of each study; thereafter the main policy implications of the findings are discussed.

Overview of studies

The first study of this thesis (Chapter 2) studies whether women involved in the red pepper processing business make different risk choices when they make a risky decision in isolation, compared to when they make the same decision together with other members of their workgroups. In addition, we have studied to what extent the level of risk-taking in the group decisions is associated with businesses success. Risk-taking attitudes may be very important for these women, because they operate their businesses in a high-risk environment. The small and informal businesses they run have a high risk of failure (Njuki *et al.*, 2011). Moreover, the fact that they as women are involved in income-generating activities confronts them with domestic, community and psychological risks (Heath, 2014; Vyas & Watts, 2009; Drinkwater, 2005; Ahmed *et al*., 2001). The results of our study make clear that under these circumstances the majority of women was relatively cautious in their individual choices, and that they were even

more cautious in the group decisions. We also found that the workgroups which made more risky choices had on average higher business performance than the other groups.

The second study (Chapter 3) examines the relationships between trust, monitoring and the performance of the female workgroups. This study is important because of the unique social context we focus on, namely a low-income patriarchal context, where women are assumed to be poorer business performers than men (Eagly & Karau, 2002). The female entrepreneurs on which we focus therefore experience stronger pressure to be successful than women in many other contexts. The small-scale businesses that these women typically are involved in have a high risk of failure (Njuki *et al*., 2011) and failure may be associated with domestic violence (Vyas & Watts, 2009), social rejection (Drinkwater, 2005) and emotional stress (Ahmed *et al*., 2001). Because of these pressures, the women may do their utmost best to avoid failure, in order to overcome the negative gender stereotypes and to counteract the expectations of low performance (Flynn & Ames, 2006). Since both trust and monitoring are associated with enhanced group performance (Bijlsma-Frankema *et al*., 2008), these women may use both at the same time to increase performance. The results of our study make clear that there is a positive association between intra-group trust and monitoring. Our findings also indicate that workgroups whose members are better able to monitor each one another also tend to perform better. Intra-group trust was also positively related with performance and was found to mediate the positive relation between monitoring and performance.

The third study (Chapter 4) analyses the effects of ethnic diversity on the performance of these female workgroups. This study is important, given the ethnically diverse nature of Ethiopia and the scarcity of empirical evidence regarding the role of ethnicity in a low-income setting with several ethic groups who have been living together already for centuries. We argue that

organizations in this context may probably not realize the benefits of cultural diversity, like the exchange of information, perspectives, goods and services among the groups. Given that the ethnic groups have been living together already for centuries, the innovative aspects of such interethnic exchanges may diminished over time. At the same time, due to historical complications, the costs of cultural diversity -- like conflicts, racism, and prejudices -- may still exist. The results of our study are in line with these expectations; we find a negative relationship between ethnic diversity and the workgroup's performances.

Our last study (Chapter 5) is focused on the relationships between the economic dimension of women's empowerment and other important dimensions of empowerment, like the familial dimension, the psychological dimension, the legal dimension, the political dimension and the socio-cultural dimension. Gaining insight into these relationships is important, because it may help us to evaluate the success of 'income focused' interventions in light of their effects on the other dimensions and to develop interventions aimed at empowering women in all dimensions. Our findings make clear that the economic dimension is not strongly related to the other five dimensions. A possible explanation for this is that the economic dimension may work as a double-edged sword, whereby negative and positive effects of income on the other dimensions may cancel each other out. The associations between the other dimensions of empowerment were rather weak too. The only exception was the psychological dimension, which showed moderately strong correlations with all other dimensions. Findings make clear that for making progress with regard to all dimensions of empowerment, focusing on one of them (like the economic dimension) is not enough and that specific actions for each dimension separately are required.

Policy implications

The findings of our first study make clear that for increasing the performance of women's groups it is important that the women's tendency to take risks in a group context is strengthened. We therefore recommend organizations that aim to improve the success of such workgroups to develop strategies that improve the tendency to take risks of the individual members, which then in turn might improve the level of risk-taking behaviour at the workgroup level. The results of our second study stress the importance of monitoring for developing intra-group trust in female workgroups. For organizations that aim to strengthen women's empowerment through the formation of workgroups, it therefore is important to stimulate the development of monitoring structures within the groups. Our third study reveals a negative association between ethnic diversity and workgroup performance. Based on this finding we argue that already at the start of the workgroups the risk of ethnic conflict is considered and that if necessary strategies are developed to abate the conflicts that might possibly arise as a result of this diversity. Our last study made clear that the degree of economic empowerment of the women in our study was not related to empowerment in other important dimensions of these women. Also among the other dimensions, except for the psychological one, correlations were very low. This indicates that – with exception of the psychological dimension -- each of the dimensions of empowerment studied is important in its own right. To strengthen the position of women in the study area on all dimensions of empowerment, therefore a broad package of measures is needed, whereby each dimension is treated separately. Given the association between the psychological dimension and all other dimensions, it takes in a special position. It is possible that strengthening this dimension positively affects all other dimensions, but it is also possible that the effect works the other way

around and that it is improvements in the other dimensions that strengthen the psychological wellbeing of the women.

Nederlandstalige samenvatting (Summary in Dutch)

Empowerment van vrouwen en collectieve actie

Sinds het midden van de jaren zeventig is het beleid van ontwikkelingsorganisaties en regeringen steeds meer gericht geweest op versterking van de positie van vrouwen in ontwikkelingslanden. In 2000 werd 'empowerment' van vrouwen door de Verenigde Naties gekozen als één van de acht 'Millennium Development Goals (MDGs)' voor de periode tot 2015; en werd het zelfs gezien als de sleutel tot het bereiken van de andere zeven MDGs (UNFPA, 2005). In het task force rapport over de post-2015 ontwikkelingsagenda van de Verenigde Naties werd gesteld dat "The empowerment of women and girls and the protection of their rights should be centre-pieces of the post-2015 agenda" (UN, 2012, p. 25). Versterking van de positie van vrouwen wordt niet alleen belangrijk geacht met het oog op het welzijn van de vrouwen zelf, maar ook als middel om armoede te verminderen, groei te bevorderen en de kwaliteit van het bestuur te verbeteren (DFID, 2011).

Ethiopië is een van de armste landen van de wereld. Het wordt gekenmerkt door een hoge mate van ongelijkheid tussen mannen en vrouwen en een zwakke positie van vrouwen in de samenleving (UNDP, 2015). Om de positie van vrouwen te versterken en de armoede te verminderen, heeft de Ethiopische overheid samen met ontwikkelingsorganisaties werkgroepen voor vrouwen opgericht, bedoeld om hun capaciteit om gezamenlijk op te treden te versterken. Deze werkgroepen worden ondersteund bij het verkrijgen van werkruimte, microfinanciering, integratie in de lokale markt, etc. (Wereldbank, 2013; ACDI, 2015). De meeste van deze werkgroepen richten zich op de verwerking van rode pepers en andere specerijen. Dit is traditioneel een vrouwenactiviteit die geen eigen grond of groot opstartkapitaal vereist.

Dit proefschrift richt zich op deze werkgroepen, analyseert factoren die van invloed zijn op het succes ervan, en onderzoekt in hoeverre de doelstelling om de vrouwen te 'empoweren' wordt gehaald. Hiertoe zijn vier studies ontwikkeld, die in de vier centrale hoofdstukken van dit proefschrift worden besproken. De eerste drie studies zijn gericht op belangrijke factoren die de prestaties van de werkgroepen kunnen beïnvloeden. Ze gaan over de houding van de vrouwen ten aanzien van het nemen van risico, de relatie tussen het monitoren van de werkzaamheden en onderling vertrouwen binnen de groepen, en de invloed van etnische diversiteit op de prestaties van de groepen. Het economisch succes van deze werkgroepen is rechtstreeks van invloed op de economische 'empowerment' van de leden, want door vrouwen gegenereerde inkomsten worden als een belangrijk aspect van economische empowerment beschouwd (Ganle *et al*., 2015; Weber & Ahmad, 2014; Garikipati, 2008). Het is echter de vraag of economische empowerment ook bijdraagt aan andere dimensies van empowerment, zoals de familiale dimensie en in psychologisch, juridisch, politiek en sociaal-culturele opzicht. Dit wordt in de vierde studie van dit proefschrift onderzocht. In de volgende sectie beschrijven we deze vier studies in meer detail. Daarna wordt ingegaan op de belangrijkste beleidsimplicaties van de bevindingen.

De vier studies

In de eerste van de vier studies (hoofdstuk 2) wordt onderzocht in hoeverre de vrouwen die deel uitmaken van de werkgroepen verschillen in de mate waarin ze risico's nemen tussen een situatie waarin ze een keuze alleen maken en een situatie waarin ze dezelfde keuze samen met hun groepsgenoten maken. Daarnaast is bekeken in hoeverre de geneigdheid tot het nemen van risico bij groepsbeslissingen samenhangt met het succes van de werkgroepen. Het om te gaan met risico is voor deze vrouwen een belangrijke vraag, omdat zij opereren in een omgeving die zeer

risicovol is. De kleine en informele bedrijven waarin ze werken lopen een groot risico om te mislukken (Njuki *et al*., 2011). Vanwege het feit dat ze zich als vrouw bezig houden met inkomensgenererende activiteiten lopen ze ook risico op problemen binnen hun huishouden en community en op psychologische problemen (Heath, 2014; Vyas & Watts, 2009; Drinkwater, 2005; Ahmed *et al*., 2001). Ons onderzoek laat zien dat onder deze omstandigheden de meeste vrouwen relatief voorzichtig zijn bij hun individuele keuze en dat ze nog voorzichtiger zijn bij de groepsbeslissing. Daarnaast blijken de bedrijfsprestaties van werkgroepen die geneigd zijn meer riskante keuzes te maken gemiddeld genomen beter te zijn dan de prestaties van werkgroepen die minder riskante keuzes maken.

In de tweede studie (hoofdstuk 3) wordt de samenhang onderzocht tussen onderling vertrouwen, het monitoren van de activiteiten binnen de werkgroepen en de bedrijfsprestaties van de werkgroepen. Dit onderzoek is belangrijk vanwege de speciale sociale context waarin de werkgroepen opereren, namelijk een arme en patriarchale context, waarbinnen van vrouwen wordt aangenomen dat zij slechtere ondernemers zijn dan mannen (Eagly & Karau, 2002). De vrouwelijke ondernemers in de werkgroepen ervaren daardoor meer druk om succesvol te zijn dan vrouwelijke ondernemers in veel andere contexten. De kleinschalige ondernemingen die deze vrouwen runnen hebben een grote kans om te mislukken (Njuki *et al*., 2011) en mislukking kan leiden tot huiselijk geweld (Vyas & Watts, 2009), sociale afwijzing (Drinkwater, 2005) en emotionele stress (Ahmed *et al*., 2001). Vanwege deze risico's zullen de vrouwen hun uiterste best doen hun onderneming te laten slagen, teneinde negatieve stereotypering tegen te gaan en de verwachting van falen te weerleggen (Flynn & Ames, 2006). Aangezien zowel vertrouwen als monitoring kunnen leiden tot verbetering van groepsprestaties (Bijlsma-Frankema *et al*., 2008) is het efficiënt voor de vrouwen om van beide gelijktijdig gebruik te maken, teneinde hun

onderneming zo goed mogelijk te laten presteren. De resultaten van onze studie laten zien dat er een positief verband bestaat tussen monitoring en onderling vertrouwen binnen de groep. Daarnaast zien we dat groepen waarbinnen meer monitoring plaatsvindt ook beter presteren. Dat geldt ook voor groepen waarbinnen meer onderling vertrouwen bestaat. Tenslotte duiden onze resultaten erop dat het positieve effect van monitoring op de prestaties van de groepen via de relatie tussen monitoring en trust en de relatie tussen trust en de groepsprestaties verloopt.

De derde studie (hoofdstuk 4) onderzoekt de effecten van etnische diversiteit op de prestaties van de werkgroepen. Dit is belangrijk omdat binnen Ethiopië verschillende etnische groepen al eeuwenlang met elkaar samenleven en er weinig kennis is over de effecten van etnische diversiteit op ondernemingsprestaties in een dergelijke context. We verwachtten dat onder deze omstandigheden de potentiele voordelen die organisaties kunnen hebben van etnische diversiteit -- zoals de uitwisseling van informatie, perspectieven, goederen en diensten -- waarschijnlijk niet gerealiseerd zouden worden. Deze voordelen zullen in de loop van de tijd steeds minder belangrijk geworden zijn, terwijl door historische complicaties de kosten voortvloeiend uit culturele diversiteit, zoals conflicten, racisme en vooroordelen, waarschijnlijk nog wel bestaan. Onze empirische bevindingen ondersteunen deze visie, we vinden inderdaad een negatief verband tussen etnische diversiteit en de prestaties van de werkgroepen.

Onze vierde studie (hoofdstuk 5) is gericht op het verband tussen de economische dimensie van empowerment en een aantal andere belangrijke dimensies van empowerment, namelijk de familiale dimensie, de psychologische dimensie, de juridische dimensie, de politieke dimensie en de sociaal-culturele dimensie. Inzicht in dit verband is belangrijk, omdat het ons kan helpen het succes van de 'inkomensgerichte' interventies te evalueren in het licht van de gevolgen voor andere dimensies. Dergelijk inzicht kan ons bovendien helpen interventies te ontwikkelen gericht

op de empowerment van vrouwen in alle dimensies. Onze analyses laten zien dat het verband tussen de economische dimensie en de andere dimensies zwak is. Een mogelijke verklaring hiervoor is dat de economische dimensie werkt als een tweesnijdend zwaard, waarbij negatieve en positieve effecten van inkomsten op de andere dimensies tegen elkaar wegvallen. Ook de verbanden tussen de andere dimensies waren niet sterk, met als enige uitzondering de psychologische dimensie, die middelmatig sterk gerelateerd is aan alle andere dimensies. Deze bevindingen duiden erop dat om vooruitgang te boeken met betrekking tot alle dimensies van empowerment, generiek beleid gericht op één bepaalde dimensie (zoals de economische dimensie) niet volstaat en dat specifiek beleid gericht op iedere afzonderlijke dimensie noodzakelijk is.

Beleidsimplicaties

De resultaten van onze eerste studie laten zien dat het van belang is om bij vrouwen werkzaam in dit soort werkgroepen de bereidheid te versterken om in groepsverband risico's te nemen. We stellen daarom voor dat organisaties die de prestaties van dergelijke werkgroepen willen verbeteren, strategieën ontwikkelen die de bereidheid tot het nemen van risico's bij individuele vrouwen versterken. Hierdoor kan, indirect, ook deze bereidheid op groepsniveau versterkt worden, wat naar verwachting het succes van de werkgroepen zal bevorderen. De resultaten van onze tweede studie benadrukken het belang van toezicht voor het ontwikkelen van vertrouwen binnen de werkgroepen. Organisaties die empowerment van vrouwen willen versterken doormiddel van dit soort werkgroepen dienen daarom aandacht te besteden aan het ontwikkelen van monitoringsstructuren. Onze derde studie laat zien dat etnische diversiteit van werkgroepen in de Ethiopische context negatief samenhangt met het succes van deze werkgroepen. Bij de

oprichting van werkgroepen dienen daarom strategieën ontwikkeld te worden gericht op het voorkomen van conflicten tussen de leden van verschillende etnische groepen binnen de werkgroep. De conclusie van onze laatste studie dat, met uitzondering van de psychologische dimensie, de verschillende dimensies van empowerment zwak aan elkaar gerelateerd zijn, impliceert dat ieder van de dimensies op zichzelf belangrijk is. Voor versterking van de positie van vrouwen in het studiegebied op alle dimensies van empowerment is dus een breed pakket maatregelen nodig, waarbij iedere dimensie afzonderlijk aandacht krijgt. De enige uitzondering is de psychologische dimensie, omdat die tot op zekere hoogte samenhang vertoonde met alle andere dimensies. Dit kan betekenen dat versterking van deze dimensie alle andere dimensies ten goede komt, maar het is ook mogelijk dat het effect andersom werkt en verbetering van het psychisch welzijn van de vrouwen een gevolg is van vooruitgang in de andere dimensies.

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Curriculum Vitae

Fitsum Wakweya Bayissa (Ethiopia, 1985) received her first degree at Hawassa University, Ethiopia, in Agricultural Resource Economics and Management in 2006. She conducted her senior research project on the 'effect of income on the decision making power of women'. Promptly, she got a position at Hawassa University as a graduate assistant, teaching undergraduates with courses like Macroeconomics, Institutional economics, Econometrics, and advising them with their senior research project. In 2010, she obtained her MSc degree in Natural Resource Economics at Norwegian University of Life Science, Norway. For the writing of her MSc thesis, on the impact of off-farm income on farm income, she carried out seven months field research in rural households of Malawi. In October 2011, she was enrolled as a PhD student at Radboud University, the Netherlands. She was able to continue her passion for women's empowerment from the time she was conducting her senior research project. In her PhD study, she spent more than two years conducting field research in Ethiopia. Currently, she is working at Hawassa University, where she is lecturing master's courses like Research methods in Agribusiness, Microfinance and Entrepreneurship, and supervising students in their master's thesis.

Empowering women should be seen not only as the process of achieving social justice and human right among all members of a society but also as a necessary condition for the eradication of poverty in low-income countries. Ethiopia is one of the poorest countries in the world with the highest level of gender inequalities and women disempowerment. Ethiopia is ranked 129 out of 156 countries on the list of the gender inequality index of the Human Development Report of 2015. In the last two decades, the Ethiopian government and developmental organizations have facilitated the formation of women workgroups as a model strategy to develop women's empowerment and to enhance the women's capacity to act collectively. Most of these workgroups are involved in the red-pepper and other spices processing business and have received massive support in terms of working places, business training, finances management, market integration, micro-finances and so forth. This thesis examines factors that influence the performance of these red-pepper processing workgroups and finds out whether and how their objective of empowering women is achieved.