

**The Effect of Small Producer Organization Strengthening Project On Women's  
Empowerment: A Case from Paraguay**

By

**KIM, Daehwan**

**THESIS**

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

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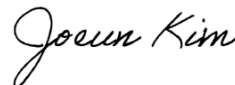
**MASTER OF DEVELOPMENT POLICY**

Committee in charge:

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## **ABSTRACT**

### **THE EFFECT OF SMALL PRODUCER ORGANIZATION STRENGTHENING PROJECT ON WOMEN'S EMPOWERMENT: A CASE FROM PARAGUAY**

**By**

**Kim, Daehwan**

Despite the 2030 Agenda for Sustainable Development, the gender inequality and disempowerment of women persist around the world. Considering the vulnerability and poverty situation of rural women, the study evaluated the effect of the small rural producer organization strengthening project on women's empowerment in Paraguay. Due to the data constraints, a simple before-and-after quantitative design was mixed with a post-only nonequivalent comparison qualitative design. The case study shows that (1) little or no effect on the role division between men and women in the households, (2) significant time reduction of women in people care and garden work at the same time with a significant household income increase, (3) no effect on decision-making by gender, (4) the greatest effect on the women's participation, (5) perception difference on violence against women between men and women but greater consensus on the prevention and intervention about violence in the project beneficiary group. In conclusion, we observed the greater participation of women in producer organization and their income increase. But it did not change the gender role in the households nor decision-making role. In addition, it has confirmed the economic disparity between men and women producers. Finally, it is important to mention that the research has limitations to demonstrate that the project interventions alone caused those changes.

## ACKNOWLEDGEMENTS

I would first like to thank my thesis supervisor Prof. Joshua D. Merfeld, KDI School of Public Policy and Management. Although I did my research work in Paraguay located on the other side of the globe, he consistently gave insightful and clear feedbacks and guidance regardless of the distance we had. Thanks to him, I was finally able to finish my long journey of master degree.

My sincere gratitude is extended to my colleagues in KOICA Paraguay office and the project team members of Fundacion Capital who helped me have the research idea, collect the data through the survey works and interviews, and understand the local context of the rural community in Paraguay. It would have not been possible for me to finish this research without their cooperation

I would also like to give my heartfelt thanks to my beloved wife, Eunyoung Kang who always has been a patient supporter to me and accompanied the tiring 9 years of my thesis journey. My daughters, Lua and Ina, always have been the sources of my happiness and energy to live and work.

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## I. Introduction

Gender inequality and women's empowerment are the 5<sup>th</sup> goal of the Sustainable Development Goals (SDGs) for 2030 Agenda. According to the UN's Sustainable Development Goals Report 2022, women are still left behind men in various indicators. It is, at business-as-usual pace, estimated to take another 40 years in order that women and men have equal representation in national political leadership. More than 1 in 4 women have experienced intimate partner violence at least once in their lifetime. There are only 57% of women who make their own informed decisions on sex and reproductive health care. Despite the global efforts made on this issue, the gender inequality and women's disempowerment still persist around the world.<sup>1</sup>

In Latin America and the Caribbean region, women in rural area are poorer and more vulnerable than men. Although they have an important role in rural economy through paid and unpaid work, their contribution has been underestimated. Rural women work more hours than men, they have active roles in post-harvest and commercial tasks, livestock and subsistence crop cultivation, and domestic duties such as preparing meals and child care. One study tells us that rural women have limited access to resources compared to men, especially productive resources such as land, water, credit and agriculture inputs. This access gap has influenced women's higher levels of poverty and vulnerability.<sup>2</sup>

Unfortunately, the situation is not different in Paraguay, situated at the heart of South America. In rural area, the women who had a child before 18 years old reach 21.2%. The proportion of the women who completed less than 3 school years is 27%.

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<sup>1</sup> UN 2022 SDG report

<sup>2</sup> Quisumbing (2013), Deere (2005), FAO (2011)

In the labor market, more than half of the rural women with working age don't have a paid job. Due to this limited access to economic opportunity, rural women are exposed to higher level of vulnerability and poverty.<sup>3</sup>

On the other hand, producer organizations are now essential tools to provide services to small holder producers by enabling their collective actions in the community and the market. But the problem is that women have certain barriers to participate in those organizations equally as male members. In this regard, the participation and leadership of women in producer organizations have drawn a growing attention in rural development projects.

We will therefore evaluate the effect of small rural producer organization strengthening project on women's empowerment, financed by Korea international Cooperation Agency (KOICA) in Paraguay. Due to the data constraints, a simple before-and-after quantitative design was mixed with a post-only nonequivalent comparison qualitative design. It is important to mention that the study has limitations to demonstrate that the project interventions alone caused the observed changes.

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<sup>3</sup> World Bank (2020)



## II. Literature Review

Although there are many definitions of empowerment in the various fields, three definitions are commonly cited in the international development area. First, Kabeer (2001) defined women's empowerment as "the process by which those who have been denied the ability to make strategic life choices acquire such ability." The ability to make choice has three inter-related domains: resources, agency, and achievements. Resources refer to access to material, human, and social resources. Agency is a process of decision making. Achievements are well-being outcomes.

In a similar way, Narayan (2002) defines empowerment as "the expansion of freedom of choice and action to shape one's life" stated in the World Bank's empowerment sourcebook. She sees recourse not as a feature of empowerment but as catalysts or enabling factors for empowerment. Agency is considered as the essence of empowerment as the majority of writers do. She stresses that resources are not sufficient by themselves without women's individual or collective ability to utilize those resources in their own interests. In the measurement perspective, she also addressed the multidimensional character of empowerment.

On the other hand, Alsop et al (2006) described empowerment as "a group's or individual's capacity to make effective choices, that is, to make choices and then to transform those choices into desired actions and outcomes". This capacity is primarily influenced by two actors: agency and opportunity structure. They defined agency as an actor' or group's ability to make purposeful choices but not as synonymous with empowerment. The opportunity structure was defined as those aspects of the institutional context that influence the actors to transform agency into action.

Based on these definitions, Alkire et al (2012) developed Women's Empowerment in

Agriculture Index (WEAI) to measure women's empowerment at the national level. The WEAI consists of two sub-indexes. The first sub-index measures 5 dimensions of empowerment: (1) decisions about agricultural production, (2) access to and decision-making power about productive resources, (3) control of use of income, (4) leadership in the community, and (5) time allocation. The second sub-index is the Gender Parity Index (GPI) that measures gender parity. This study adopted the variables of WEAI to measure women's empowerment but made some modifications through the consultation with local experts in Paraguay, considering its context.

Another important aspect of this study is the participation of women in producer organizations since the producer organization strengthening was used as principal approach for promoting the quality of lives of the small producer households. It has been found that women's active participation in producer organizations contributes to different development outcomes. Agarwal (2001) found that both men and women members should be empowered to participate in the organization's activities and decision-making processes. It will help producer organizations have better performance and equally distributed benefits. When women actively participate in producer organizations and have access to income and benefits, the positive spillover effects were found at the household level. For example, in Nicaragua children attended better the primary schools when their mothers participated in a cooperative than those of non-participant mothers (Bacon, 2010). Another study (FAO, 2016) shows that the women members of a Coffee Cooperative in Malawi have been able to better assume their roles such as child care, food preparation and school fee payment. It also enabled them to take on male's responsibilities such as housing improvement.

### **III. Project Description**

#### **1. Project Overview**

The Small Rural Producer organization strengthening project started in December 2019 and lasted for 3 years until December 2022. It focused on improving the collective actions in the productive and commercialization activities of 1,245 male and female producers who are the members of 12 producer organizations in Central and Cordillera departments in Paraguay. The producers are dedicated mainly to fruit and vegetable production, preferably belonging to the family farming. The ultimate goal of the project is improving the quality of life of the beneficiary farmers and their families in the rural community.

The strategy of interventions includes the activities such as training, productive diagnosis, brand identity creation, and financial transfers. The training program was provided to the extensionists of the Ministry of Agriculture and Live stocks, the leaders and members of the organization in the areas of production technology, business planning, marketing, financial and social mobility. The project supported, through the financial transfers, the equipment and infrastructures for the production, processing and commercial activities.

Although the main outcome of interest in the study is women's empowerment, there was a limited strategy to promote it in the project plan. The project applied a criterion of benefits to the female majority organizations in the selection process. But it didn't include a gender-related performance indicator nor activity which will result in limited effects on women's empowerment. Nevertheless, it is still worth evaluating the effects because it will help us identify where we should work more for the women's empowerment.

## 2. Project context

The project was implemented in the Central and Cordillera departments which are the nearest to the capital of Paraguay. Through a competition process, the project selected 6 producer organizations in each department. Of the beneficiary group, the 56.6% are from Cordillera department and 43.4% from Central department. The 89.4% live in rural area. One interesting characteristic is that more than half (54.8%) of the beneficiaries are females. And the 25.7% of the total member producers are the heads of household and again the 50.2% of them are women. On the other hand, in terms of education level, almost half of the group (46.4%) finished only the primary education.

Table 1. List of producer organizations by department

Central Department	Cordillera Department
Aregua - Strawberry and related Producers Association	Association of Organic Producers
Arroyos y Esteros - Central Commission of Arroyense Producers	Atyra - Atyra Consortium (Fruit and Horticultural Association)- GT
Ita - Curupicayty Association of Agricultural Producers	Caraguatay - Production and Commercialization Cooperative
Itaugua - Strawberry and related Producers Association	Eusebio Ayala - Sagrado Corazón de Jesús Women's Committee
Itaugua - Itaugua Poty Association of Producers	Itacurubi - Ka'aguy Poty Beekeepers Committee
Ypacarai - Association of Committees of Agricultural Producers	Juan de Mena - San Felipe Women's Committee

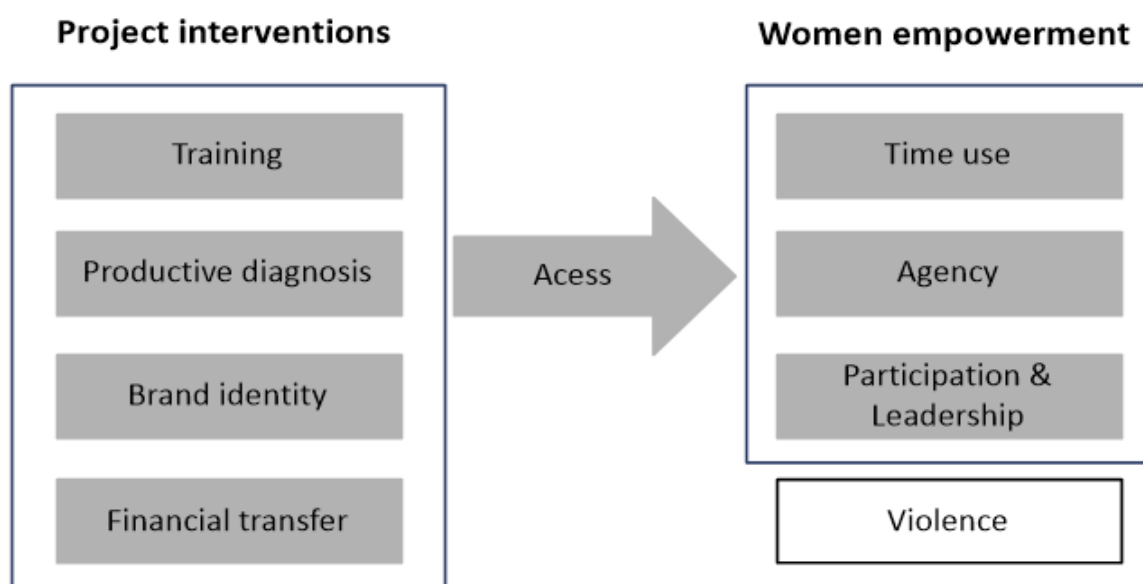
#### **IV. Methodology**

The principal objective of the study is to answer what effect the small rural producer organization strengthening project generated on women's empowerment. To achieve this objective, a mixed method of quantitative and qualitative evaluation is used. Due to the time constraints, both analyses are conducted separately in parallel and the findings are integrated and triangulated at the end.

In the quantitative method, a pre-post evaluation without control group was mainly applied as the study was designed at the end stage of the project. On the other hand, the qualitative evaluation was conducted in parallel for the treatment and control groups which will allow us to understand how the changes in time were made in the treatment group, and also to compare the difference between the two groups to complement the shortcomings of quantitative analysis.

In order to measure the project effect on women empowerment, we developed the study model in figure 1 based on the literature review. The inputs are the project interventions and, through the access to these resources, they will contribute to the women empowerment which is composed of time use, agency, participation and leadership, and violence. Although violence is part of empowerment, we didn't include it in the pre-post evaluation due to some constraints discussed later.

Figure 1. Model of the study



Source: developed by author

The table 2 below shows the definition of each indicator and sub-indicators.

Table 2. Women empowerment indicators

No	Indicators	Definition of Indicators	Sub-indicators
1	Access of the participant to goods and services provided by the project	These are the services offered by the project, to contribute to the empowerment of women.	Number of goods and services provided by the project
			Number of participants who accessed the goods and services of the project
			Percentage of participants' satisfaction with the given goods and services
2	Participants' time use	It is the distribution of the time spent by the participants to carry out productive activities inside and outside the home	Percentage of time spent by the participants in domestic and care activities
			Percentage of time spent by the participants in productive activities outside the home
			Percentage of time spent by the participants to participate in their groups/organizations
3	Agency - Control of decision-making in the household	It is the decision-making, carried out by the participant, and the establishment of their goals (actions are included to achieve those goals.)	Percentage of participants who consider that household decisions are together with your partner
			Percentage of female participants who consider that they have the autonomy to make household decisions individually
			Percentage of male participants who believe they have the authority to make individual household decisions

4	Participation and leadership	It is the participation and leadership of the participants in the producer organization, association or other community group.	Number of participants belonging to groups in community spaces
			Number of participants who lead groups in community spaces
			Number of active participants of the organizations
			Number of participants in the board of directors of the organizations
5	Gender-based violence (GBV)	It is the tool designed to prevent and identify possible GBV situations in their family environment.	Number of participants who identify GBV situations in their family environment
			Number of participants who identify GBV situations in their organizations
			Number of participants who consider that GBV can be prevented
			Number of participants who associate GBV with difficulties of women's participation

### 1. Estimation method

In the quantitative study, a pre-post mean difference tests (t-tests) with standard statistical confidence levels were used to determine the effect attributable to the time of the project period. To collect the pre-data without the baseline, we included retrospective questions about 2 years ago (before the project). Time use, agency, and participation and leadership were tested as the three core indicators.

The main estimation model used in the pre-post evaluation is:

$$Y_{i,t} = \beta_0 + \beta_1 Pre\_Post_i + X\beta^l + \epsilon_i \quad (1)$$

Where corresponds to the outcome variable Y, for individual i, in period t of measurement (pre or post-implementation). The variable that indicates whether the data of Y of the person i corresponds to before or after the implementation is represented by the dichotomous variable corresponds to the set of control variables used to ensure the balance in the estimation (individual characteristics), as well as indicators for the districts from where the program participants are. Finally, it is the

statistical error term of the model. To calculate standard errors, the standard errors of the model are grouped at the individual level.

## **2. Samples**

In this study, we developed the attached quantitative survey instrument based on the WEAI tool<sup>4</sup> and applied it for the 401 project participants. Among them, women are 206 and men are 195. The members in Cordillera are 193 and those in Central are 208. We applied a stratified randomization on the samples considering three observable variables: member's organization, location (department), and sex.

On the other hand, the qualitative analysis was also based on a similar strategy of stratified random selection of 40 participants (treatment group) and non-participants (control group) considering the observable variables of gender and location.

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<sup>4</sup> Women's Empowerment in Agriculture Index jointly developed by the International Food Policy Research Institute (IFPRI), the Oxford Policy and Human Development Initiative (OPHI), and thirteen partner projects in the portfolio of the Gender, Agriculture, and Assets Project, Phase 2 (GAAP2). It helps to measure empowerment, agency and inclusion of women in the agriculture.



## **V. Results**

### **1. Access**

Regarding this indicator, it was measured the participants' level of knowledge, participation, and satisfaction in the project interventions. The project activities consist of training, productive diagnosis, brand identity creation, and financial transfer. It was found that the training activities were the most recognized with 81.42% of positive responses. In contrast, the financial transfer component presented the lowest level of knowledge among the project participants.

In terms of the participation by activity, the greatest involvement of the participants was in the training component (72.17%), followed by brand identity (63.58%) and productive diagnosis (63.30%). The activity with the least participation was the financial transfer (52.32%). According to the findings of the qualitative evaluation, it was found that in many cases the support and financial benefits tend to be concentrated on the managerial members of the organizations. They do not always reach all the members of the organizations. This situation generates a certain degree of dissatisfaction.

If the responses are disaggregated by sex, it is possible to observe that women had a higher level of involvement and knowledge about the services provided. Specifically, a majority of female participation is seen in the training services (77.3%), while the transfer services show less participation (45.1%). The rest of the services seem to present a similar participation rate between men and women.

In the qualitative analysis, comparing the information collected in both groups, it is observed that in the control group the supports are mostly not present any more, which suggests the weakening of their organizations. While in the treatment group

there has been a greater appreciation of the support received through the Project, which meant the strengthening of the organizations. Therefore, we see a marked difference in access to resources in the treatment and control group.

## **2. Time use**

Both in the quantitative and the qualitative evaluation, it was evidenced that the division of role between men and women had the lowest level of pre-post change while it is shown a high level of asymmetry between men and women.

Like the most of other societies, men are more dedicated only to the paid activities. On the contrary, women are more responsible for the rest of household activities such as domestic chores, voluntary work, people care, animal feeding, and working in the garden. It is showing well the overload situation for women although a higher leisure time for women and its increase after the project should be analyzed in a different way.

The t-test results in the table 3 show that, only the two of the people caring and working in the garden had a statistically significant effect of the questions made on the role distribution in the households. Female participants answered the 21.5% reduction of their responsibility in people caring and the 8.8% decrease in their working in the garden. Especially, in terms of the people care in households, from the beginning of the project the project implementation team observed women had less time available to participate in project activities organized in the morning hours due to their care work. In order to include women, it was necessary to make the training schedules more flexible.

Table 3. T-test results on the division of roles between men and women

Variable	Tests de Diferencias de Medias, según sexo							
	Hombre				Mujer			
	Observaciones	Media Pre	Media Post	Diff	Observaciones	Media Pre	Media Post	Diff
<i>¿Quién de su hogar hacía las tareas remuneradas?</i>								
Usted	196	0.867 (0.024)	0.883 (0.023)	0.015 (0.033)	205	0.654 (0.033)	0.663 (0.033)	0.01 (0.047)
Su pareja	196	0.357 (0.034)	0.347 (0.034)	-0.01 (0.048)	205	0.571 (0.035)	0.527 (0.035)	-0.044 (0.049)
Otro miembro del hogar	196	0.25 (0.031)	0.276 (0.032)	0.026 (0.045)	205	0.302 (0.032)	0.341 (0.033)	0.039 (0.046)
<i>¿Quién hace las siguientes actividades: limpiar y arreglar la casa, cocinar los alimentos?</i>								
Usted	196	0.347 (0.034)	0.352 (0.034)	0.005 (0.048)	205	0.863 (0.024)	0.873 (0.023)	0.01 (0.033)
Su pareja	196	0.668 (0.034)	0.663 (0.034)	-0.005 (0.048)	205	0.117 (0.023)	0.107 (0.022)	-0.01 (0.031)
Otro miembro del hogar	196	0.342 (0.034)	0.342 (0.034)	0 (0.048)	205	0.278 (0.031)	0.298 (0.032)	0.02 (0.045)
Otra persona fuera del hogar	196	0.02 (0.010)	0.026 (0.011)	0.005 (0.015)	205	0.029 (0.012)	0.024 (0.011)	-0.005 (0.016)
<i>¿Quién de su hogar hace trabajo voluntariado en la organización a la que pertenece?</i>								
Usted	196	0.597 (0.035)	0.597 (0.035)	0 (0.050)	205	0.659 (0.033)	0.693 (0.032)	0.034 (0.046)
Su pareja	196	0.087 (0.020)	0.071 (0.018)	-0.015 (0.027)	205	0.054 (0.016)	0.049 (0.015)	-0.005 (0.022)
Otro miembro del hogar	196	0.092 (0.021)	0.087 (0.020)	-0.005 (0.029)	205	0.059 (0.016)	0.049 (0.015)	-0.01 (0.022)
Ninguno del hogar	196	0.321 (0.033)	0.342 (0.034)	0.02 (0.048)	205	0.302 (0.032)	0.283 (0.032)	-0.02 (0.045)
<i>¿Quién de su hogar hace más frecuentemente las actividades de ocio?</i>								
Usted	196	0.597 (0.035)	0.622 (0.035)	0.026 (0.049)	205	0.512 (0.035)	0.546 (0.035)	0.034 (0.049)
Su pareja	196	0.434 (0.035)	0.449 (0.036)	0.015 (0.050)	205	0.312 (0.032)	0.317 (0.033)	0.005 (0.046)
Otro miembro del hogar	196	0.429 (0.035)	0.434 (0.035)	0.005 (0.050)	205	0.512 (0.035)	0.459 (0.035)	-0.054 (0.049)
<i>¿Quién cuida a los niños/as, adultos mayores, personas con discapacidad, enfermos?</i>								
Usted	196	0.179 (0.027)	0.117 (0.023)	-0.061* (0.036)	205	0.493 (0.035)	0.278 (0.031)	-0.215*** (0.047)
Su pareja	196	0.321 (0.033)	0.204 (0.029)	-0.117*** (0.044)	205	0.068 (0.018)	0.054 (0.016)	-0.015 (0.024)
Otro miembro del hogar	196	0.138 (0.025)	0.077 (0.019)	-0.061** (0.031)	205	0.141 (0.024)	0.068 (0.018)	-0.073** (0.030)
Otra persona fuera del hogar	196	0.026 (0.011)	0.015 (0.009)	-0.01 (0.014)	205	0.02 (0.010)	0.01 (0.007)	-0.01 (0.012)
Ninguno del hogar	196	0.531 (0.036)	0.704 (0.033)	0.173*** (0.048)	205	0.41 (0.034)	0.673 (0.033)	0.263*** (0.048)
<i>¿Quién da de comer a los animales de su hogar?</i>								
Usted	196	0.612 (0.035)	0.566 (0.035)	-0.046 (0.050)	205	0.707 (0.032)	0.707 (0.032)	0 (0.045)
Su pareja	196	0.423 (0.035)	0.418 (0.035)	-0.005 (0.050)	205	0.312 (0.032)	0.293 (0.032)	-0.02 (0.045)
Otro miembro del hogar	196	0.276 (0.032)	0.27 (0.032)	-0.005 (0.045)	205	0.229 (0.029)	0.273 (0.031)	0.044 (0.043)
Otra persona fuera del hogar	196	0.005 (0.005)	0.01 (0.007)	0.005 (0.009)	205	0.024 (0.011)	0.024 (0.011)	0 (0.015)
Ninguno del hogar	196	0.117 (0.023)	0.153 (0.026)	0.036 (0.035)	205	0.098 (0.021)	0.102 (0.021)	0.005 (0.030)

<i>¿Quién trabaja en la huerta de su hogar?</i>								
Usted	196	0.776 (0.030)	0.735 (0.032)	-0.041 (0.044)	205	0.737 (0.031)	0.649 (0.033)	-0.088* (0.045)
Su pareja	196	0.27 (0.032)	0.286 (0.032)	0.015 (0.045)	205	0.385 (0.034)	0.332 (0.033)	-0.054 (0.047)
Otro miembro del hogar	196	0.235 (0.030)	0.276 (0.032)	0.041 (0.044)	205	0.249 (0.030)	0.234 (0.030)	-0.015 (0.042)
Otra persona fuera del hogar	196	0.031 (0.012)	0.051 (0.016)	0.02 (0.020)	205	0.039 (0.014)	0.039 (0.014)	0 (0.019)
Ninguno del hogar	196	0.112 (0.023)	0.179 (0.027)	0.066* (0.036)	205	0.073 (0.018)	0.176 (0.027)	0.102*** (0.032)

Nota: Errores estándar robustos entre paréntesis. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

On the other hand, it was asked specific hours spent to each activity. The results are shown in the next table 4. Although the results show the time reductions in most of the activities except the leisure time, it was found a statistical significance only in 'working in the garden' activity. The time reduction effect was higher for women which reached approximately 27 minutes saving from 114 minutes at the beginning.

Table 4. T-test results on 'time use' indicator by sex

Tiempo destinado a:	Tests de Diferencias de Medias, según sexo							
	Hombre				Mujer			
	Observaciones	Media Pre	Media Post	Diff	Observaciones	Media Pre	Media Post	Diff
Dormir por la noche	196	437.143 (5.145)	433.969 (5.398)	-3.173 (7.457)	205	429.805 (5.661)	425.161 (5.783)	-4.644 (8.093)
Tareas remuneradas	196	316.224 (16.054)	299.847 (16.612)	-16.378 (23.102)	205	237.805 (14.403)	208.39 (14.088)	-29.415 (20.148)
Tareas domésticas	196	89.087 (30.899)	88.168 (30.897)	-0.918 (43.696)	205	136.171 (5.609)	135.024 (5.711)	-1.146 (8.005)
Trabajo voluntario	196	65.893 (5.447)	63.536 (5.428)	-2.357 (7.690)	205	77.61 (6.121)	67.961 (5.210)	-9.649 (8.038)
Ocio	196	122.189 (30.695)	125.531 (30.656)	3.342 (43.381)	205	87.956 (5.107)	92.22 (5.145)	4.263 (7.250)
Cuidar niños/as, adultos mayores o personas dependientes	196	20.051 (3.531)	20.23 (3.914)	0.179 (5.271)	205	73.19 (8.318)	63.971 (7.469)	-9.22 (11.179)
Dar de comer a los animales	196	115.423 (43.335)	108.663 (43.344)	-6.76 (61.291)	205	72.737 (29.445)	39.517 (3.000)	-33.22 (29.597)
Trabajar en la huerta	196	184.337 (13.105)	170.306 (12.921)	-14.031 (18.404)	205	114.317 (7.981)	87.244 (7.045)	-27.073** (10.645)

Nota: Errores estándar robustos entre paréntesis. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

We need to see this change with the other activities such as the paid activities and animal feeding. Both men and women had less time spending in the paid activities but women had a higher and significant decline of 29.4 minutes (around 12.3% of the initial time spent). Women also had 46% of reduction in their animal feeding activity.

If we match the above data with those of the other end-line study about the income change of the project beneficiaries between 2020 and 2022, we can reach an interesting result. The project beneficiary producers increased their income 37% higher than the initial annual average household income. But male producers obtain on average approximately 26% more than women, mainly due to higher income from the farm.<sup>5</sup> One possible hypothesis is the project contributed to reducing the efficiency of productive activities by training, equipment provision, and commercialization activities. We can understand that when productive activities are reduced, women have more impact on their time use.

When comparing the data of men and women, their sleeping times are similar but men have much more time spent in the paid activities, garden work, animal feeding and leisure. Women had more time spending in domestic chores and people care. This clear division of roles between men and women lead to excessive workload to women within the households, and preventing them from spending more time in the paid activities outside their home.

### **3. Agency**

In this section, the quantitative survey asked the questions about control and decision-making of the household issues. The analysis in this section focuses on understanding decision-making at three levels: i) domestic or daily decisions, ii) purchasing/investment decisions, and iii) financial decisions. The quantitative analysis on 'agency' has limitations because no variables in the test attributed statistical significance. The results are in the following table 5.

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<sup>5</sup> KOICA (2023)

Table 5. T-test results on 'agency' by sex

Variable	Tests de Diferencias de Medias, según sexo							
	Observaciones	Hombre			Observaciones	Mujer		
		Media Pre	Media Post	Diff		Media Pre	Media Post	Diff
<i>¿Quién decide qué alimentos comprar en la casa?</i>								
Usted	196	0.5 (0.036)	0.52 (0.036)	0.02 (0.051)	205	0.854 (0.025)	0.849 (0.025)	-0.005 (0.035)
Su pareja	196	0.668 (0.034)	0.668 (0.034)	0 (0.048)	205	0.21 (0.029)	0.2 (0.028)	-0.01 (0.040)
Otro miembro del hogar	196	0.199 (0.029)	0.189 (0.028)	-0.01 (0.040)	205	0.102 (0.021)	0.107 (0.022)	0.005 (0.030)
Otra persona fuera del hogar	196	0.01 (0.007)	0.01 (0.007)	0 (0.010)	205	0.005 (0.005)	0.005 (0.005)	0 (0.007)
<i>¿Quién decide sobre las compras grandes en el hogar?</i>								
Usted	196	0.74 (0.031)	0.76 (0.031)	0.02 (0.044)	205	0.712 (0.032)	0.732 (0.031)	0.02 (0.044)
Su pareja	196	0.602 (0.035)	0.612 (0.035)	0.01 (0.049)	205	0.463 (0.035)	0.463 (0.035)	0 (0.049)
Otro miembro del hogar	196	0.204 (0.029)	0.204 (0.029)	0 (0.041)	205	0.161 (0.026)	0.166 (0.026)	0.005 (0.037)
Otra persona fuera del hogar	196	0.005 (0.005)	0 (0.000)	-0.005 (0.005)	205	0.02 (0.010)	0.02 (0.010)	0 (0.014)
<i>¿Quién decide sobre la compra de recursos productivos en su hogar?</i>								
Usted	196	0.898 (0.022)	0.918 (0.020)	0.02 (0.029)	205	0.605 (0.034)	0.615 (0.034)	0.01 (0.048)
Su pareja	196	0.265 (0.032)	0.265 (0.032)	0 (0.045)	205	0.546 (0.035)	0.532 (0.035)	-0.015 (0.049)
Otro miembro del hogar	196	0.153 (0.026)	0.143 (0.025)	-0.01 (0.036)	205	0.117 (0.023)	0.112 (0.022)	-0.005 (0.032)
Otra persona fuera del hogar	196	0.02 (0.010)	0.02 (0.010)	0 (0.014)	205	0.02 (0.010)	0.024 (0.011)	0.005 (0.015)

*¿Quién toma las decisiones sobre la producción agrícola en su hogar?*

Usted	196	0.923 (0.019)	0.918 (0.020)	-0.005 (0.027)	205	0.566 (0.035)	0.546 (0.035)	-0.02 (0.049)
Su pareja	196	0.143 (0.025)	0.138 (0.025)	-0.005 (0.035)	205	0.541 (0.035)	0.527 (0.035)	-0.015 (0.049)
Otro miembro del hogar	196	0.133 (0.024)	0.122 (0.023)	-0.01 (0.034)	205	0.112 (0.022)	0.112 (0.022)	0 (0.031)
Otra persona fuera del hogar	196	0.015 (0.009)	0.015 (0.009)	0 (0.012)	205	0.02 (0.010)	0.024 (0.011)	0.005 (0.015)
No hubo producción	196	0.015 (0.009)	0.02 (0.010)	0.005 (0.013)	205	0.029 (0.012)	0.049 (0.015)	0.02 (0.019)

*El dinero que Usted genera o gana ¿quién administra?*

Usted	196	0.852 (0.025)	0.862 (0.025)	0.01 (0.035)	205	0.854 (0.025)	0.82 (0.027)	-0.034 (0.037)
Su pareja	196	0.48 (0.036)	0.505 (0.036)	0.026 (0.051)	205	0.268 (0.031)	0.268 (0.031)	0 (0.044)
Otro miembro del hogar	196	0.066 (0.018)	0.071 (0.018)	0.005 (0.026)	205	0.029 (0.012)	0.024 (0.011)	-0.005 (0.016)
Otra persona fuera del hogar	196	0.02 (0.010)	0.015 (0.009)	-0.005 (0.013)	205	0.068 (0.018)	0.088 (0.020)	0.02 (0.027)
No gana dinero					205			

*El dinero que genera o gana su pareja ¿quién administra?*

Usted	196	0.311 (0.033)	0.296 (0.033)	-0.015 (0.047)	205	0.571 (0.035)	0.571 (0.035)	0 (0.049)
Su pareja	196	0.587 (0.035)	0.561 (0.036)	-0.026 (0.050)	205	0.532 (0.035)	0.532 (0.035)	0 (0.049)
Otro miembro del hogar	196	0.02 (0.010)	0.02 (0.010)	0 (0.014)	205	0.015 (0.008)	0.015 (0.008)	0 (0.012)
No tiene pareja	196	0.199 (0.029)	0.199 (0.029)	0 (0.040)	205	0.176 (0.027)	0.18 (0.027)	0.005 (0.038)
No gana dinero	196	0.158 (0.026)	0.194 (0.028)	0.036 (0.039)	205	0.02 (0.010)	0.024 (0.011)	0.005 (0.015)

*¿Quién se encarga de las decisiones relacionadas con los servicios financieros?*

Usted	196	0.73 (0.032)	0.709 (0.033)	-0.02 (0.045)	205	0.527 (0.035)	0.507 (0.035)	-0.02 (0.049)
Su pareja	196	0.418 (0.035)	0.383 (0.035)	-0.036 (0.050)	205	0.478 (0.035)	0.463 (0.035)	-0.015 (0.049)
Otro miembro del hogar	196	0.087 (0.020)	0.087 (0.020)	0 (0.029)	205	0.044 (0.014)	0.049 (0.015)	0.005 (0.021)
Otra persona fuera del hogar	196	0.005 (0.005)	0.005 (0.005)	0 (0.007)				
No se tomaron esas decisiones	196	0.189 (0.028)	0.23 (0.030)	0.041 (0.041)	205	0.273 (0.031)	0.293 (0.032)	0.02 (0.045)

*¿Quién se encarga de las decisiones relacionadas con el cuidado de las personas en su hogar?*

Usted	196	0.245 (0.031)	0.25 (0.031)	0.005 (0.044)	205	0.527 (0.035)	0.493 (0.035)	-0.034 (0.049)
Su pareja	196	0.321 (0.033)	0.316 (0.033)	-0.005 (0.047)	205	0.161 (0.026)	0.151 (0.025)	-0.01 (0.036)
Otro miembro del hogar	196	0.122 (0.023)	0.133 (0.024)	0.01 (0.034)	205	0.078 (0.019)	0.088 (0.020)	0.01 (0.027)
Otra persona fuera del hogar	196	0.005 (0.005)	0 (0.000)	-0.005 (0.005)	205	0.005 (0.005)	0.01 (0.007)	0.005 (0.008)
No existen eprsonas dependientes	196	0.52 (0.036)	0.52 (0.036)	0 (0.051)	205	0.39 (0.034)	0.42 (0.035)	0.029 (0.049)

**Nota:** Errores estándar robustos entre paréntesis. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Not differently from the previous gender role division results in the 'time use', it was also found in this 'agency' test a clear difference between men and women over the areas of control and decision-making. Men were the main decision makers and had control on the productive resources, agricultural production and financial services. In contrast, women had a greater control over domestic chores such as food buying and people care. Regarding income management and large purchases, women and men shared their control more equitably.

Although it is not possible to show significant changes during the project period, in the qualitative analysis it is possible to show significant differences between the treatment group and the control group, which suggest some moderate results.

In household and daily decision-making, a difference was observed between the behaviors of the control and treatment group in the qualitative evaluation. The people who did not participate in the project showed a marked difference between men and women, pointing out that in the domestic sphere, decisions usually fall on women. On the contrary, the project participants evidenced a more joint decision-making process, where both men and women were involved in daily and domestic decisions.

In decisions about purchases or investment with higher value goods, a meaningful difference between the treatment and control groups is also highlighted. While in the control group these types of decisions are usually made by men, in the treatment group, although men make these decisions, a higher level of consensus is observed.

In terms of financial decisions, there are no marked differences between the treatment group and the control group. Men make the decisions as they are normally in charge of economic activities for their family. Although in the project no actions were carried out on the gender equality, however, it is highlighted that the project



activities to promote consensual decision-making in the organizations helped the project participants to replicate it at home.

#### 4. Participation and leadership

In this indicator, it is analyzed to what extent the project has stimulated the participation of the participants in their producer organizations, while analyzing whether there is any type of evidence regarding the strengthening of leadership, the perception of organizational processes and the role that women play in them.

Table 6. T-test results on participation and leadership by sex

Tests de Diferencias de Medias, según sexo								
Hombre					Mujer			
Antes del proyecto:	Observaciones	Media Pre	Media Post	Diff	Observaciones	Media Pre	Media Post	Diff
Participó en espacios comunitarios	196	0.633 (0.035)	0.816 (0.028)	0.184*** (0.044)	205	0.605 (0.034)	0.849 (0.025)	0.244*** (0.042)
Lideró espacios comunitarios	124	0.597 (0.044)	0.456 (0.040)	-0.141** (0.059)	124	0.565 (0.045)	0.425 (0.038)	-0.139** (0.058)

Nota: Errores estándar robustos entre paréntesis. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Analyzing the participation and leadership indicators, after the implementation of the project, men and women achieved significantly positive results. Especially, women had a higher increase of approximately 24.4% in participating in a community space outside the project under analysis. However, the probability of leading the community spaces fell across the board for both men and women.

In the qualitative evaluation, the treatment and control groups are compared. For the non-participants of the control group, it was observed that their organizations are not necessarily active because some have organizational or financial problems. Both men and women mentioned that they participate in different community spaces than their producer organizations. These spaces are mainly sanitation boards and neighborhood commissions.

Regarding differences between men and women, men tend to consider that women have greater obstacles to participate in community spaces due to time constraints. However, the women interviewed for the control group consider that their participation in these spaces has been strengthened in recent years.

In the treatment group, both men and women responded that their participation in community spaces is mainly focused on organizations or committees directly linked to the project. It is observed that men tend to play presidency roles, and women take secretarial, presidency and treasury roles.

The project participants agreed that the project, in addition to promoting organizational strengthening, has served to create spaces for exchange and dialogue, which represents an opportunity for women to exchange experiences and access spaces for dialogue outside the home. .

Overall, this indicator of participation and leadership was one of the most relevant result areas for the project. Both within the framework of the initiative and within the organizations themselves, there is an active participation of women. Although it is still important to work to promote a greater participation of women in roles of greater leadership such as the presidency of organizations, it can be observed that women tend to take advantage of spaces for community participation and leadership.

## **5. Violence**

Regarding the 'violence' indicator, the pre-post evaluation was not applied for two reasons. First, the survey team found from the previous experiences there tends to be many under-reporting cases in the surveys. Due to the fact that these are sensitive issues, people usually do not feel comfortable to talk. Second, the project did not

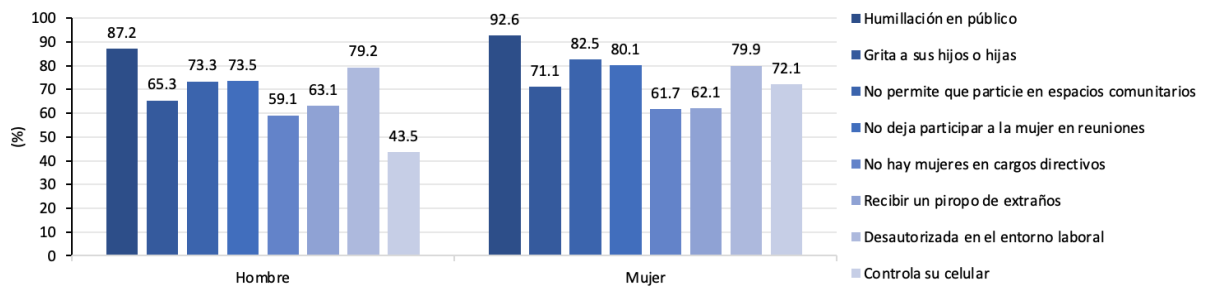
have any specific interventions that addressed gender issues or violence prevention.

Considering this context, in the quantitative method it was analyzed the participants' perception that different groups have about violence situations against women, and the different actions taken for its early detection and prevention at the time of the survey.

It is important to note that although the term Gender-Based Violence (GBV) is widely used, when doing the field work this term was not used and it was decided to talk about situations of violence against women. This is because currently the word "gender" has aroused some controversy in Paraguayan public opinion, and sometimes its use is associated with affiliation with certain positions or political trends. When analyzing different responses associated with the perception of violence against women and children, there is a certain degree of naturalization and acceptance of symbolic violence. The symbolic violence consolidates the relations of inequality and discrimination, naturalizing the subordination of women (article 6 of Law 5777/16 for the Comprehensive Protection of Women against all forms of violence) and these include the unconscious prevalence of certain cultural gender biases.

To see the perception difference between men and women on violence against women, the related questions were made as shown in the graph 1 below. It can be seen that women reported a higher rate of positive responses regarding the recognition of the scenarios as violence. The greatest perception difference was found in the control of the partner's cellular phone with a gap of 28.6 percentage points between men and women. The second biggest gap was 9.2% in permitting the partner's participation in community spaces. Which would indicate that men would see these behaviors as normal and not as a type of symbolic violence within their relationship?

Graph 1. Identification rate as violence by sex



In the qualitative analysis, there was a coincidence in both treatment and control groups regarding the perception that violence against women is a barrier and obstacle to their participation in community activities and leadership. The main difference found between the two groups is that in the treatment group there is a greater consensus on the importance of preventing and intervening in violence against women situations through dialogue and complaint actions.

## VI. Conclusions

The study, integrating the quantitative and qualitative evaluations, found that (1) little or no effect on the role division between men and women in the households, (2) significant time reduction of women in people care and garden work at the same time with a significant household income increase, (3) no effect on decision-making by gender, (4) the greatest effect on the women's participation, (5) perception difference on violence against women between men and women but greater consensus on the prevention and intervention in the project beneficiary group. During the project (2 years), it was found the beneficiary producers earned 37% higher of the annual average household income. Although women producers gained significant income improvement, male members obtained 26% higher than female members. In conclusion, the project contributed to the greater participation of women in producer organization and their income increase. But it did not change the gender role in the households nor decision-making role. In addition, it has confirmed the economic disparity between men and women producers.

The detailed results are described as follows. First, as for the indicator of 'time use', there was little or no effect on the change of the role division between men and women. Men are in charge of paid productive activities while women are responsible for domestic chores and child caring. However, it is found statistically significant reduction during the project in women's responsibility of people care and garden work, 21.5% and 8.8% respectively. Women's overload in domestic activities limits their participation in paid productive activities. In terms of the time spent by activity, the time in garden work had been reduced for both men and women. And it was higher for women which reached approximately 27 minutes saving from 114 minutes at the beginning. It is interesting to see these changes because we found in the other end-line study a significant income increase of the project beneficiary households. We may conclude that the project contributed to reducing the efficiency

of productive activities by training, equipment provision, and commercialization activities. We can understand that when productive activity time is reduced, women have more impact on their time use.

Second, in the 'agency' area, it was not found any statistically significant variable in the T-test. But, similarly to the role division variables in the time use indicator, men and women had clearly different decision areas. Men have control over productive resources, agricultural production and financial services. In contrast, women have a greater control over domestic issues such as food purchase and people care. Women and men shared more equitable control on income management and large purchases.

Third, the project had the highest effect on women's participation and leadership. The female project participants had a higher increase of approximately 24.4% in participating in a community space outside the project under analysis. However, the probability of leading the community spaces fell across the board for both men and women. In the organizations, it was perceived that women take the roles of secretarial, treasury and presidency while men paly presidency roles. In the qualitative interviews, the project participants agreed that the project, in addition to promoting organizational strengthening, has served to create spaces for exchange and dialogue, which represents an opportunity for women to exchange experiences and access spaces for dialogue outside the home. However, in the control group, their organizations are not necessarily active because some have organizational or financial problems which limits the participation of women.

Last but not least, although it was not applied a pre-post T-test to the violence indicator, we found in the survey great perception difference on violence between men and women. The symbolic violence consolidates the relations of inequality and discrimination, naturalizing the subordination of women and these include the unconscious prevalence of certain cultural gender biases. The main difference found

between the two groups is that in the treatment group there is a greater consensus on the importance of preventing and intervening in violence against women situations through dialogue and complaint actions.

## VII. Limitations and Discussions

The main question of this study is what the causal impact of the project interventions are on the women's empowerment (outcome of interest). To answer this question, an impact evaluation is supposed to be used as an attempt to estimate the counterfactual outcome. But the experimental design is not the case for this study because the participating producer organizations (treatment group) were assigned, not randomly but through the call for proposals.

In the quasi-experimental settings, there are three basic approaches: a cross-sectional, a before-after, and a difference-in-difference estimator.<sup>6</sup> Among them, a difference-in-difference estimator is the best choice, demanding more data requirements but with less strong assumption than the other two approaches. However, in this study we adopted a before-after estimator due to the data constraints, mainly derived from the timing of evaluation. The study design had started to be discussed in six months before the project was completed. This situation didn't allow us to collect the baseline data and control group assignment in the quantitative analysis.

Responding to the missing baseline data, we used the retrospective post-then-pre survey design. This design is a popular way to assess the participants' self-reported changes in the outcomes of interest. For this quantitative survey, the estimated indicators of women's empowerment are time use, agency, and participation and leadership. However, for the violence against women indicator, we did not a pre-post estimation but made only some perception questions due to the sensitiveness of the issue after the consultation with the project implementation team members. We will discuss it in more detail later in this chapter.

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<sup>6</sup> Linda G. et al (2009)



On the other hand, a before-and-after design without comparison group is a weak research design. It is not sufficient to convince that the project intervention by itself caused the change. Something else occurred during the intervention could cause the changes. Nevertheless, a control group was not assigned in the quantitative design for the following two reasons: first, an ethical issue was raised by the project team because the control group won't receive any intervention later; second, there was a high probability of data contamination due the late timing of assignment and data collection.

To minimize the risk of no comparison group in the quantitative design, it was complementarily conducted a post-only nonequivalent comparison design through in-depth qualitative interviews for 40 samples of the project participants and 40 samples of the non-participants. Differences between the treatment group and the control group may be those in the time they began rather than the intervention effect although this may be the best design alternative in the ex-post situation.

Lastly, back to the issue of violence against women, we decided to address this indicator in greater depth in the qualitative section since, from previous experiences, there tend to be many situations of under-reporting when surveys are applied. Furthermore, the project did not have any specific activities that addressed gender violence preventions. It seemed hard to obtain a significant change. However, gender violence is a crucial element of women's empowerment, especially in Paraguay. In this case, the most appropriate methodology for collecting this type of sensitive information was qualitative research.

**The End**

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