

IS SOCIAL PROTECTION A PANACEA FOR WOMEN'S EMPOWERMENT? EVIDENCE FROM CAMEROON¹

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Abstract: As part of the vulnerable group, women need social protection to cope with risk situations. By enabling them to have an income, social protection would contribute to the empowerment of women. Only in Cameroon is social protection limited to a small part of the population. This article determines the effect of social protection on the empowerment of women in Cameroon. This is measured by women's participation in decision-making on their income. The econometric analysis is carried out using an *extended ordered* probit model based on the Finscope 2017 database. The results reveal that whether formal, informal or mixed, social protection has a positive effect on women's empowerment in Cameroon. However, formal social protection contributes better to women's empowerment than informal protection. Thus, public policies aimed at women's empowerment should promote a better integration of women into the social protection system and the formal one in particular.

Keywords: women's empowerment, social protection, formal social protection, informal social protection, mixed social protection.

JEL codes: G22, G23, J16

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INTRODUCTION

From the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs), women's empowerment is a key on development agendas around the world. Feminist theories and empirical research have invested in finding ways to improve women's empowerment without reaching a consensus. Women's empowerment is indeed crucial for any development. As the source of life through their relatively large reproductive role, women not only provide for childbearing but also for education, nutrition and childcare.

Increasing the income available to women is the main strategy for improving their economic empowerment identified in the literature. To this end, the experience of microfinance with the seminal work of Yunus in Bangladesh has inspired much work on women's empowerment. However, financial inclusion is still problematic in many African countries such as Cameroon, Côte d'Ivoire, Burkina, Togo, Benin, etc. Indeed, in 2017, about 35% of the population is financially excluded. Moreover, microfinance companies have focused more on their economic objective of maximising profit than on their social objective. They thus operate like conventional banks, which limits access to poor and vulnerable people.

Social protection, sometimes seen as a driver of inclusive growth, sometimes accused of being gender blind (Jones & Holmes, 2011) is also a means of making income available to individuals. Plagerson (2014) notes a mixed effect of cash transfers on women's empowerment in this regard. On the one hand, in a variety of contexts, women report improved knowledge, status and self-esteem, as well as increased decision-making and participation outside the household. On the other hand, transfers to women may encourage men to share less of their income within the household. Conflicts may arise if women have more control over income.

Like most developing countries, social protection is not commonplace for most Cameroonians, especially those for whom these programmes are designed, namely women. Indeed, in 2016, 5731 employers were registered with the CNPS against 6207 in 2015. That is to say a regression rate of 7.7%. Moreover, according to the Finscope in 2017, only 7% of the adult population benefits from formal non-bank insurance. Inequalities are also observed between the sexes. While 9% of adult men benefit from formal non-bank insurance, only 5% of women have this privilege.

The social protection provided by the CNPS is easily accessible to workers in the formal sector. However, the informal sector is the main provider of employment in Cameroon and contains 90.5% of the population in 2010 (INS, 2015) with a high representation of women.

This informal sector is mainly made up of vulnerable jobs, notably own-account workers and unpaid family workers.

Women are at higher risk of extreme poverty than men. A World Bank study shows that when data is disaggregated by age group, for the 25-34 age group, about 122 women for every 100 men live in extreme poverty (63rd Commission on the Status of Women (CSW63), 2019). This high risk of poverty in this age group in which individuals combine unpaid care work, reproductive work with earnings and income and women are clearly disadvantaged in this age group. Moreover, women are more likely than men to work in the informal sector with limited access to the employment raft and restricted social protection rights. Within the informal sector, women tend to be in the least secure and lowest paid jobs. These labour market disadvantages are driven by the fact that women bear about $\frac{3}{4}$ of the unpaid care and domestic work.

Social protection programmes that target women improve their economic empowerment (Bandiera *et al.*, 2012). Kabeer at the Asia Pacific Social Protection (APSP, 2019) conference on social protection and gender equality, however, states that improving women's social protection is not about extending existing social protection systems to women and girls, but about putting in place factors that promote system change in a gender-sensitive manner. This will enable them to meet the needs of women and girls, particularly those who are victims of various forms of discrimination and who are in particular need of support that is tailored to their particular conditions and constraints. It must be acknowledged, however, that there has been significant progress in women's access to public social protection services and sustainable infrastructure, but gender differences are still significant.

Aware of the importance of social protection in improving the well-being of individuals, the Cameroonian government set up the voluntary insurance programme in 2014. This is a registration programme available to people working in the informal sector, particularly self-employed workers and students. Despite these efforts, few people have access to social protection. The problem is even more acute for women. Indeed, in 2016, 5731 employers were registered with the CNPS, compared to 6207 in 2015. This represents a regression rate of 7.7%. Moreover, according to the Finscope in 2017, only 7% of the adult population benefits from formal non-bank insurance. Inequalities are also observed between the sexes. While 9% of adult men benefit from formal non-bank insurance, only 5% of women have this privilege.

As formal social protection is still in an embryonic state and reserved for a limited number of individuals in Cameroon, informal social protection mechanisms put in place by informal groups contribute to helping individuals and households cope with risk situations. Thus, even some beneficiaries of formal social protection use informal social protection mechanisms in parallel, as they are based on the social capital of the individual. Studies on the effect of social protection on women's empowerment focus on social protection programmes such as conditional and unconditional income transfer programmes for women (Bandiera *et al.*, 2012; Camacho and Rodriguez, 2012; Bobonis *et al.*, 2012 and Waqas and Awan, 2019). Social protection is thus analysed in a purely microeconomic sense and does not allow for an assessment of government efforts.

Similarly, studies of the economic effects of social protection focus on formal or informal social protection, ignoring individuals who combine the two.

As the objective of this paper is to analyse the effect of social protection on women's empowerment in Cameroon, we use secondary data from the Finscope database conducted by the National Institute of Statistics (NIS) on behalf of the Finmark Trust in 2017 in Cameroon. The econometric analysis is conducted using an extended probit model. Indeed, women's empowerment is a discrete variable with three modalities (not empowered, partially empowered and fully empowered). An endogeneity bias linked to formal and therefore mixed social protection is suspected. The extended ordered probit model allows for this suspected endogeneity. Access to informal social protection also seems to be endogenous because several factors motivate membership of an informal group. However, the data do not allow us to account for this problem explicitly.

The results show that the endogeneity bias between social protection and women's empowerment is confirmed. Similarly, social protection has a positive effect on women's empowerment in Cameroon. Only informal social protection has a lesser effect on women's empowerment in Cameroon.

The particularity of this paper lies on the one hand in the way women's economic empowerment is measured. The indicator chosen to capture empowerment is women's participation in decision-making about their income. Indeed, many authors argue that increasing the income available to women improves their contribution to household income and thus their empowerment. However, it is not clear whether women who contribute to household income do so deliberately or as they wish. At the same time, these analyses sometimes ignore the power relations within the household and the frustrations that can be

caused by women's possession of income. Some husbands, in order to maintain authority, may impose or dictate how their income is spent, sometimes by force. The article by Camacho and Rodriguez (2012) entitled "Who's the Boss at Home after Receiving Conditionnal Cash Transfers?"

Finally, this article is a contribution to the literature on women's empowerment in Africa, particularly in low-income countries such as Burkina Faso, Mali, Niger, Côte d'Ivoire etc. The gender inequality index gives Burkina a score of 0.621 in 2021². In Niger, on the other hand, at least 3 out of 5 women reported having experienced sexual violence than men. Indeed, these countries are characterised by political instability in particular. As women are particularly affected by these instabilities, they need special social protection because not only does their empowerment depend on it, but also the development of the country's human capital through their reproductive role. Data indicate that girls aged 15-19 are at risk of poor reproductive health (UNFEM, 2022). Côte d'Ivoire, on the other hand, is ranked 165^e out of 189 countries according to the United Nations Development Programme's 2019 report, while Cameroon recorded only 0.560.

At the same time, the originality of this article lies in the consideration of the effect of so-called mixed protection, which in fact refers to women who have access to both formal and informal social protection, in addition to determining the effects of formal and informal social protection.

D) LITERATURE REVIEW

Early work on social protection follows the life-cycle approach with a focus on social security (Samuelson, 1975; Feldstein, 1974 and Feldstein, 1985). Thus, determining the optimal social security has been the subject of much work (Samuelson, 1975; Feldstein, 1985). Another line of research has been the analysis of the effect of social security on the trade-offs that individuals make between savings and retirement (Feldstein, 1974). De Foucauld (1995) and Barr (2004) recognise several functions of social protection, notably the insurance function (to reduce the uncertainty linked to social risks), the resource transfer function, the redistribution function aimed at combating poverty and inequality, and the function of general solidarity between members of society. Devereux & Sabates-Wheeler (2004) define social protection as all public and private initiatives that provide income or consumption transfers to the poor, protect the vulnerable from day-to-day risks and enhance the social status and rights of the

² undp.org/en/burkina-faso/empowerment-of-women-and-gender-equality

marginalised with the overall objective of reducing the economic and social vulnerability of the poor and vulnerable and marginalised groups.

According to the Organisation for Economic Co-operation and Development (OECD, 2019), three analytical frameworks influence and continue to impact the social protection system worldwide. First, the social risk management framework. According to Hadad (2007), this framework is based on two fundamental principles, namely that people with low income are more exposed to shocks and have fewer state and market-based instruments to be able to prevent and mitigate risks. Thus, the development of national social protection systems should start with the mapping of risks specific to national contexts for the better understanding of country-specific vulnerabilities.

The second framework that influences the social protection system is transformative social protection. This model formalises the nature of vulnerabilities by addressing the important and ever-increasing socio-political drivers that cause and perpetuate poverty and vulnerability to risk. Transformative social protection provides a model of four components of social protection tools including provision, prevention, promotion and transformation (Devereux & Sabates-Wheeler, 2007).

The last approach is the life-cycle approach, which derives from the idea that individuals face different risks and vulnerabilities at different stages of life. Social protection is therefore adapted to address these risks at each stage. Since the life cycle can be understood as the period during which the level of vulnerability of an individual is constant, an individual enters a new life cycle when the set of risks and certainties that define the level of vulnerability change in a positive or negative way (Bonilla & J. (2003). The life cycle change resulting from a negative shock in economic or social status leads the individual to enter a new life cycle characterised by higher levels of risk and vulnerability.

A distinction is made between formal and informal social protection according to the sources of its provision. To highlight the formal and informal dimensions of social protection, Conway et al (2000) define it as the private and public actions taken to address the economic vulnerabilities and risks of the poor to protect them from social and economic deprivation. The World Bank (World Bank, 2015) identifies three components of social protection:

- Social assistance provided in the form of public and private non-contributory transfers

- Social insurance such as health insurance contributions and pensions that provide support during the risks and shocks associated with unemployment, illness and accidents at work.
- Labour market measures provide vocational training and ensure minimum wages and decent working conditions.

Suguna (2006) analyses the empowerment of rural women through social protection. They find that in addition to poverty reduction, social protection has good potential to promote women's economic empowerment and reduce gender inequalities. Moreover, when women are designated as the recipients of transfers, SP programmes can facilitate their access to resources and promote their role as household decision-makers. This is similar to cash transfer programmes, which require complementary services to ensure that women recipients maintain control over their own income and decision-making capacity (Mumbi and Gikandi, 2016).

Looking at the physical and mental integrity of women after receiving social protection, Kamalovna et al (2020) argue that social protection mechanisms need to be improved to reduce gender-based violence. Similarly, transfers to women can improve their decision-making power within the household. Indeed, conditional cash transfer programmes for women help them with domestic tasks such as childcare (Arif et al., 2011).

However, this position is challenged. Indeed, women's preferences for childcare are seen to be in line with government preferences. Yet women suffer from a real lack of decision-making power in the household. It is in this vein that Molyneux (2006) argues that conditional transfers reduce women to their traditional roles. Skoufias and McClafferty (2001) do not share this view. They show that conditional transfers have contributed to the empowerment of women and improved their position vis-à-vis men. Quijano (2009) reconciles these conflicting positions. He argues that in reality, conditional transfers reinforce traditional gender roles but at the same time pave the way for gender transformation.

According to Jones et al (2016), access to social protection may be particularly important for women as gender discrimination affects their food and nutrition security needs and agricultural productivity. SP programmes protect women from destitution in society as women tend to have a longer life expectancy than their male counterparts. HelpAge India *et al* (2009) show that pensions have enabled widows to contribute to household income. The Oportunidades programme targeting women as recipients of conditional cash transfers in

Mexico has increased women's financial decision-making and security (Latapi and de la Rocha, 2004, Adato et al., 2000).

II) RESEARCH METHODOLOGY

1) Data source

In order to achieve the objectives set, the data used comes from the database commissioned by Finmark Trust and carried out by the INS Cameroon. It has benefited from the support of several national and international partners. These include the Ministry of Finance (MINFI), the Ministry of Agriculture and Rural Development (MINADER), the Ministry of Posts and Telecommunications (MINPOSTEL), the Ministry for the Promotion of Women and the Family (MINPROFF), the United Nations Development Programme (UNDP), the French Development Agency and the African Development Bank (AfDB). It was conducted in 2017 with the main objective of studying the Cameroonian environment in terms of financial inclusion. The survey was carried out on a sample of 6826 individuals aged at least 15 years and representative of the adult population of Cameroon. This work builds on the work of Waqas and Awan (2019).

- The variables of interest

The main variable of interest is social protection. We calculate three indicators of social protection. For this purpose, we distinguish between the indicator of formal, informal and mixed social protection.

➤ Access to informal social protection

We calculate a social protection indicator from a set of variables of participation in informal groups such as church or other religious groups, neighbourhood associations, informal savings groups, regional ethnic and village associations, funeral associations, staff associations, farmers' cooperatives or organisations, co-workers' associations and others, and finally the receipt of remittances from local and foreign migrants. All dimensions are given equal weight as there is no a priori reason to give more weight to any of them. On this basis an informal social protection indicator is calculated. Access to these associations is considered as an indicator of social protection because individuals benefit from informal insurance, informal assistance and informal labour market mechanisms according to the scheme proposed by Parrot (1998).

This indicator is recoded so that we obtain a categorical variable which takes the value 1 if the individual has access to at least one dimension of informal social protection and 0 otherwise.

➤ Formal social protection

An indicator of formal social protection is calculated from the following dimensions: has life insurance, has health insurance, has education insurance, has pension insurance and has accident insurance. For the same reasons mentioned above, none of these dimensions has a higher weight in social protection. This indicator is recoded so that we obtain a binary categorical variable that takes the value 1 if the individual has access to at least one dimension of social protection and 0 otherwise.

➤ Mixed social protection

From the two indicators calculated, mixed social protection is measured, indicating women who use both informal and formal social protection mechanisms.

2) Estimation method

To assess the effect of social protection on women's empowerment in Cameroon, we develop an econometric model. The variable that captures women's empowerment is women's participation in household decision-making. This measure of empowerment is inspired by Batool *et al*, (2019) who use control over economic resources as an indicator of women's economic empowerment. This variable is categorical ordered consisting of 3 modalities ranked in ascending order which are: not at all, partial and total. The potential link between access to social protection and women's participation in the household leads to the estimation of a simultaneous equation model; the estimation of a probit or logit model can lead to biased estimators. The estimation method finally adopted is that of the "extended ordered probit model".

The choice of the ordered probit model with endogenous explanatory variable is due to the fact that our variable women's empowerment consists of 3 modalities arranged in an ascending order. Similarly, access to formal and mixed social protection is assumed to be endogenous.

Let y_i be the ordinal variable that measures women's empowerment. It is defined as

$$y_i = \begin{cases} 0 & \text{si } y_i^* < \mu_0 \\ 1 & \text{si } \mu_0 \leq y_i^* < \mu_1 \\ 2 & \text{si } y_i^* > \mu_2 \end{cases} \quad \forall_i = 1 \dots, N \quad (1.2)$$

with $c_{j+1} \geq c_j$ and where the latent variable y_i^* is defined by :

$$y_i^* = \theta \textit{protection sociale}_i + x_i \beta + \varepsilon_i \quad (2.2)$$

Where "social protection" is the endogenous variable, x_i is the vector of control variables in the model, β is the vector of coefficients and ε_i the disturbance term which is assumed to be standard normal independent. Therefore the probability that an individual is in the $j^{\text{ième}}$ empowerment can be estimated using an ordered probit model (Wooldridge, 2010) given by :

$$P_{ij} = P(y_i = j) = P(\mu_{j-1} < y_i^* \leq \mu_j) = F[\mu_j - E(y_i^*)] - F[\mu_{j-1} - E(y_i^*)] \quad j \in \{1 \dots, 4\} \quad (3.2)$$

Where F is the standard normal cumulative distribution function and $E(y_i^*)$ is the expected value of the empowerment function (y_i^*). Therefore, the marginal effect of an increase in the regressor X_r on the probability of empowerment is given by:

$$\frac{\delta P_{ij}}{\delta X_{ri}} = \{F'[\mu_{j-1} - E(y_i^*)] - F'[\mu_j - E(y_i^*)]\} \beta_r \quad j \in \{1 \dots, 4\} \quad (4.2)$$

The social protection variable is generated on the basis of the continuous latent variable model:

$$\textit{protection sociale}_i^* = Z' \alpha + \varepsilon_{si}$$

Where Z is a vector of covariates that affect social protection and ε_{si} are unobserved errors, which are normally distributed.

In the first estimation, formal social protection is the variable of interest while mixed protection is in the second. There is a possibility of simultaneous correction of the biases related to formal and mixed social protection. We cannot apply these alternatives because mixed social protection results from the combination of formal and informal social protection. Including it in the first estimation would lead to a multicollinearity problem.

III) RESULTS AND DISCUSSION

1) Results of the statistical analysis

Table I summarises the descriptive conditional statistics while Table II highlights the correlation analysis.

Descriptive statistics on women's decision-making power show that 13.72% of women have no control over the income they receive. This share is important because the Finscope survey is representative of the adult population of Cameroon. As a result, the results from this survey reflect the situation of the adult population. The descriptive conditional statistics show that women who can be described as non-autonomous do not have access to formal social protection. They are usually in male-headed households. Women who have partial control over their income, on the other hand, are those who are married and who benefit more than others from social protection, whether formal or informal. In contrast, those who have full control are generally unmarried and live in households where the average household head is a woman.

Table I: Conditional descriptive statistics on women's participation

Variable	Decision-making power=0			Decision-making power=1			Decision-making power=2		
	N	Average	SD	N	Average	SD	N	Average	SD
Informal SP	481	0,4906	0,5004	786	0,7570	0,4292	2238	0,7015	0,4577
Formal SP	481	0,00		786	0,0165	0,1276	2238	0,0134	0,1150
Mixed SP	481	0,00		786	0,0153	0,1227	2238	0,0121	0,1092
Gender of the head of household	481	0,5634	0,4965	786	0,7379	0,4400	2238	0,4155	0,4929
Dependence on agricultural activities	481	2,0249	0,8917	786	2,1985	0,7973	2238	1,9830	0,8571
Level of basic education	481	0,2287	0,4204	786	0,2672	0,4428	2238	0,2855	0,4518
Secondary education level	481	0,3576	0,4798	786	0,3486	0,4768	2238	0,3807	0,4857
Marital status	481	0,4927	0,5005	786	0,7697	0,4213	2238	0,4441	0,4970
Financial inclusion	481	0,4802	0,5001	786	0,6196	0,4858	2238	0,6761	0,4681
Has a high income	481	0,0083	0,0909	786	0,0331	0,1790	2238	0,0237	0,1521
Has a middle income	481	0,2474	0,4320	786	0,3766	0,4848	2238	0,3101	0,4626
Income below 36270	481	0,1913	0,3937	786	0,1616	0,3682	2238	0,1693	0,3751
Age	481	21,7963	19,4719	786	20,8143	14,8030	2238	23,8047	16,6347
Age squared	481	853,4428	1307,282	786	652,084	880,5644	2238	843,2534	1055,128
Place of residence	481	0,4553	0,4985	786	0,3473	0,4764	2238	0,4786	0,4997
Household size	481	5,3368	3,3904	786	6,0241	3,2604	2238	4,5498	3,0614
Has registered business	481	0,0104	0,1015	786	0,0089	0,0940	2238	0,0134	0,1150
Has public revenues	481	0,0062	0,0788	786	0,0433	0,2036	2238	0,0362	0,1868

Source: Author based on Finscope (2017)

Table II: Correlation between variables of interest and women's empowerment

Variables	Participates in decision making
PS informal	0.0302*
PS formal	0.1106**
PS mixed	0.0280*

Source : Author from Finscope (2017)

2) Results of the econometric analysis

The results of the estimates are reported in Tables III and IV.

The estimated models are globally significant as revealed by the results of the chi-square test. The discussion of individual significance requires highlighting the results of the Wald test on the null hypothesis $H_0: \rho=0$. Since $\text{Prob} > \chi^2=0.000$. The correlation test between the two equations shows that the null hypothesis of no correlation cannot be verified. An endogeneity bias could be found in informal social protection. Indeed, the latter is measured by the membership of individuals in informal groups. There are several factors that motivate individuals to belong to or join these groups. However, we do not have any information that would allow us to highlight these motivations.

The estimation of women's empowerment as a function of mixed and formal social protection confirms the existence of an endogeneity bias. Indeed, the hypothesis of correlation between the equations cannot be rejected as shown by the results in Tables III and IV.

In terms of individual significance, formal social protection is found to have a significant positive effect on the probability of a woman participating in household decision making. Indeed, women's empowerment is better (ranging from not empowered to fully empowered) when they have access to formal social protection. Specifically, access to formal social protection is associated with 12.24% less chance of not having control over her income, 11.97% of having partial control and 24.21% more chance of having total control. Women who have access to informal social protection are also more likely to have full control over the income they receive.

The positive effect of social protection on women's empowerment confirms analyses that social protection, by reducing inequalities, contributes to women's empowerment (Kabeer, 2019). Similarly, the positive effect can be justified by the fact that women's membership of

informal groups provides them with an environment for exchange on such sensitive issues as life in the home. The fact that a woman does not have control over the income she receives may be a reflection of a deeper problem than domestic violence, and through the exchanges within these association groups and informal groups, the woman can get help, get out of her frustrations and regain her autonomy.

This analysis allows us to identify other factors that favour women's empowerment in Cameroon, notably the link of the household to agricultural activities, the level of education, the marital status of the woman, her age and the gender of the head of the household. Similarly, economic characteristics such as household income, financial inclusion and the socio-professional category of the household have a positive effect on women's empowerment. Indeed, all these variables have the effect of making income available to women. These results are in line with Sen's capability theory, which states that an increase in the income available to women has an empowering effect.

With regard to the determinants of access to formal protection, we find that the exclusion variables selected (being a government employee and owning a registered business) have a significant positive effect on the probability of a woman having access to formal social protection as well as the mixed variable.

Table III : Social protection estimation results³

Variable	Decision-making power		PS formal		(1)		(2)		(3)	
	Coefficients	Standard error	Coefficients	Standard error	Coefficients	Standard error	Coefficients	Standard error	CScoefficients	Standard error
Formal SP	-1,7795***	0,3641			-0,1224***	0,0186	-0,1197	0,0766	0,2421**	0,0945
Informal SP	0,1585***	0,0472			-0,0327***	0,0097	-0,0231***	0,0069	0,0558***	0,0165
Gender of head of household	-0,2523***	0,0543	0,0985	0,1658	0,0524***	0,0112	0,0376***	0,0079	-0,0900***	0,0188
Dependence on agriculture ref: independence										
Partial	0,0964	0,0616	0,2136	0,1580	-0,0186	0,0125	-0,0125	0,0090	0,0311	0,0214
Total	0,0077	0,0653	-0,2646	0,2661	-0,0024	0,137	-0,0027	0,0093	0,0051	0,0230
Level of study										
Basic level	0,1112**	0,0552	-0,5651**	0,2777	-0,0252**	0,0114	-0,0204**	0,0083	0,0456**	0,0196
secondary level	0,0354	0,0551	0,1458	0,1487	-0,0067	0,0113	-0,0041	0,0080	0,0108	0,0192
Married	-0,3702***	0,0530	-0,0541	0,1623	0,0761***	0,0110	0,0537***	0,0077	-0,0130***	0,0182
Financially included	0,1455***	0,0488	0,5093**	0,2591	-0,0280***	0,0101	-0,0175**	0,0073	0,0454***	0,0172
Income										
High income	0,3136**	0,1440	0,7708***	0,2289	-0,0616**	0,0295	-0,0401**	0,0207	0,1017**	0,0500
Average income	0,0256	0,0477	0,0173	0,1434	-0,0052	0,0098	-0,0036	0,0069	0,0088	0,0167
Age	0,0306***	0,0046	0,0362*	0,0204	-0,0062***	0,0010	-0,0042***	0,0007	0,0104***	0,0016
Age squared	-0,0005***	0,0001	-0,0006	0,0004	0,0001***	0,0000	0,0001***	0,0000	-0,0002***	0,0000
Household size	-0,0373***	0,0070	0,0006	0,0223	0,0077***	0,0014	0,0055***	0,0010	-0,0131***	0,0024
Place of residence 1=urban	0,0431	0,0552	0,2697	0,1734	-0,0078	0,0113	-0,0042	0,0080	0,0121	0,0193
Has registered business			0,5261*	0,2970	0,0022*	0,0012	0,0039*	0,0022	-0,0060*	0,0033
Is a state employee	0,1760	0,1236	0,7363***	0,1795	-0,0334	0,0253	-0,0203	0,0178	0,0536	0,0431
Constant			-3,4289***	0,3796						
N	3504									
Correlation between the equations			0,7830***	0,1128						
Prob > chi2	0,000									

^a1% *, ** and *** indicate significance at 10%, 5% and 1%.

Source: Authors's calculations based on Finscope (2017)

³ (1), (2) and (3) correspond to the marginal effects when the woman has no control over her income (1), when she has shared control (2) and when she has full control (3). This corresponds to the modalities 0, 1 and 2 of the explained variable.

Table IV: Estimation results by mixed social protection

Variable	Decision-making power		PS mixed		(1)		(2)		(3)	
	Coefficients	Standard error	Coefficients	Standard error	Coefficients	Standard error	Coefficients	Standard error	Coefficients	
Mixed SP	-1,6890***	0,3904			-0,1231***	0,0185	0,1276*	0,0762	-0,0134***	0,0024
Gender head of household	-0,2542***	0,0543	0,0865	0,1725	0,0528***	0,0112	0,0377***	0,0079	-0,0906***	0,0189
Dependence on agriculture ref: independence										
Partial	0,1133*	0,0613	0,1721	0,1637	-0,0223*	0,0125*	-0,0154*	0,0089	0,0378*	0,0213
Total	0,0211	0,0649	-0,2458	0,2735	-0,0052	0,0137	-0,0044	0,0092	0,0096	0,0229
Level of study										
Basic level	0,1290**	0,0547	-0,4891*	0,2815	-0,0285**	0,0113	-0,0221***	0,0081	0,0506***	0,01937
secondary level	0,0594	0,0547	0,1808	0,1568	-0,0116	0,0113	-0,0075	0,0079	0,0191	0,0192
Married	-0,3613***	0,0530	-0,0550	0,1702	0,0744***	0,0110	0,0524***	0,0077	-0,1268***	0,0183
Financial inclusion										
Included	0,1834***	0,0476	0,4744*	0,2674	-0,0361***	0,0099	-0,0237***	0,0071	0,0598***	0,0168
Income bracket										
High income	0,3490**	0,1424	0,7687***	0,2336	-0,0692**	0,0293	-0,0459**	0,0204	0,1152**	0,0496
Average income	0,0411	0,0475	0,0519	0,1490	-0,0083	0,0098	-0,0057	0,0069	0,0140	0,0167
Age	0,0320***	0,0046	0,0357*	0,0211	-0,0065***	0,0010	-0,0044***	0,0007	0,0109***	0,0016
Age squared	-0,0005***	0,0001	-0,0005	0,0004	0,0001***	0,0000	0,0001***	0,0000	-0,0002***	0,0000
Household size	-0,0378***	0,0070	0,0083	0,0226	0,0078***	0,0014	0,0056***	0,0010	-0,0134***	0,0024
Place of residence 1=urban	0,03991	0,0552	0,3082*	0,1833	-0,0071	0,0114	-0,0038	0,0080	0,0109	0,0193
Has registered business	-	-	0,4592	0,3153	0,0017	0,0012	0,0030	0,0021	-0,0048	0,0032
Is a state employee	-	-	0,7244***	0,1772	0,0027***	0,0009	0,0048***	0,0012	-0,0075***	0,0020
Constant			-3,545 ***	0,3978						
N	3504									
Corr (e.g. formal PS, e.g. decision-making power)	0,7616***	0,1239								
Wald chi2	303,77									
Prob > chi2	0,0000									

^b *, ** and *** indicate significance at the 10%, 5% and 1% levels

Source: Authors from Finscope.

Conclusion and implications

The objective of this work was to determine the effect of social protection on women's empowerment in Cameroon. To achieve this, we distinguished two main dimensions of social protection, namely formal and informal social protection. An intermediate dimension is identified, namely mixed social protection. Empowerment is measured by the power of women to control their income. At the end of our analysis, it appears that social protection has a positive effect on the empowerment of women in Cameroon. Specifically,

- Formal social protection, i.e. the protection that individuals enjoy as a result of their employment, contributes positively to the empowerment of women in Cameroon. Thus, better security at work is a guarantee of women's empowerment. It is therefore necessary to put in place mechanisms aimed at reaching a greater number of beneficiaries of the social protection system in place.
- Women who use both formal and informal social protection (mixed social protection) are more likely to participate in decision-making on how their income is spent.
- Informal social protection also has a positive effect on the empowerment of women in Cameroon. This effect is, however, less significant than that of formal social protection. This can be justified by the fact that the income that informal groups make available to individuals is not high enough.
- The study also allows for a deeper analysis of the determinants of women's empowerment in Cameroon. It shows that financial inclusion, household income, household size, etc., are explanatory elements of women's decision-making power within the household.

These results imply that public policies aimed at women's empowerment must place an emphasis on social protection, notably by

- Making formal social protection more accessible by increasing the number of women beneficiaries. This can be done by implementing a government social protection programme for women and by increasing the outreach of the voluntary insurance programme already in place.
- By framing informal social protection mechanisms through state subsidies. This would increase the value of aid to this vulnerable group.

ANNEX

Table 1 : Definition of variables

Variables	Definition
Dependent variable Power to control household income	Coding: 1 if the woman has control over how the money is spent and 0 otherwise.
Marital status	It takes the value 1 if the woman is married and 0 otherwise.
Level of education	Measures the highest level of education achieved by the woman. This variable takes the value 1 if the woman has a higher level of education, 2 for secondary level and 3 for primary level and 0 otherwise.
Dependence on agricultural activity	Provides information on the sources of income of the household. It takes the value 1 when the household lives exclusively from agriculture, 2 if it lives from agriculture and other activities and 3 if the household is independent from agriculture.
Financial inclusion	Reflects the inclusion status of the woman. It is qualitative and takes the value 1 when the woman is excluded and 0 if she is included.
Household income bracket	Describes a set of ranges to which the household income belongs
Household size	Captures the number of people living in the household
Formal social protection	Captures access to social protection by being employed in Cameroon. It takes the value 1 when the individual has access to formal social protection and 0 otherwise
Informal social protection	Measures access to informal social protection mechanisms. It takes the value 1 when the individual has access to informal social protection mechanisms and 0 otherwise
Age group	Defines the age range of the woman
Environment	Allows capturing the environment of residence. Qualitative variable that takes the value 1 when the woman lives in an urban area and 0 otherwise.
Gender of the head of household	Measures the effect of the gender of the person who makes the main household decisions. Binary variable taking the value 1 when the head of household is male and zero otherwise.

Source: Authors

Table 2: Descriptive statistics for formal social protection variables

Variable	N	Average	Standard deviation	Min	Max
life insurance	3505	.002	.022	0	.2
health insurance	3505	.005	.03	0	.2
education insurance	3505	.001	.014	0	.2
pension insurance	3505	.003	.023	0	.2
accident insurance	3505	.001	.014	0	.2

Source: Author based on Finscope (2017)

REFERENCES

Adato, M.; De la Briere, B.; Mindek, D. & Quisumbing, A. 2000. The Impact of PROGRESA on Women's Status and Intrahousehold Relations, International Food Policy Research Institute, 95 p.

Arif, S., Syukri, M., Isdijoso, W. Rosfadhila, M. & Soelaksono, B. 2011. "Are Conditions Pro-women? A Case Study of a Conditional Cash Transfer in Indonesia" Center for Social Protection Research Report 03(2301): 1-24

Bandiera, O.; Buehren, N.; Burgess, R.; Goldstein, M.; Gulesci, S. Rasul, I. & Sulaiman, M. 2012. *Empowering Adolescent Girls: Evidence from a Randomized Control Trial in Uganda*, Working Paper, World Bank Group, Washington DC
<https://openknowledge.worldbank.org/handle/10986/25529>

Barr, N. 2004. *The Economics of Welfare State*, Fourth Edition, Oxford, Oxford University Press

Batool, S. A.; Ahmed, H. K. & Qureshi, S. N. 2019. "Impact of Demographic Variables on Women's Economic Empowerment: An Ordered Probit Model," *Journal of Women and Aging*, 30 (2): 1-21.

Bobonis, G., Gonzalez.Brenes, M. & Castro, R. 2012. "Public Transfers and Domestic Violence: The Roles of Private Information and Spousal Control." *American Economic Journal: Economic Policy*, 5 (2013): 179-205.

Bonilla-Garcia, A & Gruat, J. 2003. *Social Protection: A life cycle continuum Investment for Social Justice, Poverty Reduction and Sustainable Development*, International Labour Organization, Geneva

Camacho, A & Rodriguez, C. 2012. *Who's the boss at home after receiving conditional cash transfers*, American Economic Association Annual meeting in Chicago, Illinois 2012.

Conway, T; de Haan, A., & Norton, A. 2000. Social protection: New directions of donor agencies, Paper for the DFID-ODI inter-agency seminar on social protection, Easthampstead Park, Berkshire.

De Foucauld, J-B 1995. *Le financement de la protection sociale*, Rapport au Premier ministre, Commissariat général du Plan, La Documentation française

Devereux, S. & R. Sabates-Wheeler 2004. "Transformative Social Protection", IDS Working Paper 232, IDS, University of Sussex, Brighton.

Feldstein, M 1974. "Social Security, Induced Retirement, and Aggregate Capital Accumulation," *Journal of Political Economy*, 82 (5): 905-926

Feldstein, M. 1985. "The Optimal Level of Social Security Benefits", *The Quarterly Journal of Economics*, 100 (2) 303-320.

Hadad, L. 2007. "Comment on the 'Role of Social Risk Management in Development: A World Bank View'", *IDS Bulletin*, 38 (3): 14

HelpAge India 2009. *The Social Pension in India: A Participatory Study on the Poverty Reduction Impact and Role of Monitoring Groups*, HelpAge Briefing, HelpAge India, New Delhi

INS 2015. *Labour, Social Protection and Insurance*, Annuaire Statistique du Cameroun, Edition 2015

Jones, N. & Holmes, R. 2011. "Why is Social Protection Gender-Blind? The politics of Gender and Social protection", *IDS Bulletin*, 42 (6).

Jones, N., Holmes, R. Presler-Marshall, E. & Stavropoulou, M. 2016. "Transforming gender Constraints in the agricultural sector: The potential of social protection programmes," *Global Food Security*, Article in Press.

Kamalovna, N. T., Khabibovna, G. M., Akhmedovna, N. M., Mukhtorjanovna, L. N. & Kizi, Z. H. O. 2020. "Mechanisms of improving social protection of women: Risk indicator and statistics (In the context of Gender-Based violence)", *Journal of Critical Reviews*, 7 (4): 38-41

Latapi, A.E. & de la Rocha, M.G. 2004. External Evaluation of the Impact of the Human Development Program Oportunidades, Mid-term Qualitative Evaluation of the Oportunidades Program in Rural Areas, Instituto Nacional de Salud Publica, Morelos, Mexico, 194p

Molyneux, M. 2006. "Mothers at the Service of the New Poverty Agenda: Progres/Oportunidades, Mexico's Conditional Cash Transfer" *Social Policy and Administration* 40 (4): 425-449

Mumbi, A. & Gikandi, J. 2016. "Influence of Social Protection on Women Empowerment in Political Parties in Nairobi, Kenya," *European Journal of Gender Studies*, 1 (1): 11-21.

OECD 2019. "Implementing Social Protection Strategies; Lessons from the EU-SPS Programme; EU Social Protection Systems Programme

Quijano, M. A. F. 2009. "Social Policy for Poor Rural People in Columbia: Reinforcing Traditional Gender Roles and Identities?" *Social Policy and Administration* 43 (4): 397-408

Parrot, L. 1998. "Characteristics of an informal financial system in Anglophone Cameroon", *Autrepart*, 7: 153-167

Plagerson, S. 2014. Do Social Protection Programmes that impose Conditionality on Women Fail to Confront Patriarchy as a Root Cause of Inequality? Social Protection Human Rights

Samuelson, P. A. 1975. "Optimum Social Security in a Life-cycle Growth Model," *International Economic Review*, 16 (3): 539-544.

Suguna, B. 2006. *Empowerment of rural women through Social protection*. Discovery Publishing House

Skoufias, E. & McClafferty, B. 2001. "Is PROGRESA Working? Summary of the Results of an Evaluation by IFPRI", Discussion Paper BRIEFS N°118, Food Consumption and Nutrition Division of the International Food Policy Research Institute

Waqas, M. & Awan, M. S. 2019. "Do Cash Transfers Effect Women Empowerment Evidence from Benazir Income Support Program of Pakistan," *Women's Studies*, DOI: 10.1080/00497878.2019.1666007.

World Bank 2015. *The state of social safety nets*, 2015, World Bank