Intmate Parteners violences and women's participation in the labour Market in Cameroon

Abstract.

This article analyses the incidence of intimate partner violence (IPV) against women's participation in the work market in Cameroon. This is the effect of the data from the Demographic and Health Survey carried out by the INS in 2018. We have used the method of variable instrumentalities to verify our hypotheses: the effect of intimate partner violence on the possession of women of employment and access to paid employment for women. The results obtained show that, in return, CPI exposure has a positive effect on possessions and access to employment for women, which is statistically significant after having controlled the causality simultaneously between the employment status and the CPI. Women participating in the labour market are entitled to a VIP salary of 313.7 ‰, 110‰ of the women's salary for paid employment in kind or in nature and 40% of the work for a member of the family who confirms the family negotiation model. The physical violence of intimate partners is now the largest increase in the environmental order of 56% for women declared to be involved in the work market and thus a paid job and 61.67% of those in activity at a member of the family.

Key words: Partner violence, Participation in the work market; Remunerated job, EDS; Cameroon

Classification JEL: J12, J16, Z10

Introduction

In most countries around the world, particularly those developing countries, women are increasingly participating in the work market. Contrary to this trend, they realize that they are less well paid in silver and are less represented in stable jobs and therefore have better social security compared to their male counterparts (OIT, 2023). In effect, according to the Organisation Internationale du Travail (OIT, 2022), the global rate of participation in the work market for women is 61% compared to 75% for men aged 15 to 49.

Another thing that makes the attention on this paper clear is the lack of participation in the labor market between unionized women and non-unionized women. To illustrate, the Demographic and Health Survey (EDS) conducted in 2018 in Cameroon shows that women work less than

men (62% compared to 79% of women), but only 17% of them in the EU, While working, they did not receive their silver remuneration of less than 4% for men. Several studies show that these disparities are influenced by factors that do not only encourage women to choose and develop in secure jobs that favor their economic expansion, but also relationships within the couple's life. It is also the case that this work focuses on a specific area of marital relations, particularly intimate partner violence (IPV).

The CPI, still qualified as conjugal violence, is a serious violation of human rights and a problem of global public health (Sardinha et al, 2022)[1]. Even if the CPI can sometimes affect men and women, women are more susceptible to being touched, suffering serious injuries or are likely to be affected by men (Wado et al., and OMS, 2021). [2]It is estimated that 27% of women aged 15 to 49 experienced a conjugal form of violence between 2000 and 2018 worldwide, with low and intermediate income countries (PRFI) reporting an increased prevalence (Sardinha et al., 2022). All but several countries have made efforts to reduce the CPI while taking into account sustainable development objectives (ODD: Objective 5, paragraph 5.2 on gender equality).

Monitoring the relationship between the CPI and the participation of women in the work market and access to socio-professional choices is of great interest. Studies on the issue of after a certain number of authors show that, according to the theory of negotiation at the men's side, conjugal violence can be observed in improving the negotiation power of women at the men's side by accessing employment, and therefore the increase in their income (Farmer et Tiefenthaler, 1996 ; 1997 and Tauchen et al. 1991). In developing countries, it can be seen that the reduction in the wage differential according to genre has reduced the incidence of domestic violence against women (Aizer, 2010) in the United States, for example.

Other studies (Aizer, 2010 and Luke and Muki, 2011) clearly show that, considering the theory of the male bat return, men perceive women's employment as a permanent danger against their domination and use it when the situation presents itself to representatives to assist their

[1] (Raj et al, 2010) United Nations Commission on the Condition of Women. Report on the quarantine-fourth session (28 February-2 March 2000). Supplement no. 7. Available at: http://www. un.org/womenwatch/daw/csw/e200027.pdf. Consulted on 24 July 2009.

[2] Homicide is an extreme form of this violence: around 38% of women's deaths are committed by their intimate partners (Stöckl et al. 2013; OMS, 2013). This reference date from 2013 makes it even higher than a 2021 statistic from the OMS. Find a recent reference or delete it.

authority, Carrasco (2017) adds that man's inactivity is a handicap within the couple in the measure where his position as head of the family is generally taken into account.

In Sub-Saharan Africa, prejudices and norms are as we can see according to Bachwenkizi et al. (2023) and Cools and Kotsadan (2017) in their studies that women currently face a greater risk of being exposed to violence linked to access and search for goods such as water and the regions where women's rights are not are not very recognizable. We can understand that not only the employment of women, but their improvement in the financial situation is also a source of increasing the incidence of the conjugal violation, but other studies show that this is a means of improving their negotiation power within the couple (Eswaran et Malhotra et Bhattacharya, 2011).

In Cameroon, like the rest of the country on the path to development, the effects of violence linked to intimate partners have not been spared. According to the OIT (2021), 32% of women aged 15-49 have been subjected to acts of physical, sexual or emotional violence among their partners, compared to the global average of 27% (OMS, 2021). According to the latest Demographic and Health Survey (EDS-V, 2018), women are more likely to participate in the labour market, but not in the most paid activities than men, with 63% being paid in silver compared to 46% after work. Certain key factors could be at the root of the stagnation of women's participation in the work market. When the situation arises, prejudices and norms still affect the power of women to negotiate in a union, which is observed across the decision-making power of working women or not, and not across the property management of the couple in question empowerment of men in family asset management (EDS-III, 2018)

Physical, sexual and psychological violence in the couple resulting from perpetrators manifests itself at individual, family, community and societal level in a wide sense which interact and contribute to increasing risks or reducing the protection of the vulnerable as they are associated with the perpetrator of the violence and others with the victim or the couple. In Cameroon, the EDS-V (2018) data analysis shows that the level of instruction and income favors the negotiation power of women, while the number of children also increased slightly, from 47% to 58% for a woman pretending to be a child, at least in terms of household goods management. The analysis of the impact of violence on the participation of women in the labor market in Cameroon provides us with a study to understand the means and propose solutions to address these problems.

The problem of inclusion in the context of the studies here poses an economic problem of simultaneity (Anderberg et al, 2021) between conjugal violence and participation in the labor

market and its incidence in encountering women suggests the possibility of the question of endogeneity[3]. While women's employment can have an impact on violence when faced with it, it is also possible that violence can affect women's employment prospects, their financial situation and, in the long term, their economic and social well-being. However, there is still a consensus on the potential causal link between conjugal violence and women's employment and the important economic costs associated with it (Peterson et al. 2018)[4]. The empirical research directly confirming this link is relatively few and rare.

Studies aimed at analysing the impact of violence on women's employment situations do not provide a statistically significant link, particularly due to the limitations of data and the inability to overcome the problem of endogenity (Lloyd, 1997 ; Lloyd et Taluc, 1999 ; Tolman et Rosen, 2001) [5]. Recent studies in India and Colombia have used approaches that analyse the relationship between intimate partner violence and the employment of women in unions and address the problem of endogeneity using the variable instrumental method. The tools used here are respectively the history of family violence and marriage violence in its infancy for the incidence of domestic violence (Bhattacharya, 2015 and Fajardo-Gonzalez, 2021). Research into the relationship in Cameroon is still ongoing and has not really been explored in terms of the possibility of resolving endogenous disease using the instrumental method.

The objective of this article is to measure the effect of the CPI on women's participation in the labor market. It takes a first step to measure the effect of the CPI on women's work and a second

[3]Studies focusing on the impact of employment or the financial situation of women relative to their exposure to domestic violence have adopted several strategies to tackle the problem of endogenous violence. These include the use of instrumental variables (Chin, 2012; Eswaran et Malhotra, 2011; Lenze et Klasen, 2017), the use of measures exogenous to the financial situation of women (Aizer, 2010), of geographical measures exogenous to employment rates/employment due to sex and age. (Alonso-Berrego and Carrasco, 2017) or external shocks to the labor market (Erten and Keskin, 2021).

[4]Walby, S. (2004). The cost of domestic violence. London: Women's Rights and Equality estimates the economic cost of domestic violence at around CHF 2.7 billion, based on 2001 data. This includes the cost of labour arrests due to injuries; in addition, they estimate that around half of the costs of these absences due to illness are borne by the employer and another half by the individual due to the loss of wages

[5] These studies primarily concern the United States and the analysed figures are limited to low-income districts or women benefiting from social assistance. Despite the absence of significant concerns about the impact of conjugal violence on women's employment, conjugal violence is associated with several other unfavourable outcomes in the labour market, such as periods of stress which are more frequent in the past (Lloyd et Taluc, 1999) or a diminution of the job title. The number of working hours (Tolman and Wang, 2005). Farmer and Tiefenthaler (2004), using new data from the United States, once again examined the participation of women in work and their income when they work

step to assess this effect on women's work. One of the major contributions of this article falls within the price-based nature of the CPI using the instrumental variables method.

The development sequence is structured in 4 sections: section 2 presents the methods and materials used; Section 3 presents the results; Section 4 discusses the results and the paper concludes with a conclusion.

2. Materials and methods

2. 1. The data

The data used in this article comes from the five-year Demographic and Health Survey (EDS) of Cameroon carried out in 2018. It was carried out by the National Institute of Statistics in collaboration with the Ministry of Public Health and with the financial support of the United Nations Agency for International Development (USAID), the United Nations Population Fund (FNUAP), the United Nations Children's Fund (UNICEF) and the Bank of the World. As in other developing countries, this survey aims to collect information on the characteristics of men, reproductive and sexual health, child health, the independence of women in the home, domestic violence and violence against MST/SIDA.

The Cameroon EDS sparkling wine is a two-degree sparkling wine. The main unit of inquiry is the Denomination Sector (SD), defined by the General Survey of Population and Habitat of Cameroon in 2005 by the Central Bureau of Population Studies and Research. At the second stage, a 28-shot batch was selected by hand with a systematic shot with an even probability. The district is divided in such a way as to ensure adequate representation of the urban and rural areas, including the 12 study areas which have been constituted by the regions of Adamaoua, Centre (without Yaoundé), East, North-West, Littoral (without Douala), North , West-North,

2.2. Measure the variables

2.2.1. The dependent variable: participation in the women's work market.

The variable relating to participation in the labour market (PMT) recommended by the OIT for evaluation is considered:

a) Woman has worked or performed an activity for the last 12 months of the year before the survey period.
b) Woman who works: (i) for her own account; (ii) for a certain enterprise; iii) for a member of the family
c) woman who has worked and receives remuneration: (a) in a specific situation; b) in nature; c) in species and in nature

2.2.2. The explanatory variables

a) The interest variable: VIP

The variable of interest is conjugal violence. It is measured from its three key dimensions: physical violence, emotional violence and sexual violence. To assess the prevalence of physical violence between intimate partners, seven questions have been posed specifically to married women and women in marriage:

(i) Have you been pushed, rescued or rescued by your wife?

(ii) Have you been photographed by your spouse/partner? (iii) Have you been surprised by your wife or surprised by a dangerous object approaching your wife? (iv) Have you been amazed or trained by your mother? (v) Have you been alienated or burned by your mother? (vi) Have your hair been cut or your arms twisted by your fingers? (vii) Have you been attacked with a knife/gun or another weapon from your wife?

Also, the physical violence is measured by a binary variable which takes the value 1 if the mother answers either one of the 7 questions above.

The prevalence of sexual violence has been examined through the following two questions: (i) Have you been physically confronted with your partner in an undesirable sexual encounter? (ii) Have you been exposed to other types of sexual acts that you do not desire from your wife? Sexual violence is measured by a binary variable which takes value 1 if the mother answers either one of the 2 questions above.

Concerning emotional violence, three questions emerged during the inquiry:

(i) Have you been humiliated by your wife? (Have you been insulted by your wife? (iii) Have you been insulted by your wife? The emotional violence is measured in a binary variable manner which takes value 1 if the mother answers yes to the one of the 3 questions above.

b) Control variables

The control variables are selected on the basis of previous research [5, 11, 16, 29,30] and the socio-cultural context of Cameroon. The characteristics of the mother and father include age (15-19 years; 20-24; 25-29; 30-34; 35-49), level of education (without instruction; primary; secondary; higher education), religion (Christian; Muslim; other), if the woman has been working for the last 12 months, The characteristics of the mess include the sex of the mess chef, the number of children aged 0 to 5 years living in the mess, residential area (urban, rural) and indicator of mess wealth (the most painter ; the poorest; the environment; the richest; the

richest); whether they have a job or not; the number of contracts concluded with the woman; the experience of violence between mother and woman.

2.3. Empirical method

Our objective is to examine the relationship between women's participation in the work market and conjugal violence.

We estimate equation 1 as follows:

$$\boldsymbol{PMT_i = \beta_0 + \gamma_{PMT} IPV_i + \theta_0 X_i + \varepsilon_{0i}} \qquad \textbf{(1)}$$

Or PMT_i $est\ la$ a multinomial variable capturing participation in the women's work market;IPV_i representing the different dimensions of the conjugal violence that women are confronted with;X_i is the set of covariables;$\beta_0,\ \gamma_{PMT},\ \theta_0$ are parameters to estimate and $\varepsilon_{0i}$are the term of error.

Using the linear probability model of women's participation in the work market, the elements of interest are: γ_{PMT} because this parameter relates to the relationship between violence and women's participation in the work market. The problem we could see here is that of the endogenous nature of violence in the measure where there is simultaneity between violence and participation. To solve this problem of endogenous hyperplasia, we simply apply the double smallest squares in two steps:

i) **The equation for the reduced form which follows as follows:**

$$\boldsymbol{IPV_i = \beta_1 + \partial Z_i + \theta_1 X_i + \varepsilon_{1i}} \qquad \textbf{(2)}$$

X_i, is the same set of covariables of equation (1);$\boldsymbol{Z_i}$ $est\ l'ensemble\ des\ instruments;\ \ \beta_1,$ $\boldsymbol{\partial}, et\ \theta_1$are parameters to estimate and $\varepsilon_{1i}$are the term of error.

ii) **The structural equation which is written as follows:**

$$\boldsymbol{PMT_i = \beta_2 + \gamma_{2sls} \widehat{IPV}_i + \theta_2 X_i + \varepsilon_{2i}} \qquad \textbf{(3)}$$

où $\boldsymbol{\widehat{IPV}_i}, est\ \ la\ violence\ prédite\ de\ l'équation(3);\boldsymbol{\gamma_{2sls}}$ $est\ la\ paramètre\ d'intéret;\ \ \beta_2,$ $\theta_2,$ are parameters to estimate andε_{2i} est the term error.

To validate our instruments, we need two hypotheses:

$$\begin{cases} \boldsymbol{\partial \neq 0} \\ \boldsymbol{E(Z_i\ , \varepsilon_{2i}\ ) = 0} \end{cases} \textbf{(4)}$$

Beyond the problem of simultaneity, we aim to prevent the recurrence of all other forms of sources of endogenous hypertension using the regressions of the IV PTOBIT. We can understand that here other sources of endogenous behaviour could be, for example, a

measurement error, the underestimation of the incidence of violence in response to women, or even a non-selective selection in the context of violence and of the variable amounts.

iii) The instruments

We therefore consider two potential instruments in our analysis which have an impact on the CPI, but are unlikely to have a direct impact on women's participation in the work market. The first step is to combat intergenerational violence. Here is the experience of violence suffered by the woman's mother, the question he asked was whether his father had attacked his mother? And apart from the three modalities (yes, not, and I don't know), we generate a variable mother. The mother who was a victim of violence yes and takes the value 1 and the two others mean and take the value 0. The second instrument is the number of unions that make up the woman. The question posed to women is your first union? If the variable has to take the value 1 and 0, then.

The justification for the choice of these instruments rests on the literature on the intergenerational transmission of violence and on the experience of women in old age. It can be seen that children who are raised in unions or who have experienced conjugal violence have a strong chance of perpetuating these situations even into adulthood, or that women who have experienced violence in their original homes are more likely to remain with violent conjoints (Kalmurs, 1984; Shaus et Gelles, 1990). For example, women who have already experienced these violent situations can give them the experience of managing their own lives in the second home.

Because there cannot be a direct relationship between being alone or having violence and participation in the work market among adults, this can have a negative impact on their cognitive and non-cognitive attitudes, as well as on health or the fear of permanent replacements, where the possibility of generating income which could increase financial difficulties. These difficulties have made it impossible for the Union to find jobs in order to improve its bargaining power in the workplace and to reduce violence afterwards. In addition, our instruments can also be correlated with the term error and can also have a direct effect on women (Kalmin, 1994 and Pollack, 2004). We characterize these indirect effects partly by including the covariables in our analysis of occurrence, the education of the woman and the girl, the occupation of the couple who are the potential links.

By observing the two instruments, one can note that there is a relationship and it is significant and positive between being confrontational and having to deal with conjugal violence.

3. The results

3.1. Statistical descriptors of study variables

Women and men in a relationship have an average level of education of around 37%, they are more Christian, have an average standard of living, an average age of 31 years, they have at least one child and around 3 live in Household chores. The most severe intimate partner violence is physical (33%), then emotional (28%) and finally 10% for sexual violence.

Table 1 : **Summary statistics of the study variables**

	%	Mean	Sd	Min	Max
non-school-aged woman=0	76.46				
non-school-aged woman =1	23.54				
Female primary school student =0	66.23				
Female primary school student =1	33.77				
Femme-edu- secondary =0	62.39				
Femme-edu- secondary =1	37.61				
Femme-edu-superieur =0	94.93				
Female-Educated-Superior =1	5.07				
Christian woman =0	29.87				
Christian woman =1	70.13				
Muslim woman =0	73.69				
Muslim woman =1	26.31				
Women of other religions =0	96.44				
Women of other religions =1	3.56				
Home-for a non-school couple.	21.53				
Men-couple primary	31.81				
Man-in-couple -secondary	37.46				
Man-in-couple- super-love	9.20				
Mari-travail =0	2.64				
Mari-travail =1	97.36				
Sexe du chef de ménage=masculin	76.82				
Sexe du chef de ménage=feminine	23.18				
Zone de residence=Urban	49.85				
Zone de residence =Rural	50.15				
Plus pauvre=0	82.28				
Plus pauvre=1	17.72				
pauvre=0	78.89				
pauvre=1	21.11				
Moyen =0	77.29				
Moyen =1	22.71				
Rich =0	79.04				
Rich =1	20.96				
Plus-rich =0	82.49				
Plus-rich =1	17.51				
age_ femme_continue		31.27143	8.406568	15	49
Number of children under 5		1.43049	1.289907	0	10
Number of children in household		3.181237	2.137018	0	13

Binary indicators of IPV					
Experience of physical rape=no	66.74				
Experience with physical rape=yes	33.26				
Experience of emotional rape=no	72.32				
Experience with emotional rape=yes	27.68				
Experience of sexual rape=no	89.81				
Experience of sexual rape=yes	10.19				
Experience of rape =no	85.67				
Experience of rape = yes	14.33				
Intensity of VIP dimensions					
Intensity of physical violence		0.49	1.22	0.00	7
Intensity of sexual violence		0.10	0.42	0.00	3
Emotional violence intensity		0.43	0.90	0.00	3
Index of all VIPs					
VIP Index		1,019	2.0799	0.00	14
VIP Index (Normalized)		0.08	0.16	0.00	1

Source: Author, calculated from data from EDS Cameroun 2018

3.2 Results of the estimation of the linear probability model of participation in the women's work market.

The estimate of women's participation in the work market (equation **1)** presented in the first column of **Table 2** here allows us to see that the VIP is significantly positive, which translates into an association with women's participation. The augmentation of a VIP intensity supplementary unit increased the probability of participating in the work market for the last 12 months by 0.163% and 0.110% and 5% respectively of being paid (in kind or nature) and work for a member of the family. This equation does not yet take into account the problem of endogenous participation and the violence that occurs simultaneously with the MCO.

Table 2 : **Marginal effects of participation in the women's work market in the form of intimate partner violence.**

	The woman worked for 12 months	**Remunerated work (in nature or in kind)**	**The independent woman**	**Woman – work – company**	**Women's work – for a member of the family**
VARIABLES	Y1	Y2	Y3	Y4	Y5
VIP indexes normalized	0.163***	0.110**	0.0573	0.0284	0.0513*
	(0.0465)	(0.0487)	(0.0481)	(0.0258)	(0.0265)
Female primary school student	0.111***	0.128***	0.177***	0.0108	-0.0543***
	(0.0211)	(0.0231)	(0.0233)	(0.0188)	(0.0128)

Femme-edu- secondary	0.0729***	0.104***	0.106***	0.0564***	-0.0542***
	(0.0244)	(0.0271)	(0.0275)	(0.0195)	(0.0158)
Femme-edu-superieur	0.0522	0.108**	-0.0571	0.119***	
	(0.0395)	(0.0459)	(0.0468)	(0.0240)	
Age-femme-continue	0.0318***	0.0465***	0.0406***	0.00477	-0.00559
	(0.00601)	(0.00673)	(0.00683)	(0.00408)	(0.00409)
age2	-0.000330***	-0.000554***	-0.000465***	-5.10e-05	5.91e-05
	(9.24e-05)	(0.000102)	(0.000104)	(6.07e-05)	(6.29e-05)
Christian	0.0224	0.0382	-0.00377	0.0311	0.00715
	(0.0376)	(0.0393)	(0.0397)	(0.0268)	(0.0206)
Muslim	-0.143***	-0.0931**	-0.0768*	-0.0249	-0.0627***
	(0.0383)	(0.0407)	(0.0412)	(0.0292)	(0.0218)
Man-in-couple - primary	0.0861***	0.0691***	0.0732***	-0.00706	0.00713
	(0.0213)	(0.0232)	(0.0232)	(0.0157)	(0.0124)
Man-in-couple - second	0.0738***	0.0771***	0.0574**	-0.000841	0.0130
	(0.0230)	(0.0251)	(0.0251)	(0.0158)	(0.0146)
Man-in-couple - superior	0.0363	0.0437	-0.0267	0.0273	-0.0194
	(0.0337)	(0.0377)	(0.0376)	(0.0210)	(0.0255)
mari-travail	0.231***	0.193***	0.141***	0.0524*	
	(0.0373)	(0.0453)	(0.0460)	(0.0293)	
Feminine	0.0475**	0.0313	0.0497**	0.0149	-0.0224
	(0.0188)	(0.0208)	(0.0210)	(0.0107)	(0.0144)
Urban	0.0614***	0.0145	0.0839***	-0.0211*	0.00476
	(0.0182)	(0.0206)	(0.0206)	(0.0124)	(0.0135)
Poor	-0.0842***	-0.0216	0.0358	-0.00316	-0.0593***
	(0.0232)	(0.0246)	(0.0248)	(0.0197)	(0.0118)
Middle	-0.181***	-0.0659**	0.0121	0.00167	-0.131***
	(0.0246)	(0.0267)	(0.0271)	(0.0198)	(0.0155)
Rich	0.180***	-0.0566*	-0.00563	0.0368*	-0.167***
	(0.0289)	(0.0317)	(0.0320)	(0.0213)	(0.0211)
Tres-riche	-0.183***	-0.0516	-0.0673*	0.0563**	-0.131***
	(0.0325)	(0.0362)	(0.0362)	(0.0227)	(0.0232)
Moins-5 children	0.00177	-0.00923	0.00443	-0.0123***	0.00488
	(0.00574)	(0.00633)	(0.00649)	(0.00435)	(0.00372)
Name-of-the-child-menage	0.00417	0.00425	0.0112**	-0.00567*	-0.000559
	(0.00440)	(0.00473)	(0.00478)	(0.00294)	(0.00279)
Observations	**4,055**	**4,055**	**4,055**	**4,055**	**3,737**

Source: Author, calculated from EDS Cameroun 2018 data, standard errors are between parentheses; ***p<0.01, **p<0.05, *p<0.1

The assessment of the participation of women in the labor market (equation **1)** presented in the first column of **table** 3 allows us to note that the intensity of the VIP is significantly positive, which translates into a strong association with women's participation. The augmentation of a VIP intensity supplementary unit increased the probability of participating in the work market for the last 12 months by 98% and 0.110% and 4% respectively of being paid (in kind or in nature) and worked for a member of the family.

A high level of education gives women the opportunity to find employment in a company and to be employed (in nature or in general). The employment status of the married couple, the residence in an urban area is associated with a possibility of participation in the labour market of educated women, while the fact that she is Muslim, the number of children is negatively associated with participation in the labour market of women's work. Consequently, a married family seems to be a factor in encouraging women to take part in life.

Table 3 Participation in the women's work market due to the intensity of conjugal violence by the intimate partner.

			The type of employee		
VARIABLES	**The woman worked for 12 months**	**Remunerated work (in nature or in kind)**	**Independent**	**Any business**	**Employé chez member of the family**
VIP indexes normalized	0.981***	1,098***	0.344	0.0777	0.389**
	(0.297)	(0.322)	(0.306)	(0.166)	(0.168)
Femme-edu **(ref=non-school-age)**					
Female primary school student	0.0934***	0.107***	0.171***	0.00977	-0.0622***
	(0.0230)	(0.0254)	(0.0243)	(0.0191)	(0.0137)
Femme-edu- secondary	0.0515*	0.0786***	0.0982***	0.0552***	-0.0627***
	(0.0267)	(0.0298)	(0.0287)	(0.0199)	(0.0167)
Female-Educated-Superior	0.0598	0.117**	-0.0541	0.119***	-
	(0.0415)	(0.0485)	(0.0471)	(0.0241)	
Age-femme	0.0313***	0.0458***	0.0404***	0.00473	-0.00570
	(0.00628)	(0.00709)	(0.00686)	(0.00408)	(0.00417)
age2	-0.000327***	-0.000551***	-0.000464***	-5.07e-05	5.77e-05
	(9.64e-05)	(0.000108)	(0.000104)	(6.07e-05)	(6.41e-05)
Religion (ref=autres)					
Christian	0.0139	0.0290	-0.00650	0.0305	0.00425
	(0.0394)	(0.0416)	(0.0400)	(0.0269)	(0.0212)
Muslim	-0.107**	-0.0482	-0.0638	-0.0229	-0.0461*
	(0.0421)	(0.0454)	(0.0436)	(0.0299)	(0.0238)
Maritime education (ref=non-scholarship)					
Man-in-couple - primary	0.0755***	0.0558**	0.0693***	-0.00775	0.00219
	(0.0226)	(0.0248)	(0.0237)	(0.0159)	(0.0129)
Man-in-couple - second	0.0739***	0.0770***	0.0573**	-0.000940	0.0128
	(0.0240)	(0.0264)	(0.0252)	(0.0158)	(0.0150)
Man-in-couple - superior	0.0447	0.0529	-0.0240	0.0278	-0.0168
	(0.0350)	(0.0396)	(0.0379)	(0.0212)	(0.0269)
mari-travail	0.212***	0.171***	0.135***	0.0512*	-
	(0.0400)	(0.0483)	(0.0468)	(0.0296)	
Sex of the chef	0.0655***	0.0532**	0.0561**	0.0160	-0.0143
	(0.0206)	(0.0230)	(0.0222)	(0.0113)	(0.0152)
Place of residence (Ref=urban)	0.0572***	0.00946	0.0825***	-0.0214*	0.00388
	(0.0191)	(0.0217)	(0.0208)	(0.0125)	(0.0137)
quintile of the wealth of the menagerie (Ref=plus poor)					
Poor	-0.0954***	-0.0342	0.0321	-0.00384	-0.0634***
	(0.0245)	(0.0262)	(0.0253)	(0.0198)	(0.0123)

Middle	-0.185***	-0.0697**	0.0110	0.00144	-0.132***
	(0.0257)	(0.0282)	(0.0272)	(0.0198)	(0.0158)
Rich	-0.177***	-0.0519	-0.00421	0.0371*	-0.165***
	(0.0302)	(0.0334)	(0.0321)	(0.0213)	(0.0214)
Very rich	-0.166***	-0.0299	-0.0610*	0.0574**	-0.123***
	(0.0346)	(0.0387)	(0.0369)	(0.0229)	(0.0238)
Moins-5 children	-0.000947	-0.0128*	0.00342	-0.0124***	0.00337
	(0.00609)	(0.00677)	(0.00661)	(0.00437)	(0.00386)
Name-of-the-child-menage	0.00315	0.00336	0.0109**	-0.00572*	-0.000739
	(0.00460)	(0.00499)	(0.00481)	(0.00294)	(0.00284)
Observations	4,055	4,055	4,055	4,055	3,737
Log likelihood	-146.33144	-573.27879	-606.18583	945.19497	726.42726
Test > chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Wald test of exogeneity : *Prob > chi2*	0.0031	0.0010	0.3415	0.7636	0.0336

Source: Author, calculated from EDS Cameroun 2018 data, standard errors are between parentheses; ***p<0.01, **p<0.05, *p<0.1

3 .3. The results of the assessment of the structural model of participation in the women's work market

We use theoretical and empirical literature on intergenerational transmission and the experience of violence as our choice of variable instrumentals. According to our analysis, the two instruments chosen are the mother who was a victim of violence and the name of a previously contracted woman who can mark an experience relatively similar to the violence already known.

Observing the second column of **Table 4,** we can see that women have an average level of education and that a number of educated children participate in the work market, apart from the violence conjugated by the intimate partner. The violence associated with intimate partner has a reducing effect on Muslim participation. The level of education, the residential environment and the employment status of the sea are not associated with the VIP.

For men, average education and employment, living in an urban area increases women's chances of participating in the work market despite the violence suffered by their intimate partners. Therefore, for Muslims, the economic situation of the family reduces the chances of women participating in the work market.

To verify the validity of our instruments, we estimate equation 3 of our study **.** We can therefore note that these two instruments are significant and positively linked to the participation of women in the labour market (Annex 1). As we can expect, if the mother of the woman has been the victim of intimate partner-related violence, she is even more vulnerable to becoming a victim and a woman who has already been the victim of violence in her or his previous relations with strong chances of gaining ground in the new Union.

Our results match the test standards. For a weak identification, we report the F-stat which is beautiful and good above the empirical level of 10 (F=51.02). These results are consistent with the "intergenerational cycle of domestic violence" as in the study by Lee et al., (2020), which states that when the Fest statistics were collected, our results are valid. The F statistics of the first stage should have dropped to 51, even in our case it is well over 83, 42. In addition, the procedure of Montiel and Pfluger (2013) which tests the weak instruments in the presence of 'heteroscedastism to be observed in our case that the F de Wald test is 19.93 with a margin of 10% and the critical value of the double estimates is 8.68. The results require a reduction in the weakness of the instruments. The Durbin and Wu-Hausman test is significant and its high level of criticism suggests the exogenity of the instruments (Annex 2). The Sargan and Basmann tests with a value Chi2 (1) =0.42 below P=0.51 show that our model provides the information necessary for estimation (Annex 3).

The results of the structural form reported on the first column of Table 4 continue to show a significant and positive association between VIPs and the participation of women in the work market. A VIP access increases the likelihood of participation in the women's work market from 313‰. The coefficient estimated from the structural form is more important. Changing the instrument can influence the performance of couples over time. The results of the other variables in our model remain unchanged as in the previous estimate.

Table4: Marginal effects of VIPs depending on work taking into account instruments

	(1)	(2)	(3)
VARIABLES	Work	**VIP indexes normalized**	/
Female primary school student	0.299***	0.0199**	
	(0.0802)	(0.00777)	
Femme-edu- secondary	0.165*	0.0254***	
	(0.0885)	(0.00905)	
Female-Educated-Superior	0.191	-0.00775	
	(0.132)	(0.0152)	
Age-femme	0.100***	-2.43e-05	
	(0.0212)	(0.00223)	
age2	-0.00104***	4.48e-06	
	(0.000316)	(3.35e-05)	
Christian	0.0443	0.00983	
	(0.126)	(0.0131)	
Muslim	-0.341**	-0.0361***	
	(0.142)	(0.0137)	
Man-in-couple - primary	0.233***	0.00910	

	(0.0722)	(0.00750)	
Man-in-couple - second	0.228***	-0.00403	
	(0.0736)	(0.00811)	
Man-in-couple - superior	0.134	-0.0121	
	(0.106)	(0.0122)	
mari-travail	0.676***	0.0191	
	(0.141)	(0.0150)	
Sex of the chef	0.209***	-0.0224***	
	(0.0633)	(0.00680)	
Place	0.183***	0.00238	
	(0.0628)	(0.00675)	
Poor	-0.305***	0.0117	
	(0.0777)	(0.00807)	
Middle	-0.592***	0.00421	
	(0.0885)	(0.00879)	
Rich	-0.567***	-0.00200	
	(0.104)	(0.0104)	
Very -rich	-0.531***	-0.0195	
	(0.120)	(0.0119)	
Moins-5 children	-0.00303	0.00352*	
	(0.0194)	(0.00210)	
Name-of-the-child-menage	0.0101	0.00138	
	(0.0148)	(0.00155)	
Nombre-union		0.0324***	
		(0.00747)	
Intergenerational violence		0.0523***	
		(0.00584)	
VIP indexes normalized	3,137***		
	(0.770)		
athrho2_1			-0.429***
			(0.145)
lnsigma2			-1.890***
			(0.0111)
Constant	-2.327***	0.0191	
	(0.369)	(0.0389)	
Observations	4,055	4,055	4,055

Source: Author, calculated from EDS Cameroun 2018 data, standard errors are between parentheses; ***p<0.01, **p<0.05, *p<0.1

3.4 Validity of the instruments

The validity of our instruments will be compromised by the different robustness controls, whereas our two instruments have undergone good statistical tests. Thus, the results of the effective ivprobit present the coefficients of the two instruments and are considered as precise estimates of the causal effect (Angrist & Pischke, 2014 in Chapter 3).

It is also advisable to see if our instruments do not satisfy the restriction of exclusion

(E $(Z_i, \varepsilon_i) \neq 0$), it is clear that there are, by definition, sources who are exposed to violence and who have indirect effects on participation in the work market of women and, in addition, certain factors that we consider in the model and which are measured by gender-related standards do not take into account these concepts which can lead to residual effects of confusion. In addition, the impact of instruments on the education and health of women and their partners and the various devices can violate the criteria of exclusion.

With our two instruments and assuming that the correlation between the endogenous variable, VIP and the instruments and the error term is positive (in our case), it is possible to have a bilateral basis on the number of participation types (Annex 2).

We can finally verify the hypothesis of monotony because we observe that the two instruments and the endogenous variable currently used are significant with a P-value below 5%. The hypothesis of monotony is also valid in the global equation (Goldman and Kaplan, 2018)

3.5 Robustness checks

We fit into this section of the robustness checks process to ensure that our results are well defined with our choice of variable interest in terms of violence and in particular the method of application.

We have reduced the composite effect of the VIP to avoid our coefficient being biased and/or underestimated. This also gives us statistically significant use of each type of violence and assesses the level of violence (Table 5). We rely on the works of Angelucci &Health (2020) and Erten and Keskin (2021) which present the scores, but those of Bhattacharya (2015) have clearly considered the binary form of violence. According to our analysis, around 88% of women participating in the work market have a VIP experience. This can be translated as the fact that, even in a non-legal relationship, it has already exposed him to the opportunity to work and, consequently, to violence against him as a result of his employment or the decision to report on the choice of participation. Physical violence is the most widespread form with almost 56% of working women already declared to have experienced this form of violence. Emotionally, this does not stop there, as women say they have subdued this other form representing around 48% and 10% for sex. The same trend is observed for women who are already declared to have paid employment. Very few women in a relationship working for a company are the victims of VIPs who work for a family member.

According to the theoretical explanations of the VIP, there is a positive relationship between the VIP and participation in the women's work market. Women should seek employment to

minimize their exposure to violent partners in a way that can increase their bargaining power (Chin, 2012; Dugan et al, 1999). This type of employment also offers an opportunity for physical distancing. This reassures us with results that clearly show that it is in the employment of a family member who women are more aware of physical violence.

Table 5: Different types of violence of intimate partners function of participation in labor work

	The woman worked for 12 months		Remunerated work (in nature or in kind)		The independent woman		Woman – work – company		Women's work – for a member of the family	
	Yes	Non	Yes	Non	Yes	Non	Yes	Non	Yes	Non
- Violence Physical										
Average	.3755	.5574	.3491	.5627	.3821	.5565	.4746	.5042	.4641	.6167
Ecart type	1,089	1,293	.9919	1,313	1,058	1,300	1,199	1,204	1,185	1,332
Intensity- sexual violence										
Average	.1087	.1001	.0935	.1040	.1002	.0995	.0995	.1031	.0997	.1008
Ecart type	.4346	.4114	.3938	.4229	.4103	.4126	.4144	.3801	.4093	.4349
Intensity- emotional violence										
Average	.3396	.4824	.3565	.4640	.3490	.4809	.4249	.3782	.4045	.5965

Ecart type	.8217	.9419	.8353	.9248	.8210	.9423	.8988	.8095	.8739	1,047
VIP indexes normalized										
Average	.0633	.087	.0614	.0869	.0639	.0874	.0768	.0758	.0744	.1010
Ecart type	.1480	.166	.137	.167	.1426	.1672	.1578	.1471	.1547	.1769

Source: Author, calculated from EDS Cameroun 2018 data

3.6. Potential mechanisms

Here we will test the direct correlation between the intensity of violence and the different forms of participation in the work market.

We carry out additional verifications to assess the choice of the VIP variable with the ivprobit model. We obtain results similar to those when we desensitized ourselves to different forms of violence. We have already recorded the violence the last 12 months of the investigation. The correlation is significant and Wald's test allows us to conclude the true value and that the P-value is 0.003 which is lower than 5% which is the lowest significance.

Table 6 : VIP and work for 12 months prior to the survey

	Coefficient	**P>|z|**
Corr. (e.IPV_in~m)		
(e.worked)	-0.4045517	0.003
Sd (e.IPV_inde~m)	0 .1510919	0.003
Wald test of exogeneity (corr = 0): chi2(1) = 8.76		Prob > chi2 = 0.0031

Source: Author, calculated from EDS Cameroun 2018 data

Given the VIP theory, we can explain the results obtained through certain mechanisms. Firstly, the positive relationship between VIPs and participation in the work market can be justified by the desire of women to seek work in order to reduce their exposure to violent partners in the measure of being regulated at home and near their mothers can increase violence and embarrassment, like in our case (Chin, 2012). To better understand our analysis, we observe the information about the type of employment of the woman.

Table 7: VIP and employed by a family member

	Coefficient	**P>|z|**

Corr. (e.IPV_in~m)		
(e. family_member)	-0.3518737	0.034
Sd (e.IPV_inde~m)	0.1533405	0.000
Wald test of exogeneity (Corr = 0): chi2(1) = 4.52		Prob > chi2 = 0.0336

Source: Author, calculated from EDS Cameroun 2018 data

We have effectively found that working with a family member here does not reduce distancing or regular contact with his wife, which is qu'carried out in this type of employment, will not be advantageous for absorbing the consequences of partner violence intimate. This means that VIP intensity maintains women in family-related activities at around 40%.

Another mechanism to be tested here is the possibility of a man using violence to extract rent and control his partner's income. In this option, men can encourage women to take part in rewarding activities, but maintain their control or move away from encouragement for family work and not rewarding in terms of simply better control. This mechanism has already been justified in the study relatively at the statistical level of the negotiating power of women in family income management. Therefore, the prior assessment between marriage control, women's income and conjugal violence would be significant and would be positively correlated. But it has also been noted that, in view of the fact that women contribute relatively to family resources through their income from work, improving their ability to trade in goods management, this is how women can be fight to seek this independence which sometimes remains missing because of the power to domination of men.

4. Discussions

Violence against women is an indisputable reality these days; we see some women around the world being declared VIP victims throughout their lives. Several factors have amplifying effects on these violences when they occur during periods of war or social trouble (Clark et al, 2010 and Guruge et al, 2017); the epidemics (OMS, 2020) ; economic, social power (Bhattacharga, 2015 ; Fajardo et Gonzalez et Anderberg et al, 2021) ; natural disasters (Harville et al, 2011 and Rao, 2020) and in terms of hygiene and environmental health (Sardinha, 2022; Wado et al and Clarc et al, 2021). This which highlights the importance of the study of violence on economic, social and health results requires greater attention.

In our article, we add to the scarcity of literature on the VIP effect on the participation of women in the labour market with the use of EDS-III data for Cameroon. Our major contribution to this work is based on the analysis of men's performance in relation to the choice of participation in

the work market and on the type of employment received by women, all while taking into account the problem of endogenous in order to have credible estimates of the relationship between VIPs and participation in the women's work market.

Our observation reflects solid analyses on the link between VIPs and women's participation in the work market, which is significant and positive. We can say that the positive relationship is observed on the different forms of violence committed, in particular on the "participation in the course of the last 12 months before the survey" and on the women who have declared themselves to be working and receiving compensation in particular and in nature.

The examination of potential mechanisms which can justify the effect of the VIP's incidence on participation finds its focus on certain aspects such as:

- In a nutshell, the time spent with her mother can present an exposure to violence, while the search for work outside the home can reduce the time spent with her mother, consequently also reducing the level of violence.

Furthermore, economic independence from employment income could reduce the risk of conjugal violence by predicting family bargaining theories. And these two are not mutually exclusive. This confirms our hypotheses. However, we also note that the VIP accepts the likelihood of being a family worker (as a housekeeper or as a family member). This result is consistent with that of Jansen (2004).

- Secondly, we examine the actions of men who abuse women in order to extract or control their work resources relative to their own preferences. Thus, the use of violence as a collective bargaining tool is intended to contraindicate between unpaid work in a family business (unpaid work or domestic work) or freelance work in a business or underpaid work (paid work in nature or in nature) where a justification for the extraction of pensions due to the vulnerability of women by reporting to their intimate partner.

Examining our results provides a complete account of the VIP effect on women's employment, but it leaves some observations. We may note that the data used can have limits, in terms of measurement or use of cells in the panel, which ostensibly allows us to follow this effect quickly and better understand the causal links. In addition, the lack of information on men's and women's income does not facilitate a proper understanding of women's negotiating power in the home.

Finally, the results presented reflect important information in a way that VIPs do not affect women's employment. Several motivations justify men's recourse to violence and the mechanisms involved can act either individually or simultaneously. One preventable condition is the reduction in time combined with violent confluence which can doubly reduce violence and give rise to financial autonomy. The complex relationship between VIPs and participation in the women's work market is related to the fact of contextual, institutional and socio-political diversity in the measure where it can nuance the fact of the state of social and gender norms (considerations of the inferiority of women in relation to men), gender ratios (male sex preferences), and divorce laws (Amaral et Bhalothra, 2017 and Anderberg et al, 2021).

It is therefore established that economic studies on development show that the situation is a consequence of voluntary policy intervention which can implement the mechanisms aimed at supporting women through unconditional monetary transfers, the provision of social benefits (Hsu, 2017), family planning (Mc Carthy, 2019) and the relative autonomy of women in terms of representation through decision-making or representation (Lnu et al, 2022). Reducing the risk of violence against women and their greater participation in the labour market must be achieved through an approach of individual, family and collective action with political will in judicial and institutional development.

Conclusion

This article was created with the aim of assessing the incidence of intimate partner violence (IPV) on women's participation in the labour market using data from the last 2018 Cameroon Demographic and Health Survey. Descriptive statistics and the method of instrumental variables have been used to achieve these objectives. The following lines summarize the main results obtained.

In return, women participating in the labor market are exposed to VIP salaries of 313.7 ‰, 110‰ of the women's salary of a paid job in kind or in nature and 40% of the work for a family member which confirms the family negotiation model. The physical violence of intimate partners is now the highest in the world: 56% for women declared to be involved in the work market and thus a paid job and 61.67% for women engaged in activities with a family member.

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In addition, our study program provides VIPs with a high level of education that increases their likelihood of finding a job in a company and being employed (in nature or in general). The

employment status of the married couple, the residence in an urban area is associated with a possibility of participation in the labour market of educated women, while the fact that she is Muslim, the number of children is negatively associated with participation in the labour market of women's work.

This article is one of the first to assess the impact of VIPs on women's participation in the work market by monitoring potential endogenous status using data from demographic surveys in Cameroon. However, our results do not exclude inverse causality. The use of our two instruments demonstrates a male reaction effect and provides a better relationship between economic independence and the VIP.

The results of this study call for effective and targeted interventions to reduce VIPs by strengthening anti-CIA laws. Put in place and encourage policies and initiatives aimed at encouraging the employment of women which not only favour the improvement of sexual equality, but protect women by respecting human rights for the benefit of families.

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ANNEXES:

<u>Annexes1</u>: Significance of the instruments

```
Number of obs = 4,690
                                                F(2, 4687) = 83.43
Prob > F = 0.0000
R-squared = 0.0344
Adj R-squared = 0.0340
Root MSE = 0.1573
```

IPV_index_Norm	Coefficient	Std. err.	t	P>|t|	[95% conf.	intervals]
nber_unions	.0351971	.0071328	4.93	0.000	.0212134	.0491807
intergene_viol	.0636787	.0055116	11.55	0.000	.0528733	.0744841
_cons	.0599529	.0027153	22.08	0.000	.0546296	.0652762

```
Instrumental variables 2SLS regression Number of obs = 4,690
Forest chi2(1) = 30.52
Prob > chi2 = 0.0000
R-squared = .
Root MSE = .52032
```

worked	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
IPV_index_Norm	1.415202	.2561544	5.52	0.000	.9131489	1.917256
_cons	.5085958	.0214833	23.67	0.000	.4664894	.5507022

```
Instrumented: IPV_index_Norm
Instruments: nber_unions intergene_viol


. estat firststage // We see that F-stat>10 (=>51.0248) with implies th
> at the instruments are not weak because of the rule-of-thumb threshold of 10

First-stage regression summary statistics
```

	Adjusted	Partial		
variables	R-sq.	R-sq.	R-sq.	F(2,4687) Prob > F
IPV_index_~m	0.0344	0.0340	0.0344	83.4253 0.0000

```
Minimum eigenvalue statistic = 83.4253


Critical Values # of endogenous regressors: 1
H0: Instruments are weak # of excluded instruments: 2
```

5%	10%	20%	30%
2SLS relative bias	(not available)		

10%	15%	20%	25%
2SLS size of nominal 5% forest test	19.93	11.59	8.75	7.25
LIML size of nominal 5% Forest test	8.68	5.33	4.42	3.92

Annex 2 : Instrument endogenous testing

```
. est endogenous // We see that the instrument is not exogenous (see the test of
Wald of IV probit)

Tests of endogeneity
H0: Variables are exogenous

Durbin (score) chi2 (1) = 25.8698 (p = 0.0000)
Wu-Hausman F (1, 4687) = 25.9966 (p = 0.0000)
```

Annex 3 : Suridentification test

Tests of overidentifying restrictions:

Sargan (score) chi2 (1) = .421931 (p = 0.5160)

Basman chi2 (1) = .421699 (p = 0.5161)