

Profiling the Transitional Poor in Senegal: Determinants of Transition

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Summary: The purpose of the study is to analyze the determining factors of the transitory poor, namely the characteristics of those who fall into poverty and the characteristics of those who emerge from poverty. To carry out this work, we determined the states of poverty during the transition 2005-2011 and 2011-2018 using the pseudo-panel methodology inspired by the work of Dang and Lanjouw (2013) using national survey data (ESPSI ,II, EHCVM). Then, we sought to detect the determining factors using a multinomial model.

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It appears in the results that 12% of poor households in 2011 remained in poverty in 2018 and that 31% of poor households emerged from poverty during the period considered. After estimating multinomial logit models, the analysis is oriented according to gender, level of education and area of residence which are determining factors of transitional poverty.

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1. Introduction

Analyzing variations in the poverty status of households or individuals in particular provides insight into the factors that characterize individuals who have just fallen into poverty or those who have just emerged from it. Trends of movement or exit from poverty constitute a strong signal for policies that put poverty reduction at the heart of all economic and social development policies. The importance given to poverty issues as well as the analysis of dynamics is motivated by conceptual and methodological advances (Guarrero, 2014). This state of affairs makes it possible to further strengthen studies in the field by offering a wide range of knowledge on transition dynamics. All the more so since the factors which determine movements tend to change from one period to another or from one socio-economic context to another. In this same rhythm of evolution of the configuration, we can note the evolution of the conceptualization of the poor which allows us to have an understanding of individuals who can be classified poor or non-poor (Moore, 2005; Clément, 2014). These approaches aim to place the notion in a broader historical perspective but also to align the term with new realities.

Poverty constitutes a problem of general interest which interests development practitioners and all social strata of the population. There are therefore several approaches that help to understand the concept of poverty as a whole at the level of society and over time. However, it is a difficult notion to define because it constitutes a reality with multiple causes and consequences which change from one social group to another or from one era to another (Gorge et al. 2017). Concomitant approaches to the notion of poverty understand it by relying on income, consumption and multidimensional indicators which have a direct and indirect effect on the living

environment of the individual and the household (Michel et al 2012; Poverty in general highlights the inability of individuals to satisfy their basic needs (food, housing, etc.) and non-basic needs (access to education, health, leisure, etc.).

As part of our study, it is a question of understanding the characteristics of those who enter poverty and those who leave poverty because the entry and exit transition is of capital importance for the orientation of economic policies. Thus, mastering these movements makes it possible to provide additional resources or one-off support which are necessary to move the poor towards a situation of non-poverty (Mededji, 2007).

Between 2011 and 2019, according to the Harmonized Survey on household living conditions, the number of poor people estimated at 200,048 decreased considerably with a relative rate estimated at 3.4%. However, apart from Dakar where the number of poor people decreased by an estimated percentage of 139,330, the proportion of poor people increased in other urban and rural areas with figures of 327,620 and 11,758 respectively. Consequently, based on the figures from the latest household survey, we can deduce that 5% have moved out of poverty because the poverty rate fell from 42.8% in 2011 to 37.8% in 2018/2019.

Thus, in this paper we will seek to detect the elements of tipping into poverty and the characteristics which favor the exit of the poor towards a situation of non-poverty. We then seek to answer the question of what are the profiles of households that escape poverty and what are the profiles of households that fall into poverty? Or what are the determining factors of transition movements in both directions (entry or exit)?

The search for answers to these questions leads us to highlight these series of studies and approaches listed in the literature. And finally

we will present the methodology used to do this work as well as the results that result from these different methods.

2. Selective literature review

The phenomenon of poverty is essentially dynamic since it oscillates over time, and is linked to movements of entry into and transition out of poverty. Key elements and concepts were examined in the literature to identify the determinants of transient poverty

2.1 Theoretical framing of studies on transitional poverty

It is unanimous in the analyzes that income is certainly a strong predisposing condition for the analysis of poverty but remains insufficient to constitute on its own the adequate and relevant framework for identifying the poor. Amartya Sen (1979b) lends itself to the analysis of poverty as the deprivation of capabilities that harms the endowments in terms of human capital and social capital that the individual may have during his or her life cycle. Thus, this approach highlights the flexibility of the notion of well-being which cannot be limited to an orientation solely in terms of economic wealth, it also integrates the capacities of each individual. These approaches are very interesting but difficulties should be noted concerning the list of operations which is very heterogeneous. To overcome these difficulties, authors such as Robeyns and Alkire (2008) have proposed solutions which make it possible to understand a set of factors representative of poverty and non-poverty. And these authors integrate into their factor identification solutions any method making it possible to verify the gap between the indicators and the standard of living measured by well-being.

According to Yves Edouard (2018), the transition to poverty initially results in a drop in income, which corresponds to the liminal transition phase described by the theory. In this analysis, the monetary aspect is privileged. This situation encourages individuals to review their consumption habits based on their altered socio-economic category. Before adapting to this new reality of financial restriction, the individual finds himself in a marginal phase (liminality) where hierarchies and benchmarks must be modified, as Van Gennep (1909 cited by Segalen Martine, 2017) pointed out.). In this context, new trade-offs must be made in order to preserve and maintain one's self-image in relation to society.

After this period of restrictions, the individual will be in a phase of social reintegration of the new class they are joining, this is accompanied by a reassessment of their endowments (food and non-food needs) in line with their new social group. . Thus, these analyzes highlight three phases of rite of passage situation before, during and after the shift towards a drop in income. An analysis in the opposite direction can also be carried out, that is to say in the case where the individual experiences an increase in financial resources.

Initially, when the individual experiences a drop in income, he is forced to modify his habits in relation to his former social status, in order to adapt to his new situation. This reintegration is done by adjusting one's standard of living and behavior to their new status. According to Yves Edouard (2018), factors commonly associated with the fall in social class are technical unemployment, divorce or the death of a spouse, which can lead to a rapid decrease in income. Furthermore, loss of income can cause stress for the individual, as pointed out by Lazarus (1966 cited by Poirel et al, 2011). These

theories will subsequently be further explored in the literature, notably through empirical studies aimed at verifying their validity.

2.2 Empirical analysis of the determining factors of transitions

Poverty can manifest itself in multiple ways: through low or no income, through precarious housing, through poor health, through insufficient education, undernourishment or a degraded environment. These factors evolve from one region to another or from one set of individuals or communities to another (Ravaillon et al. (1998a, 2000), Hodonou (2007), Thorat et al (2017), Dramani (2019)). It must be recognized that the analysis of the determinants of poverty in different states, namely chronic or transitory, also carries out an analysis on vulnerable households and captures the growing inequalities between standards of living.

Hodonou et al. (2007) on a panel of 15,922 households for two years, namely between 2006 and 2007, uses a stochastic process to analyze movements into and out of poverty. These results show the existence of a strong transition between states of poverty. And this situation relates to human and physical capital endowments, the situation on the labor market, the composition of the household and the area of residence. Along the same lines, Thorat et al (2017) analyze movements into and out of poverty in India using a sample of 41,554 households over the period 2005-2012. As a result, the majority of poor households in 2005 left the period in 2012, i.e. 65% of the poor population, and the frequency of the population having fallen into poverty over the period is estimated at 14% of the non-poor population. .

Mededji (2007) through a panel of 836 households seeks to analyze transitions in poverty and the determining factors of entry and exit from poverty in urban areas in Benin. It appears in the author's results that the main determining factors of entry into poverty relate to geographical location, the labor market status of household members other than the head of household, demographic factors (household size , number of adults in the household and ethnicity). While the decisive factors of exit states relate to the status of the head of household, the sector of activity, demographic variables such as the number of children in charge and the sex of the head of household.

In the context of Senegal, the numerous surveys carried out on the living conditions of households or on poverty have encouraged the advent of work on the extent of household poverty. The results of its various studies have made it possible to identify and understand the extent of household poverty. The results that emerge from this work reveal that this phenomenon affects a significant part of the population, namely all social strata.

Dramani (2012) through a study carried out in Senegal, uses a sample of 2048 biographers. Using a methodology based on non-monetary indicators of poverty, the author seeks to analyze the dynamics of poverty according to generations. The results of this work show that 20% of individuals remain chronically poor in their childhood, 13.6% in youth, 13.2% in adulthood and finally 15% in old age. We note a transition of +6.3% in terms of transitory poverty, while for chronic poverty, there is a decline of around 7%. In this same vein, Sène et al. (2014) carried out a study on multidimensional poverty in Senegal, based on data from the Senegal Poverty Monitoring Survey (ESPS, 2011). Their results obtained through a decomposition of poverty noted that poverty is very heterogeneous in the regions and that households living in rural

areas and whose heads are elderly display the highest levels of deprivation.

Previously, a gender analysis carried out by Badji and Boccanfuso (2006) with the objective of determining the trends in female poverty and these determinants, shows that the possession of certain durable goods could contribute to improving the conditions of existence of households in both urban and rural areas.

3. Methodology and analysis of results

We will first determine the states of transitional poverty using the method of the work of Dang and Lanjouw (2013): the non-poor having fallen into poverty (npp) and the poor who have become non-poor (pnp). Then detect the determining factors of these states of poverty using a multinomial model

3.1 Descriptive statistics

At the level of the database used to carry out our analyzes and estimates (ESPSI, ESPSII, EHCVM) we observe in the descriptive statistical table that households headed by a man are more numerous, i.e. triple the number of households headed by a woman. And most of these households belong to the working age group [36-60] and are monogamously married. There is no big difference in percentage terms between rural and urban households. The variables retained to carry out the study in addition to those presented in the table of descriptive statistics are the branch of activity, marital status, household size, expenditure on food consumption, expenditure on non-food consumption, access to water, access to electricity and housing status.

Table 1: Descriptive statistics

Wording	Terms	Frequency	
		2005-2011	2011-2018
Gender			
	Male	4397	5280
	Feminine	1427	1876
Medium			
	Urban	3003	3941
	Rural	2821	3215
Age group			
	[16-35]	782	979
	[36-60]	3516	4199
	[60 and over]	1526	1978
Household size			
	1-5	1513	1888
	6-10	2454	2978
	10 and over	1857	2290
Total		5824	7156

Source: transition base 2005-2011 and 2011-2018

3.2 Dynamics of poverty

Write The analysis method used is taken from the work of Dang and Lanjouw (2013) and Dang, Lanjouw, Luoto and McKenzie (2011). This method allows for a more disaggregated analysis at the household level. In our case we have three surveys (ESPSI, ESPSII, EHCVM). This involves aggregating its three surveys in order to find the dynamics of household poverty between 2005-2011 and 2011-2018. This will result in two series of aggregated surveys of household movements between these periods.

Consider group 1 with a sample of N1 households as the transition base from 2005-2011, and group 2 with a sample of N2 households the transition base from 2011-2018.

Consider a vector containing household characteristics from survey group 1 that are observed (for different households) in both survey series at the same time. x_{i1}

The linear projection of the income of group 1 noted on the characteristics is given by: $y_{i1}x_{i1}$

$$y_{i1} = \beta'_{i1}x_{i1} + \varepsilon_{i1}(1)$$

The linear projection of group 2 income denoted () on is given by: $y_{i2} x_{i2}$

$$y_{i2} = \beta'_1 x_{i2} + \varepsilon_{i2} \quad (2)$$

Let and represent respectively the poverty thresholds of period 1 (and period 2. The objective is to estimate the joint distribution of poverty and non-poverty in and . For example: $Z_1 Z_2 t_1(t_2) t_1 t_2$

$$P(y_{i1} < z_1 \text{ and } (3) y_{i2} > z_2$$

To the extent that the probability in equation (3) depends on the joint distribution of the two error terms, the estimation of the bounds becomes simpler:

$$\text{and } (4) P(\varepsilon_{i1} < z_1 - \beta'_1 x_{i1} \quad \varepsilon_{i2} > z_2 - \beta'_2 x_{i2}$$

The correlation between the two error terms captures the correlation of those parts of household income in the two periods that are explained by and household characteristics. $x_{i1} x_{i2}$

The estimation of relation (4) gives:

$$P(\varepsilon_{i1} < z_1 - \beta'_1 x_{i1} \text{ and } (5) \quad \varepsilon_{i2} > z_2 - \beta'_2 x_{i2}) = \Phi_2\left(\frac{z_1 - \beta'_1 x_{i1}}{\sigma_{\varepsilon 1}}, -\frac{z_2 - \beta'_2 x_{i2}}{\sigma_{\varepsilon 2}}, -\rho\right)$$

Hypothesis 1: requires that the population from which the sample comes is the same for the group 1 survey and the group 2 survey. For our case we have the Senegalese national household surveys.

Hypothesis 2: constrains the correlation between the error terms ε_{i1} and ε_{i2} to be non-negative

This relationship (5) makes it possible to determine the following indicators: the PP (pure poor or chronically poor), the NPP (the non-poor having fallen into poverty), the PNP (the poor who have become non-poor) and the NPNP (non-poor who remained non-poor). As part of this paper we analyze the results concerning NPP, PNP.

Table 2: Estimated states of poverty base transition 2011-2018

Mean estimation		Number of obs	=	7,156
		Replications	=	400
		Observed Mean	Bootstrap Std. Err.	Normal-based [95% Conf. Interval]
pp		.1204896	.0004957	.1195181 .1214611
pn		.3112793	.0005145	.3102709 .3122877
npp		.1780154	.000126	.1777685 .1782623
nnp		.3902158	.0010972	.3880653 .3923662

Source: author on stata, ESPSII database, EHCVM

It should be noted that 12% of poor households in 2011 remained in poverty in 2018, which is a decrease of almost double (17%) compared to the period 2005-2011. 31% of poor households emerged from poverty during the period considered. At the same rate as the transition period of 2005-2011, the non-poor who fell into poverty between 2011 and 2018 is estimated at 18%. It still appears in the results that 39% of non-poor households in 2011 remained in poverty in 2018. In this paper we are interested in the transient poor.

Following the determination of the state of poverty, we will make an estimate using the multinomial regression method, which will make it possible to identify the most determining factors for each state of poverty.

3.3 Determinant factor of states of poverty

This method makes it possible to identify the determining factors for each profile of poor people. Logit or logistic regression models and the probit model are used to model the interactions that exist between a discontinuous dependent variable y_i and a vector of random variables $X=(x_1, \dots, x_k)$. The mathematical expression looks like this:

Let Y be a binary variable (poor or non-poor), independent variable contributing to the explanation Y . The model is expressed as follows:

$$\Pr(Y=1|X) = \frac{1}{1 + e^{-z}}$$

Or

$$z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$\beta_0, \beta_1, \beta_2, \dots, \beta_k$ sont les coefficients estimés de données,

X_1 , are the independent variables $X_2 \dots \dots X_k$

e is the base of the natural logarithm, equivalent to 2.71828

$$Y=\begin{cases} 1 & \text{Classe 1 (25\% de l'échantillon)} \\ 2 & \text{Classe 2 (entre 25\% et 75\%)} \\ 3 & \text{Classe 3 (75\% au Max)} \end{cases}$$

The classes are determined for each state of poverty (poor non-poor, non-poor poor) as part of our study. They are obtained using deciles.
And where the latent variable is defined by:

$$y_i = \beta X_i$$

With representing the state of poverty (npp, pnp) y_i

$$Y_i = \beta_0 + \beta_1 \text{Gender} + \beta_2 \text{NE} + \beta_3 \text{Milieu} + \beta_4 \text{Branch_of_activity} + \beta_5 \text{Marital_Situation} + \beta_6 \text{Age_Group} + \beta_7 \text{Household_Size} + \beta_8 \text{Food_Dowry} + \beta_9 \text{Non_Food_Dowry} + \beta_{10} \text{Access_Services} + \beta_{11} \text{Housing_Status} + \epsilon_i \quad (2)$$

3.3.1 The non-poor poor (npp)

In this part the aim is to verify the determining factors of non-poor households which have fallen into poverty. This involves dividing this variable into three classes.

Class 1: Intermediate stage between poverty and non-poverty

Class 2: no poor poor

Class 3: not poor chronically poor

Dissemination of the endogenous variable: transition between 2011-2018

Variable	Obs	Mean	Std. Dev.	Min	Max
npp	7,156	.1780154	.0106203	.1545206	.1915205

npp

Percentiles		Smallest		
1%	.1573219	.1545206		
5%	.1596817	.1548194		
10%	.1613951	.1548194	Obs	7,156
25%	.1639489	.1551142	Sum of Wgt.	7,156
50%	.1822656		Mean	.1780154
		Largest	Std. Dev.	.0106203
75%	.1864536	.1914335		
90%	.1886771	.1914335	Variance	.0001128
95%	.1894849	.1915205	Skewness	-.7155562
99%	.1906299	.1915205	Kurtosis	1.951711

The model specification is as follows:

$$Y=\begin{cases} 0 & \text{si le score est inférieure à 0.164} \\ 1 & \text{si le score est compris entre 0.164 et 0.186} \\ 2 & \text{si le score est compris entre 0.186 et 0.192} \end{cases}$$

The result table below emerges from the estimation by the Stata software:

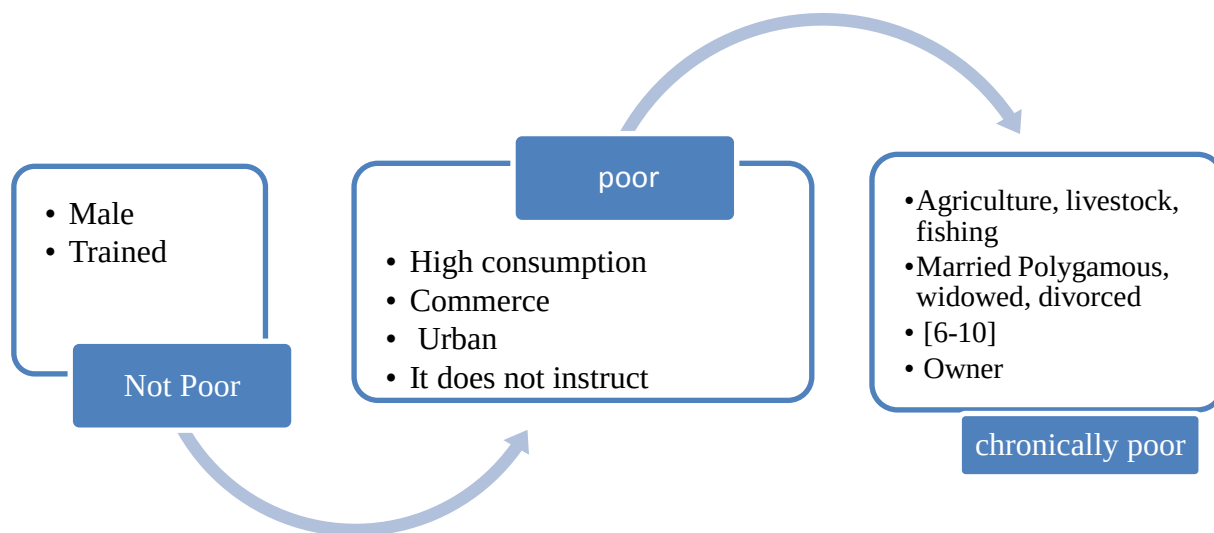
Table 3: Table of results of the determining factors of the non-poor -poor

VARIABLES	Not poor- poor	Not poor -chronically poor
Gender		
Male	-0.616*** (0.131)	-0.0511 (0.100)
Education		
Educated	-0.360*** (0.115)	-0.242*** (0.0904)
Middle Residence		
Rural	-0.225* (0.132)	-0.157 (0.103)
Industry		
Industry	0.230 (0.185)	-0.523*** (0.143)
Construction	-4,564*** (1,055)	-0.404** (0.161)
Trade	1.104*** (0.156)	-0.360*** (0.129)
Service	-0.186 (0.158)	-0.342*** (0.110)
Marital status		
Married Monogamous	-0.248 (0.223)	0.737** (0.318)
Married polygamously	1,345*** (0.241)	1,238*** (0.326)
Widower	5,767*** (0.635)	1,984*** (0.687)
Divorce	2,909*** (0.365)	0.956** (0.455)
Age group		
[36-60]	-0.00124 (0.121)	20.15 (792.8)
[60 and over]	17.62 (765.7)	39.31 (1,102)
Household Size		
[6-10]	-0.358*** (0.127)	0.224** (0.106)
[10 and more]	-1.321*** (0.167)	0.0602 (0.129)
Food allocation		
Average consumption	-0.0925 (0.132)	0.151 (0.105)

High consumption	-0.224 (0.158)	0.190 (0.124)
Non-food allocation Average consumption	0.209 (0.137)	-0.0519 (0.106)
High consumption	0.535*** (0.172)	-0.000552 (0.135)
Access Social Services No access	-0.201* (0.119)	-0.129 (0.0889)
Housing status Untitled owner	-0.572*** (0.147)	-0.151 (0.107)
Tenant	-0.931*** (0.148)	-0.693*** (0.123)
Others	-0.104 (0.163)	-0.410*** (0.136)
Constant	-0.216 (0.291)	-19.98 (792.8)

Source: ESPSII database, EHCVM

For the non-poor who became poor during the 2011-2018 transition, it appears in the results that it is linked to gender, education, branch of activity, marital status, household size and employment status. accommodation. We note for these variables that they are significant for both categories of non-poverty.

**Figure 1: Determinants of the non-poor-poor**

In the results, it appears that the propensity of non-poor women to fall into poverty is greater and that lack of education is a determining factor in falling into poverty. For both men and women, lack of education is a determining factor in falling into poverty. Concerning the area of residence, the negative sign associated with the rural area modality indicates that households in non-poor urban areas have a higher probability of falling into poverty.

It appears in the results that the variable related to sex is a determining factor of the non-poor having fallen into poverty. The negative sign indicates that the propensity of non-poor women to fall into poverty is greater. The fall of non-poor female-headed households into poverty is more frequent due to the numerous difficulties and constraints that weigh on their daily lives in different areas. And among these constraints we can cite, among others, the need to work part-time to compensate for the time they must devote to social charges (childcare and education,

cooking, cleaning, etc.) considered as unpaid work. In addition, the lack of education (school dropout), discrimination and even prejudice had limited the participation of women in economic and social life.

Concerning the education variable, we observe in the results that it is significant. The uneducated modality was chosen as the reference; it appears that a high propensity of non-poor households whose head is uneducated tends to fall into poverty. Lack of education increases the likelihood of non-poor individuals falling into poverty, especially among women who are already vulnerable due to their numerous failings. Nowadays, the global economy is a dynamic driven by technological innovations and globalization. In this case, training and capacity building provide skills necessary to be up to date in efficient operation. Moreover, it appears in World Bank forecasts that by 2030, several types of jobs will disappear due to the empowerment of tasks.

Concerning the variable area of residence, the results show that it is significant. We note in the results that the probability of a non-poor household falling into poverty is very high in rural areas than in urban areas. Women in rural areas face difficulties ranging from their ranks in terms of social status in this environment which makes them dependent on men (education of children, maintenance of goods and materials, etc.) to numerous obstacles (access to productive goods, access to land, skills training or time).

With regard to the branch of activity, the negative sign associated with the branches of industry, construction and service allows us to observe that households whose head who works in these sectors have higher probabilities of not appearing in households falling into poverty than those engaged in commerce. For marital status, non-poor heads of married polygamous, widowed or divorced households have a greater probability of falling into poverty than households whose head is monogamously married. Polygamy implies that the head of the household must face more burden while being widowed or divorced refers to the consequences of such type of shocks. For the variable relating to the age group, it is not significant and therefore does not constitute a determining factor in the fall into poverty. In this case a non-poor individual cannot fall into poverty due to age, this assumes that the social protection system with enough contributions to maintain the individual in a situation of non-poverty if we also take into account other determining and significant factors, namely the level of income, expenses, etc.

Regarding the size of the household, the positive sign affiliated with the modalities [6-10] shows the high probability of these households falling into poverty. Especially since the tipping factor is higher in urban areas where life is more expensive. And it should be noted that in low-income countries, an average inhabitant directs almost two thirds of their income to food expenses (WB, 2022). In this case, being the head of a household where the size is large will have consequences on the standard of living with higher costs, namely high consumption expenditure. And among the charges we can cite, among others, rental charges which are negatively correlated with non-poverty.

3.3.2 The poor-non-poor (pnp)

At this level it is a question of verifying the determining factors of poor households which have become non-poor. This involves dividing this variable into three classes.

Class 1:Intermediate stage between poverty and non-poverty

Class 2:poor not poor

Class 3:close to pure non-poverty

Dissemination of the endogenous transition variable 2011-2018

Variable	Obs	Mean	Std. Dev.	Min	Max
pnp	7,156	.3112793	.0429641	.1904969	.3918856
pnp					
Percentiles		Smallest			
1%	.2069621	.1904969			
5%	.2238683	.1921207			
10%	.2393727	.1921207		Obs	7,156
25%	.2901357	.1937499		Sum of Wgt.	7,156
50%	.3232348			Mean	.3112793
		Largest		Std. Dev.	.0429641
75%	.3418186	.3878955			
90%	.3552465	.3899131		Variance	.0018459
95%	.3628904	.390905		Skewness	-.8802848
99%	.3748733	.3918856		Kurtosis	2.81016

The model specification is as follows:

$$\begin{cases} 0 & \text{si le score est inférieur à 0.290} \\ 1 & \text{si le score est compris entre 0.290 et 0.341} \\ 2 & \text{si le score est compris entre 0.341 et 0.392} \end{cases}$$

From the estimation by the software, the result table below emerges:

Table 4: Table of results of the determining factors of the non-poor poor

VARIABLES	Poor not poor	Poor not pure poor
Gender		
Male	0.497*** (0.118)	0.433*** (0.164)
Education		
Educated	0.238** (0.106)	0.0163 (0.153)
Middle Residence		
Rural	0.163 (0.118)	0.0517 (0.167)
Industry		
Industry	-0.389** (0.166)	-0.949*** (0.246)
Construction	3,637*** (0.743)	3,004*** (0.776)
Trade	-1.167*** (0.137)	-1,463*** (0.195)
Service	0.0971 (0.143)	-0.147 (0.186)
Marital status		
Married Monogamous	0.733*** (0.201)	1,623*** (0.612)
Married Polygamist	-0.601*** (0.217)	0.444 (0.618)
Widower	-3.431*** (0.285)	-4,486*** (0.676)
Divorce	-2.334*** (0.299)	-1,576** (0.711)
Age group		
[36-60]	0.903*** (0.115)	18.60 (810.3)
[60 and over]	-1.112*** (0.307)	22.24 (810.3)
Household Size		
[6-10]	0.469*** (0.115)	0.420** (0.173)
[10 and more]	1,407*** (0.151)	1,125*** (0.212)

Food allocation		
Average consumption	0.107 (0.120)	0.228 (0.177)
High consumption	0.272* (0.144)	0.341* (0.206)
Non-food allocation		
Average consumption	-0.188 (0.124)	-0.0196 (0.180)
High consumption	-0.492*** (0.156)	-0.312 (0.223)
Access Social Services		
No access	0.0936 (0.108)	0.0493 (0.150)
Housing status		
Untitled owner	0.487*** (0.132)	0.370** (0.174)
Tenant	0.758*** (0.135)	0.211 (0.212)
Others	0.0703 (0.148)	-0.622*** (0.241)
Constant	-0.233 (0.264)	-20.31 (810.3)

Source: ESPSII database, EHCVM

For the poor who became non-poor during the 2011-2018 transition, it appears in the results that it is linked to gender, education, branch of activity, marital status, household size and housing status. We note for these variables that they are significant for the two categories of non-poverty.

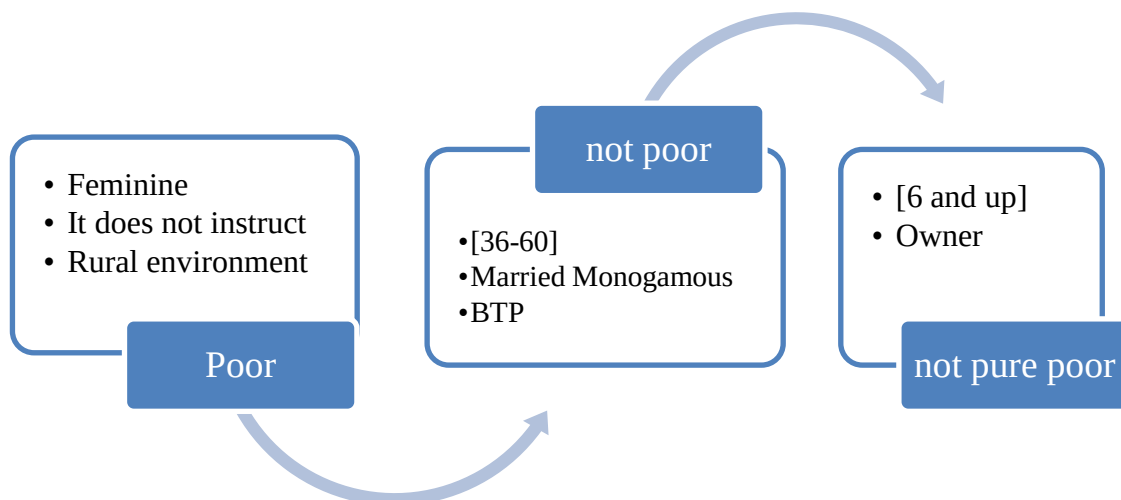


Figure 2: Determining factors of the non-poor poor

In the results, it appears that men are more likely to escape poverty than women and that education is a determining factor in exiting poverty. The results show that the variable related to sex is a determining factor in the dynamics of transition from poverty to non-poverty. The positive sign obtained for the male category indicates that men are more likely to escape poverty than women. The objective of fighting poverty is to move poor households towards non-poverty. This process is accompanied by the observation that households headed by a man are more likely to leave than households headed by a woman. This then assumes that women are faced with more obstacles to overcome in order to escape poverty than men (time allocated to work, social security contributions, type of employment, etc.). Added to this is also discrimination which means that women have less chance of accessing health care, or of being autonomous in the creation of businesses or of adequate education without the constraint of abandoning themselves for social reasons, especially when they are in a situation of poverty, which contributes to making their living conditions even more difficult.

It appears in the results that there is a strong propensity to find educated households at the level of poor households which have transitioned towards non-poverty. Education is a determining factor in escaping poverty. Education is the key to the development of individuals and households in general. For both men and women, it constitutes an essential factor in the eradication of poverty. It is unanimous in studies and analysis that getting an education provides the means to hope for a decent job which could ensure the satisfaction of basic and non-basic needs.

Concerning the variable relating to the environment of residence, it appears in the results that it is significant. The urban area modality is chosen as a reference and we note in the results that the probability of transitioning out of poverty is greater in rural areas than in urban areas.

It appears in the results that among the poor population those who work in agriculture, livestock breeding or fishing have a greater chance of emerging from poverty than those who work in all other sectors of activity. This constitutes an interesting result given the context of rural exodus of young people towards the capital in search of work while the rural environment offers significant opportunities to improve the living conditions of households. It is unanimously recognized that the agricultural world can be a source of opportunity to escape poverty if convincing investments are made.

Regarding the sector of activity, the positive sign associated with the construction modality indicates that heads of household who work in this branch of activity have a greater chance of emerging from poverty than those who work in industry and commerce. It must be recognized that the construction sector is a sector which occupies a preponderant place in the Senegalese economy due to its significant contribution to GDP and the plethora of players operating in the field (ANSD, 2022). This is an expanding sector which offers more opportunities and constitutes one of the best job providers with the advantage of benefiting from significant efforts on the part of the State. The development of this sector offers opportunities to those operating in this sector and could enable them to escape poverty for individuals affected by this scourge.

Regarding marital status, the positive sign associated with the monogamous married person allows us to note that the latter have a strong propensity to escape poverty compared to the polygamous married person, the widower and the divorced person. It should be noted that the structure of the family has a very important role to play on the latter's general standard of living. If we take polygamy for example, it previously constituted a useful social fact given the opportunities in terms of family labor for agricultural work. Nowadays, with the development of technologies and the shocks that shake economies as well as the rise in the standard of living, it can further complicate the satisfaction of basic and non-basic needs due to costs which increase with the size of the household.

For the age group, we observe in the results that the age group [36-60] is a determining factor and the positive sign indicates the high probability of households belonging to this age group of escaping poverty then that the negative sign associated with the age group [60 and over] shows the probability of this age group of escaping poverty is low. The age group of active people constitutes the social class where the individual is either working or looking for work; consequently, productive and decent work is a source of income with a view to satisfying primary and secondary needs. . It is one of the main ways out of poverty. While for the age group of the inactive, namely the class [60 and over] whose only sources of income are family solidarity, namely transfers or retirement pensions for those who had to be in the formal system. The low level of this income can constitute a barrier to exit for individuals in this age group in a situation of poverty. The importance of transfers can in certain cases be an asset for the household in order to be able to meet basic and non-elementary expenses, especially since depending on the socio-cultural context, the head of the household is the one who receives all the transfers and who aggregates them and makes decisions regarding the needs of the household. Which corroborates with the results of our estimations where a positive sign appears affiliated to the modalities [6-10] and [10 and more].

4. Conclusion

The general objective of this paper was to identify the determining factors of households which fell into poverty and households which were able to escape poverty during the transition periods 2011-2018. The analysis is carried out in two phases of two periods: a first which concerns the non-poor who have fallen into poverty and a second which concerns the poor who have left poverty. As a method of analysis, we used the pseudo-panel methodology inspired by the work of Dang and Lanjouw (2013) using national survey data (ESPSI, II, EHCVM) to determine poverty states, then we sought to detect the determining factors through a multinomial model.

After estimating multinomial logit models, the analysis is oriented according to gender, level of education and area of residence which are determining factors of transitional poverty. For both men and women, lack of education is a determining factor in falling into poverty. Concerning the area of residence, the negative sign associated with the rural area modality indicates that households in non-poor urban areas have a higher probability of falling into poverty. While women in urban areas working in the construction and services sector have a higher probability of escaping poverty.

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