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International Migration and Vulnerability in the Ivorian Labor Market*

Koko Siaka Koné

Institut Pédagogique National de l'Enseignement Technique et Professionnel (IPNETP), Abidjan, Côte d'Ivoire
Email: kokosiaka@yahoo.fr

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Abstract

This study examines the relationship between international migration and vulnerability in the labor market in Côte d'Ivoire, using data from the Harmonized Household Living Conditions Survey (HHLCS) of 2021. A Labor Market Vulnerability Index (*LMVI*), constructed from five dimensions (economic, social, institutional, gender and territorial), is derived through a Principal Component Analysis. The results show that migrants' vulnerability stems more from a lack of formalization and social protection than from low incomes, with institutional (0.228) and social (0.222) dimensions accounting for nearly 45% of the variance. The Oaxaca-Blinder decomposition shows an almost zero *LMVI* gap (−0.003) between migrants and non-migrants, indicating that differences in individual characteristics are offset by structural factors. In this study, the structural component of the Oaxaca-Blinder decomposition refers explicitly to differences in the returns to observable characteristics, which may reflect labor market segmentation or discrimination. This apparent near-equality confirms the structural nature of vulnerability, with migrants remaining confined to informal segments that are poorly protected. The study highlights the need for a link connecting employment and migration policies, focusing on the formalization of jobs, the recognition of skills and the portability of social rights, in line with the objectives of decent work and Agenda 2063.

Keywords

International Migration, Vulnerability, Labor Market, Decomposition Oaxaca-Blinder, Côte d'Ivoire

*"International migration and vulnerability in the Ivorian labor market" examines how migrant workers experience and negotiate labor-market insecurity within a context marked by widespread informality and limited institutional protections. The title signals a multidimensional analysis of how migration intersects with economic precariat, social inequality, and structural fragility in Côte d'Ivoire.

1. Introduction

International migration has been a major determinant of economic and social dynamics in West Africa for several decades. It contributes to the reorganization of labor markets, the diversification of household incomes and regional integration. In Côte d'Ivoire, a traditional land of labor immigration, foreign workers represent 12.6% of the population, as highlighted in the analysis of the Côte d'Ivoire 2017 data IRSEIS[1]. This represents more than three million people, mainly from Burkina Faso, Mali, Guinea and Niger (UN-DESA, 2025)[2]. These migrants contribute significantly to agricultural production, the construction sector, and informal trade (OIM, 2024)[3]. Their economic participation also translates into significant remittances to their countries of origin: according to World Bank data, in 2021, remittances from Côte d'Ivoire amounted to about US$1.96 billion, or nearly 2.7% of national GDP. These flows are mainly directed towards Burkina Faso (23.9%), Mali (19.3%), Ghana (19.4%) and Nigeria (18.7%), confirming the central place of the Ivorian corridor in West African migration exchanges. Indeed, Transfers made by Burkinabe and Malian nationals represent, respectively, 2.4% and 1.9% of their countries' GDP in 2021 (Koné & Soro, 2024; Adepoju, 2005).

However, this migration dynamic is accompanied by marked disparities in the Ivorian labor market. Data from the 2017 IRSEIS show that foreign labor represents around 12.6% of the working-age population, but is concentrated mainly in low-skilled and low-protected jobs. More than 94 per cent of migrants are active in the informal sector, including 58 per cent in agriculture and 26 per cent in trade, with women over-represented in domestic and caregiving jobs (almost 25 per cent compared to 8 per cent for men). Moreover, recent crises—economic, health or security—have increased the vulnerability of migrant workers, amplifying their exposure to the risks of working poverty and marginalization (Fasani & Mazza, 2020).

In a country where more than four out of five jobs are in the informal sector (ILO, 2020), migrant insecurity is part of a general context of economic and institutional insecurity. However, migrants remain particularly vulnerable due to their legal status, their low affiliation to the National Social Security Fund (NSSF) and their concentration in seasonal or low-productivity activities. According to the IRSEIS 2017, the vulnerable employment rate reaches 71% at national level and exceeds 80% among migrant women, confirming an overexposure to the risks of working poverty and social exclusion. The proportion of migrants with formal social security coverage remains marginal: only 20% report receiving a pay slip or sick leave, while 75% receive an income less than or equal to the Guaranteed Interprofessional Minimum Wage (GIMW) set at 75,000 FCFA. Similarly, access to unionization and continuing education remains very limited, increasing the dependence of foreign workers on informal intermediaries and private employers. This situation illustrates the multidimensional nature of vulnerability, which is

[1]Integrated Regional Survey on Employment and the Informal Sector.
[2]United Nations Department of Economic and Social Affairs, Population Division.
[3]Organisation Mondiale pour les Migrations /International Organization for Migration.

not limited to income but also includes access to social protection, employment stability and legal recognition of work (OIM, 2019a; ILO, 2009).

Contemporary theories emphasize that vulnerability in the labor market results from a combination of economic, institutional and social factors. Human capital theory (Becker, 1964) underlines the role of education and skills, while the capabilities approach (Sen, 2003) centres on the real freedom to access decent employment. Applied to migration, these approaches show that migrant workers often have fewer opportunities and recourse due to structural constraints and implicit discrimination (Ruhs & Anderson, 2010).

This is the perspective of this study, which aims to analyse the relationship between international migration and vulnerability in the Ivorian labor market, based on data from the Harmonized Household Living Conditions Survey (HHLCS) of 2021: to what extent are international migrant workers more vulnerable economically and socially than non-migrants in the Ivorian labor market, and what are the structural causes? By mobilizing the Oaxaca-Blinder decomposition method (Oaxaca, 1973; Blinder, 1973), it seeks to quantify the vulnerability gaps between international migrants and non-migrants, in order to distinguish the share of inequality attributable to observable characteristics (education, age, sector, location) from that attributable to labor market structure and segmentation effects.

2. Theoretical Frame of Reference

International migration is today one of the most structuring phenomena of labor markets. It changes the composition of the labor force, forms of employment and social protection systems, while revealing persistent inequalities between migrants and non-migrants. In contexts marked by high informality and weak institutional regulation, migration is accompanied by multiple vulnerabilities, as recalled by Kalleberg (2018), ILO (2017) and Ruhs (2013): job insecurity, low wages, lack of social protection, discrimination and increased exposure to occupational risks. These vulnerabilities, economic and social, reflect asymmetries of power, status and rights (Camacho et al., 2015).

The theoretical foundations of these inequalities are multiple and concern both the motivations for labor migration and the structuring of the labor market and the risks of vulnerability induced.

With regard to the causes of migration, Harris and Todaro's of 1970 economic model highlights the rationality of migration choices, insofar as the decision to migrate is made if the expected wage gain offsets the cost and risk of displacement. Borjas (1999) extends this analysis by introducing human capital: while wages are more unequal in the country of origin than in the country of destination, highly skilled individuals have a greater incentive to migrate: conversely, when inequalities are higher in the host country, it is rather less skilled workers who migrate. The New Migration Economy (Stark & Bloom, 1985) emphasizes the family logic of risk management, in that the decision to migrate is based on a mechanism of risk management and collective investment, through which households diversify

their sources of income and bet on the fact that remittances will compensate for economic shocks (Duleep & Regets, 1999).

The theory of segmented labor markets (Doeringer & Piore, 1971) shows that migrants are concentrated in the "secondary segment", characterized by instability, low wages and low protection. Standing's (2011) analyses of the precariat and Sen's (2003) approach to capabilities invite us to conceive of vulnerability as a deficit of real freedom of action and choice, reinforced by labor institutions and migration policies (Ruhs, 2013; Kabeer, 2012; Crush et al., 2005).

Several factors reinforce this vulnerability: precarious legal status, limiting mobility and wage bargaining (Ruhs & Anderson, 2010); sectoral segmentation, concentrating migrants in "3D" jobs (Dirty, Dangerous and Devaluing) such as construction, agriculture or domestic work (Piore, 1979; OCDE, 2018); and recruitment informality, often marked by abuse (OIM, 2019b). This is compounded by the underutilization of skills, the "brain waste" (Mattoo, Neagu, & Özden, 2008) and discrimination in hiring (Bertrand & Mullainathan, 2003; Heath & Cheung, 2007), which accentuate income and stability gaps. These mechanisms have worsened with the COVID-19 pandemic, with migrants overrepresented in essential jobs but excluded from social protections (Fasani & Mazza, 2020; Borjas & Cassidy, 2020; Camacho et al., 2015).

Empirical evidence supports these trends. The OCDE (2015, 2018)[4] show that while migrants have employment rates comparable to those of natives, they hold more temporary, part-time or informal jobs. The low portability of social rights (Holzmann & Koettl, 2011) remains a major obstacle to securing career paths. In West Africa, these vulnerabilities are exacerbated by informality exceeding 80% of the workforce (ILO, 2009). Migrants face increased risks of non-payment of wages and accidents at work (OIM, 2019b), while women, who are overrepresented in "care" and domestic work, are particularly vulnerable (Kabeer, 2012). Young migrants, often confined to informal activities, face massive underemployment (ILO, 2020). Despite the Free Movement Protocol of 1979 and the National and Regional Qualifications Framework (UNESCO-UNEVOC, 2013), mechanisms for recognizing competencies remain limited (Camacho et al., 2015).

Public policies aimed at reducing this vulnerability are structured around a few levers: dissociating the right to work from migration status (Anderson, 2010; Ruhs, 2013), supervising recruitment agencies (OIM, 2019b), improving the portability of social rights (Holzmann & Koettl, 2011) and strengthening the mutual recognition of qualifications. To this end, the construction of a Labor Market Vulnerability Index (*LMVI*), integrating economic, social and institutional dimensions from data such as the HHLCS, would allow for a harmonized measurement of the gaps between migrants and non-migrants (Dustmann & Görlach, 2016; Fasani et al., 2020).

Thus, the vulnerability of migrants in the labor markets results from the inter-

[4]Organisation de coopération et de développement économiques (OCDE)/Organization for Economic Cooperation and Development (OECD).

action between economic structures, labor institutions and legal status. In West Africa, building an area of protective mobility requires greater coherence between migration and employment policies, recognition of qualifications and portability of social rights—prerequisites for making migration a lever for integration and social justice (ILO, 2020; AUC-IOM, 2019).

3. Concepts and Methodology

3.1. Concept of Vulnerability

Vulnerability in the labor market refers to the multidimensional fragility of an individual in the face of the risks of insecurity, working poverty and social exclusion. It manifests itself in job instability, income insecurity, lack of social protection and a weak capacity to defend or retrain.

So, in the economic literature, vulnerability is understood through five dimensions: i) economic (E): income instability, underemployment, low productivity; ii) (S) social: lack of social protection, health coverage, leave, unionization; iii) institutional (I): formalization and portability of rights; iv) territorial (T): effect of place of residence on access to formal employment); and gender differential (G): wage inequalities, concentration in vulnerable jobs. From this conception flows a Labor Market Vulnerability Index (*LMVI*) (Kossoudji & Cobb-Clark, 2002).

3.2. Labor Market Vulnerability Index (*LMVI*)

In line with approaches to human capital (Becker, 1964), skills (Sen, 2003) and segmented labor markets (Doeringer & Piore, 1971), precariousness is explained both by a lack of resources and by unequal returns on these resources according to gender, migration status or territory. This approach is part of the analytical framework for decent work defined by the ILO (2013, 2020), combining productive employment, social security and equal access to rights. To ensure comparability across heterogeneous indicators and to capture vulnerability as a condition of exposure rather than intensity, the underlying variables are transformed into binary indicators. This approach conceptualizes labor market vulnerability as a risk/no-risk dichotomy, consistent with the literature on multidimensional vulnerability and social exclusion, where the absence of key protections constitutes a threshold effect rather than a marginal variation (Crush et al., 2005; Duleep & Regets, 1999).

The labor market vulnerability index, *LMVI*, is:

$$IVMT_i = w_E E_i + w_S S_i + w_I I_i + w_G G_i + w_T T_i$$

where:

E_i: economic dimension (employment, income, underemployment, status of remuneration);

S_i: social dimension (protection, security, health);

I_i: institutional dimension (formalization, contract, NSSF);

G_i: gender/discrimination dimension;

T_i: territorial dimension (urban/rural, region, access to the formal labor market).

The coefficients (w_d) are derived from the factor loads (a) of the first axis of a five (5) dimensional Principal Component Analysis, as follows:

$$w_d = \frac{|\alpha_d|}{\sum|\alpha|}$$

with $|\alpha_d|$, the absolute value of the empirical load observed for dimension (d). This paper is based on cross-sectional data from the 2021 Harmonized Household Living Conditions Survey[5] (HHLCS). This limits the analysis to a static perspective. As a result, it is not possible to track vulnerability trajectories over time or differentiate patterns by duration of stay or migration cohorts.

The labor market vulnerability index is constructed from sub-indices (E_i, S_i, I_i, G_i, T_i) defined on the basis of the variables listed in Table 1 below:

Table 1. Variables used to calculate the *LMVI*.

Dimensions	Nature of vulnerability	Variables	Interpretation	Indicators[6]
Economic	Low income, Poverty, Underemployment	Labor income < at the GIMW of 75,000 FCFA (=1, 0 if not) Labored poverty (=1, 0 if not) Hours worked < 40 (=1, 0 if not) Paid employment (=1, 0 if not)	*Inadequate labor income* *Household below the poverty line despite employment* *Visible underemployment* *Stability of the source of income*	$Income_i$ $Poverty_i$ $Underemployment_i$ $Status_i$
Social	Deficit in social protection	Paid leave (=1, 0 if not), Health coverage (=1, 0 if not)	*Basic social rights* *Health Protection*	$Leave_i$ $Health_i$
Institutional/ Legal	Lack of contract and formality	Pay slip (=1, 0 if not) NSSF affiliation (=1, 0 if not) Formal use (=1, 0 if not)	*Transparency of income* *Retirement protection* *Integration into the regulated sector*	Pay_slip_i $NSSF_i$ $Informality_i$
Gender and discrimination	Inequalities in treatment	Gender (Male = 1, Female = 0) Sector of activity (Agriculture = 1, 0 if not)	*Structural gender disparity* *Occupational segmentation*	$Gender_i$ $Sector_i$
Territorial	Regional disparities	Residence (Urban = 1, Rural = 0), District (Abidjan = 1, if not)	*Structural advantage of the urban Concentration of formal jobs*	$Résidence_i$ $District_i$

Source: Authors.

Sub-indices (E_i, S_i, I_i, G_i, T_i) are defined as follows:

$$E_i = \frac{1}{4}\left(Income_i + Poverty_i + Underemployment_i + Status_i\right)$$

$$S_i = \frac{1}{2}\left(Leave_i + Health_i\right)$$

[5]The survey, coordinated by WAEMU, the World Bank and national statistical institutes, provides a rich range of modules covering socio-demographic characteristics, employment, living conditions, household expenditure and income.

[6]For the calculation of the *LMVI*, all indicators adopt the same sense of risk. Thus, if a variable x is protective, such as belonging to a trade union, it is important to consider the inverse x' of this variable in the construction of the sub-index considered, namely: $x' = 1 - x$.

$$I_i = \frac{1}{3}\left(Pay\_slip_i + NSSF_i + Informality_i\right)$$

$$G_i = \frac{1}{2}\left(Gender_i + Sector_i\right)$$

$$T_i = \frac{1}{2}\left(Residence_i + District_i\right)$$

3.3. Oaxaca-Blinder Decomposition Model

To quantify and qualify the vulnerability of international migrants in the Ivorian labor market, as measured by the *LMVI*, the study uses the structural analysis (Oaxaca, 1973; Blinder, 1973). This approach breaks down the gaps in vulnerability scores between international migrant workers and Ivorian workers. Considering a dependent variable named Y_M for migrant workers and Y_{NM} for Ivorian non-migrant workers, the general formulation of the Oaxaca-Blinder model is as follows:

Let Y be the indicator of professional well-being, measured here by the *LMVI* and X the set of observable characteristics. Two linear equations for migrants (M) and non-migrants (NM) are estimated separately:

$$Y_M = X_M \beta_M + \varepsilon_M$$

$$Y_{NM} = X_{NM} \beta_{NM} + \varepsilon_{NM}$$

The average vulnerability score deviation is written:

$$\Delta = \bar{Y}_M - \bar{Y}_{NM} = \left(\bar{X}_M - \bar{X}_{NM}\right)\beta_{NM} + \bar{X}_{NM}\left(\beta_M - \beta_{NM}\right)$$

where:

$\left(\bar{X}_M - \bar{X}_{NM}\right)\beta_{NM}$ is the endowment effect (explained) related to differences in observable characteristics (age, primary education, secondary education, higher education);

$\bar{X}_{NM}\left(\beta_M - \beta_{NM}\right)$ is the structural effect (not explained) referring to differences in the structure of the labor market, segmentation or discrimination.

The scope of the study is restricted to employed persons aged 15 years and over, in order to examine the relative vulnerability of migrant workers[7] in the labor market in Côte d'Ivoire.

4. Results

4.1. Indicators of Employment Conditions and Vulnerability

Table 2 comparing the employment and vulnerability conditions of non-migrants and migrants shows a higher vulnerability of the latter in the Ivorian labor market. In view of the economic dimension of vulnerability, the proportion of migrants with less than GIMW reached 61.4%, compared to 47.4% among non-migrants, a gap of 14 points. This gap reveals increased exposure to working poverty and financial instability. However, the share of paid employment remains similar (77.5%

[7]According to the ILO (2018) guidelines of the 20th ICLS, a migrant worker is a person who is habitually resident in a country other than that of his birth or citizenship and who is engaged in or seeking paid employment there.

versus 76.9%). This indicates that beyond mere access to income, economic vulnerability is more closely linked to the level and regularity of income, thus reflecting low-productivity and low-protection work.

The social dimension accentuates this observation. Only 1.7% of migrants receive annual leave for 5.6% of non-migrants, and only 1.3% have health coverage, compared to 4.8% of non-migrants. These negative gaps reflect a lack of social protection and the absence of resilience mechanisms to economic, health or family risks. As a result, migrant workers are overexposed to the vagaries of the Ivorian labor market.

This socio-economic precariousness is reinforced by the institutional dimension, for which the differences reach particularly high levels: only 12.2% of migrants have a pay slip for 32.9% of non-migrants, 1.8% of them contribute to the CNPS against 5.5% of non-migrants, and 2.1% are in formal employment, while 5.7% of nationals benefit from the protection of this sector. In a context where informal employment predominates, these figures reflect a relatively higher informality among migrant workers and a virtual absence of administrative recognition of their employment. This lack of formalization predisposes them to unstable jobs, devoid of rights and legal guarantees.

In terms of gender and territorial dimensions, the differences are more moderate but significant. The proportion of men is 9 points higher among migrants, which translates male overrepresentation in migration flows and in risky jobs. In addition, migrants are slightly more likely to work in agriculture (+1.8 points) and less present in urban areas (−2.8 points) and in Abidjan (−0.9 points). These trends indicate that migrant vulnerability is also rooted in spatial and sectoral structures, with migrants remaining concentrated in rural areas and low-productivity sectors.

In total, migrant workers have higher levels of precariousness on almost all labor market indicators relative to non-migrant workers. Migrants are generally less declared, less covered and less remunerated with comparable characteristics.

Table 2. Indicators of employment conditions and vulnerability (%).

	Income <GIMW	Labored poverty	Underemployment (<40hrs/week)	Paid employment	Annual leave	NSSF contribution
Non-migrant (*NM*)	47.4	40.4	51.1	76.9	5.6	5.5
Migrant (*M*)	61.4	44.9	48.6	77.5	1.7	1.8
M* − *NM	14.0	4.5	−2.5	0.6	−3.9	−3.7
	Health coverage	**Formal employment**	**Agriculture**	**Male**	**Urban**	**Abidjan**
Non-migrant (*NM*)	4.8	5.7	61.1	51.5	36.6	7.0
Migrant (*M*)	1.3	2.1	62.9	60.6	33.8	6.1
M* − *NM	−3.5	−3.6	1.8	9.1	−2.8	−0.9

Source: Based on 2021 HHLCS data.

4.2. Labor Market Vulnerability Index

The results of the PCA applied to the five sub-indices (*E*, *S*, *I*, *G*, *T*) indicate that the first factor axis explains 46.8% of the total variance; it represents the empirical vulnerability gradient (Table 3).

Table 3. Determination of factor loads (a) from PCA.

Total variance explained										
Component	Initial eigenvalues			Sums extracted from the load square			Component Matrix[a]			Communalities[8] $h_d^2 = c_{d1}^2 + c_{d2}^2$
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	d	Component c_1	Component c_2	
1	2.339	**46.780**	46.780	2.339	46.780	46.780	E	**0.571**	0.549	0.628
2	1.265	25.298	72.077	1.265	25.298	72.077	S	**0.754**	−0.571	0.895
3	0.692	13.836	85.913				I	**0.776**	−0.541	0.895
4	0.502	10.035	95.948				G	**0.685**	0.460	0.681
5	0.203	4.052	100.000				T	**0.611**	0.363	0.505
Extraction method: Principal component analysis.							a. 2 extracted components			

Source: Based on 2021 HHLCS data.

The factor loads (a), deduced from the first factor axis of the PCA (Table 3), make it possible to calculate the coefficients of the *LMVI* (Table 4).

Table 4. Determination of *LMVI* coefficients.

Dimension (d)	$\lvert\alpha\rvert$	$w_d = \frac{\lvert\alpha_d\rvert}{\sum\lvert\alpha\rvert}$
E	0.571	0.168
S	0.754	0.222
I	0.776	0.228
G	0.685	0.202
T	0.611	0.180
$\sum\lvert\alpha\rvert$	3.397	-

Source: Based on 2021 HHLCS data.

[8]Hetaera were professional courtesans (and distinct from *pornē* (prostitutes were considered far lower down on the social spectrum) known for their physical beauty, cultured minds and talents that exceeded the average Attic woman. They enjoyed state protection and a freedom that surpassed that of married women. See also: Glazebrook & Henry (Eds.) 2011. *Greek prostitutes in the ancient Mediterranean*, 800 *BCE*-200 *CE*.

Hence:

$$LMVI_i = 0.168E_i + 0.222S_i + 0.228I_i + 0.202G_i + 0.180T_i$$

The empirical approach of the *LMVI* applied from HHLCS 2021 data strongly nuances the conceptual hierarchy according to which the economic dimension is dominant, followed by social aspects (ILO, 2009; Holzmann & Koettl, 2011) and institutional (Lindbeck & Snower, 1988), while gender inequalities and territorial disparities (Kabeer, 2012; UNESCO-UNEVOC, 2013; AUC-IOM, 2019) play a contextual role. The PCA induced weights underline a multidimensional vulnerability strongly structured around the institutional and social dimensions which alone explain nearly half of the total variance (45%), far ahead of the economic dimension (0.168). Indeed, the highest coefficients (0.228 and 0.222) place institutional and social vulnerability at the heart of the model. In other words, informal forms of employment and lack of social security coverage are the main determinants of precariousness in the Ivorian labor market. The communalities, calculated at 0.895 for both the social (*S*) and institutional (*I*) dimension, show a strong internal consistency of the variables. These two dimensions are therefore highly correlated with the main component, contributing strongly to the empirical structure of vulnerability: the variables internal to *S* (paid leave, sickness coverage, union) and *I* (NSSF, pay slip, formality) evolve in a coherent and homogeneous way, in the sense that they measure the same latent phenomenon, institutional and social precariousness.

In this context, economic vulnerability is, paradoxically, maintained. Indeed, the pure economic aspect (income, poverty, underemployment) explains only 16.8% of the variance. This suggests that differences in income are not sufficient to explain vulnerability: institutional and social aspects weigh more than the wage level itself. As a result, work is no longer only "poorly paid", but is legally and socially fragile.

Moreover, at 20.2%, the gender and discrimination dimension has a structural weight comparable to that of the economic dimensions, reflecting a specific vulnerability of women and agricultural workers. This reinforces the idea of a sustainable horizontal segmentation (by sex and sector), which is also reinforced by significant territorial vulnerability. Indeed, the 18% weight for the territorial dimension shows the persistence of a spatial divide between urban workers, who are better integrated into the formal sector, and rural workers, who are overrepresented in the informal and agricultural sectors. This dimension underlines the polarization of Abidjan as a professional security hub.

In total, the *LMVI* constructed from the data of the HHLCS 2021 highlights the fact that the precariousness on the Ivorian labor market is not only related to income, but above all to the low formalization of employment and the social protection deficit. The gender and territorial dimensions also contribute significantly, reflecting the persistence of inequalities in access to decent work according to sex and place of residence. Low economic weights indicate that vulnerability is not only monetary, but remains structurally rooted in weak labor institutions.

4.3. Oaxaca-Blinder Decomposition

The results (Table 5) show that the average difference in *LMVI* between migrants and non-migrants is small and negative (Δ = −0.003), suggesting a near equality in terms of overall vulnerability. However, this apparent convergence between migrants and non-migrants masks compensatory effects between an explained (+0.029) and an unexplained (−0.027) share. These two components reveal distinct dynamics: the socio-demographic characteristics of migrants tend to increase their vulnerability, while the structure of the market (value of diplomas, recognition of experience) tends to reduce this gap; some migrants find, indeed, informal but relatively stable jobs.

Table 5. Oaxaca-Blinder decomposition of mean *LMVI* deviation between migrants and non-migrants in Côte d'Ivoire.

Variable	Basic data[9]		Estimated coefficients		Oaxaca-Blinder decomposition	
	$\bar{X}_{NM}$	$\bar{X}_{M}$	β_{NM}	β_{M}	$(\bar{X}_{M}-\bar{X}_{NM})\beta_{NM}$	$\bar{X}_{NM}(\beta_{M}-\beta_{NM})$
Constante			0.842	0.841		−0.001
Age	38.77	37.33	−0.001	−0.002	0.001	−0.039
Primary education	0.201	0.150	−0.054	−0.059	0.003	−0.001
Secondary education	0.169	0.109	−0.152	−0.089	0.009	0.011
Higher education	0.041	0.006	−0.450	−0.372	0.016	0.003
N	9241365	2289737		Σ	0.029	−0.027

Source: Based on 2021 HHLCS data.

$$\Delta = \bar{Y}_{M} - \bar{Y}_{NM} = (\bar{X}_{M} - \bar{X}_{NM})\beta_{NM} + \bar{X}_{NM}(\beta_{M} - \beta_{NM})$$

$$\bar{Y}_{NM} = 0.842 - 0.001(38.77) - 0.054(0.201) - 0.152(0.169) - 0.450(0.041)$$

$$\bar{Y}_{NM} = 0.842 - 0.039 - 0.011 - 0.026 - 0.018 = 0.748$$

$$\bar{Y}_{M} = 0.841 - 0.002(37.33) - 0.059(0.150) - 0.089(0.109) - 0.372(0.006)$$

$$\bar{Y}_{M} = 0.841 - 0.075 - 0.009 - 0.010 - 0.002 = 0.745$$

$$\Delta = \bar{Y}_{M} - \bar{Y}_{NM} = 0.745 - 0.748 = -0.003$$

Examination of the average gap due to differences in observable characteristics indicates that, on average, migrant workers are younger (37.3 years versus 38.8 years) and less educated. As a result, they are more exposed to job insecurity. Differences in educational levels contribute strongly to this effect, as the deficit in secondary education (+0.009) and especially in higher education (+0.016) accounts for most of the positive share. These results confirm that the demographic and educational characteristics of migrants constitute a factor of objective vulnerability, linked to less favorable conditions of professional integration.

[9]The mean of the age variable was considered, while the education variables refer to percentages.

On the other hand, the share of the average gap attributable to variations in the yields of these characteristics (structural effect) is negative (−0.027) and reflects differences in the valuation of the characteristics between the two groups. Age appears to be the most contributory variable (−0.039), implying that work experience has a stronger protective effect among migrants: jobs held by migrant workers, often informal but sustainable, have some stability in specific segments of the labor market. However, returns on their human capital remain lower, with the impact of secondary (+0.011) and higher education (+0.003) indicating an undervaluation of qualifications or mismatch between qualifications and formal job demand.

In total, the overall gap between migrant and non-migrant workers in the Ivorian labor market is marginal, with the composition and structural effects almost offsetting each other. This situation reflects structural rather than differential vulnerability, as the vulnerability of migrant workers is less a result of their individual characteristics than of the way in which the Ivorian labor market values these characteristics.

5. Discussion

The results of the study on the vulnerability of migrants in the Ivorian labor market are fully in line with the theoretical framework mobilized, which is based on approaches to human capital (Becker, 1964), skills (Sen, 2003) and labor market segmentation (Doeringer & Piore, 1971). The Labor Market Vulnerability Index (*LMVI*) and the Oaxaca-Blinder decomposition confirm the relevance of the reference framework, showing that the vulnerability of migrant workers stems less from an individual skills deficit than from a structural and institutional disadvantage linked to the way the Ivorian market values these skills. The predominance of the institutional (0.228) and social (0.222) dimensions in the PCA directly echoes Sen's (2003) capabilities approach. These dimensions capture constraints on migrants' real freedom to access and sustain decent work, including formal recognition, social protection and legal security, thereby reflecting a deprivation of capabilities rather than income alone, as underlined by Duleep & Regets (1999).

First, the results of the Principal Component Analysis (PCA) suggest that vulnerability is primarily institutional and social, with these two dimensions alone accounting for nearly 45% of the total variance. This result echoes the work of Kalleberg (2011, 2018) and the ILO (2020) according to which contemporary precariousness at work is no longer limited to low income, but stems from the fragility of the legal and social frameworks that govern employment. The relatively modest weight of the economic dimension (0.168) confirms that income, although central in the theory of human capital, is not intrinsically a sufficient indicator of professional well-being. This is, moreover, the meaning of Sen's (2003) approach to skills, which emphasizes the real freedom to participate in the labor market in conditions of dignity, security and social recognition.

Second, the Oaxaca-Blinder decomposition highlights the coexistence of a positive composition effect (+0.029) and a negative structural effect (−0.027). This near-perfect compensation illustrates the tension between endowments and returns, which is typical of segmented labor markets rather than true equality of opportunity. The composition effect, attributed to the younger age and lower educational level of migrants, directly refers to the logic of the Harris-Todaro model of 1970 and the New Economy of Migration (Stark & Bloom, 1985). Indeed, for these authors, migration is a rational risk arbitrage strategy despite disadvantageous initial conditions. Migrants are in the "secondary segment" of the Ivorian market, characterized by high informality, low social protections and a lack of recognition of rights, as described by Doeringer and Piore (1971), Crush et al. (2005), Ruhs (2013) or Camacho et al. (2015).

The unexplained part (−0.027), linked to differences in characteristics yields, shows an undervaluation of migrant human capital, a phenomenon often interpreted as a "semi-conformity" effect (Ruhs & Anderson, 2010) or "brain waste" (Mattoo et al., 2008). The negative role of age (−0.039) suggests, however, that experience partially compensates for this disadvantage, confirming Chiswick's (1978) thesis that gradual assimilation into the labor market improves employment stability, even in informal settings. By contrast, lower returns at secondary and higher levels reflect a lack of recognition of migrant qualifications and persistent institutional segmentation, consistent with Kabeer's (2012) findings on gender and status inequalities in African markets.

Ultimately, the results validate the theoretical postulate of structural vulnerability, resulting from the interaction between institutional capital deficits, implicit discrimination and generalized informality. The calculated *LMVI* indicates that the precariousness of migrants is not only economic, but also institutional, social and territorial, in line with the conclusions of OIM (2019a) and ILO (2017) on the multidimensionality of vulnerability at work. The small difference observed between migrants and non-migrants ($\Delta = -0.003$), in terms of human capital, does not therefore reflect a real equality, but an unstable balance between structural disadvantages compensated by adaptation effects linked to experience.

6. Conclusion

The Labor Market Vulnerability Index (*LMVI*), built on the five dimensions, economic, social, institutional, gender and territorial, reveals that the vulnerability of migrants is not reduced to low incomes, but is deeply rooted in the institutional and social fragility of the Ivorian labor market. The institutional (0.228) and social (0.222) dimensions dominate the structure of vulnerability, reflecting the weakness of formalization, social protection and recognition of workers' rights.

The Oaxaca-Blinder decomposition confirms that the vulnerability gaps between migrants and non-migrants ($\Delta = -0.003$) are small but remain structurally significant. The explained share (+0.029) is mainly due to the socio-demographic and educational profile of migrants, while the unexplained share (−0.027) reflects

an undervaluation of migrant human capital and persistent institutional segmentation. The almost perfect compensation between endowments and yields underlines the tension characteristic of dual labor markets described by Doeringer and Piore (1971). Indeed, access to formal employment in the Ivorian labor market remains limited by structural and social barriers rather than skill gaps. These findings repeatedly confirm that migrants are not more vulnerable because they are less qualified, but because their skills are less recognized and less protected.

In a context of generalized informality, as is the case in the Ivorian labor market, the challenge is therefore not only to improve incomes, but to strengthen employment governance, the portability of social rights and the recognition of acquired qualifications, in accordance with the recommendations of the ILO (2020) and UNESCO-UNEVOC (2013).

Ultimately, reducing vulnerability in the Ivorian labor market requires an integrated approach aimed at the progressive formalization of work, the extension of social coverage to migrant workers, and the construction of a framework of protective and inclusive mobility.

However, it is important to remember that these conclusions are based on instantaneous cross-sectional data and would benefit from being verified over time. Also, future research based on longitudinal or pseudo-panel data would allow a dynamic assessment of migrant vulnerability.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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