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MIGRATIONS INTERNATIONALES ET DEVELOPPEMENT EN AFRIQUE

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DEDICACE

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RESUME

L'objectif principal de cette thèse est d'étudier les effets des migrations internationales sur le développement des économies africaines. À travers trois essais empiriques, constituant les trois chapitres de la thèse, nous proposons un regard complémentaire sur les enjeux économiques des migrations internationales en Afrique. L'analyse des effets des migrations internationales sur les économies africaines a été limitée à trois dimensions du développement que sont, l'inclusion financière, la croissance économique et les variables du marché du travail. Tout d'abord, dans une approche macroéconomique, dans le premier essai, nous analysons l'effet des transferts de fonds des émigrants sur la dynamique de l'inclusion financière en se basant sur un échantillon de 32 pays d'Afrique subsaharienne. Les résultats mettent en exergue un effet positif et significatif des transferts de fonds sur les huit dimensions de l'inclusion financière étudiées. La magnitude de l'effet est d'autant plus forte lorsqu'il s'agit des indicateurs de finance inclusive mesurés au niveau des institutions de microfinance. Ensuite, dans la même veine, le deuxième essai estime l'effet de l'émigration et de l'immigration sur la croissance économique des pays d'Afrique. L'objectif est d'étudier l'effet des mouvements migratoires sur l'économie d'un pays considéré à la fois comme pays d'origine et de destination, comme c'est le cas dans la plupart des pays africains. En faisant cela, les résultats montrent que, d'une part l'émigration impacte négativement la productivité globale des facteurs. D'autre part, l'immigration a un impact positif sur la productivité globale des facteurs des pays d'accueil au travers du capital humain que ces derniers apportent avec eux. Enfin, dans le troisième essai, nous menons une étude complémentaire dans une approche microéconomique. Cette étude vise à estimer l'effet de l'immigration sur les variables du marché du travail des natifs au Togo. Les résultats montrent qu'une augmentation des travailleurs immigrés affecte négativement l'emploi et les salaires des natifs qui ont les mêmes caractéristiques que les immigrés.

ABSTRACT

The main objective of this research is to analyse the effects of international migration on the development of African economies. Through three empirical essays, constituting the three chapters of the thesis, we propose an additional view of the economic implications of international migration in Africa. The analysis of the economic impact of international migration has been limited to three dimensions of development, such as financial inclusion, economic growth and labor market outcomes. Firstly, based on a macroeconomic approach, in the first essay, we analyze the impact of emigration on the dynamics of financial inclusion, using panel data from 32 sub-Saharan African countries. The results highlight a positive and significant impact of emigrant remittances on the eight dimensions of financial inclusion studied. The magnitude of the impact is more strong when it comes to financial inclusion indicators measured at the level of microfinance institutions. Then, in the second essay, we estimate the impact of emigration and immigration flows on economic growth in African countries. The aim is to analyze the effect of migration movements on the economy of a country considered both as a country of origin and destination, as is the case for most African countries. The results show that, on the one hand, emigration has a negative impact on total factors productivity. On the other hand, immigration has a positive impact on total factors productivity of host countries through the human capital they bring with them. Finally, in the third essay, we carry out a complementary study using a microeconomic approach. This study aims to estimate the effect of immigrant workers on competing natives's labor market outcomes in Togo. The results show that, the increase in immigrants workers have a negative impact on the employment and wages of competing natives.

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0. Chapitre introductif

Ce chapitre introductif de la thèse présente le contexte général des migrations internationales dans le monde et en Afrique. Ensuite, il présente les fondements théoriques qui sous-tendent la relation entre migration et développement économique, suivis d'une revue de littérature des études analysant les effets des migrations internationales sur différents aspects de développement. Enfin, le chapitre met en relief la contribution globale de la thèse à la littérature économique.

0.1. Contexte général : Etat de la migration dans le monde

La mondialisation grandissante, l'interdépendance économique, sociale, culturelle et sécuritaire sont devenues plus que jamais des réalités mettant toute la planète en conurbation. Cette interdépendance se traduit aussi par des mouvements migratoires qui s'accentuent, faisant du monde un village planétaire. Cette mobilité, qui s'effectue de façon récurrente concerne tous les pays et tous les peuples. D'une part, le progrès technique a également rendu plus facile et plus rapide cette mobilité ; en particulier pour les personnes à la recherche d'un emploi, d'une opportunité économique ou sociale, d'une éducation ou d'une meilleure qualité de vie. Dans le même temps, les conflits, le changement climatique, la pauvreté, les inégalités de tout ordre, les écarts de développement, obligent également des personnes à quitter leur pays d'origine pour chercher un meilleur avenir pour elles-mêmes et leur famille.

Ainsi, la question de la relation entre la migration internationale et le développement suscite un intérêt de plus en plus croissant. Quatre dimensions sont souvent explorées lorsqu'il s'agit d'analyser les questions liées à la migration internationale (OCDE, 2017) : l'émigration, les transferts de fonds des migrants, la migration de retour et l'immigration. Selon l'Organisation Internationale de la Migration (OIM), la migration internationale est un mouvement de personnes entre pays. On parle d'immigration lorsqu'une personne née dans un autre pays, s'installe dans un pays de destination donné pendant au moins trois mois (OCDE,2017). L'émigration, consiste pour une personne, à se déplacer hors de son pays de naissance appelé pays d'origine, pour résider dans un autre pays pendant au moins trois mois consécutifs (OCDE, 2017). Selon la même source, les transferts de fonds des migrants, sont des transferts internationaux, pour l'essentiel financiers, que les émigrés envoient vers leur pays d'origine. La migration de retour, quant à elle constitue pour un migrant international de décider de rentrer dans son pays d'origine et de s'y établir de façon temporaire ou permanente (OCDE, 2017). Dans ce chapitre introductif, nous présentons d'abord le contexte de la migration dans le monde et en Afrique en particulier ; ensuite, nous dressons un état de la littérature qui a porté sur les questions des migrations internationales et du développement ; enfin, nous explicitons la valeur ajoutée de cette thèse de doctorat à cette littérature.

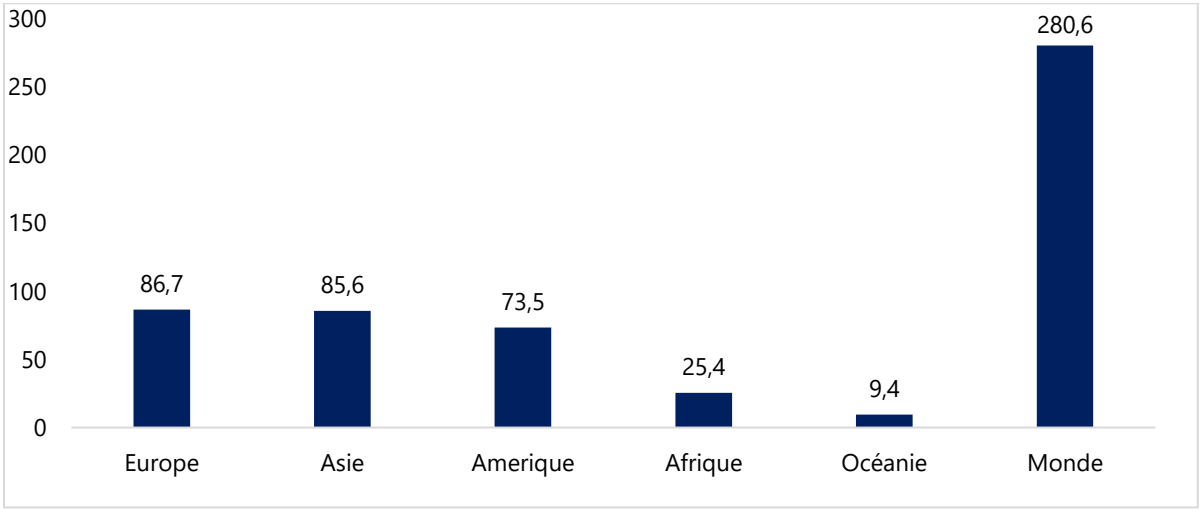
- **Le stock des migrants constitue 3,6% de la population mondiale en 2020, (UN-DESA, 2020)**

Le stock des migrants internationaux a considérablement augmenté au cours des dernières décennies. En termes absolus, en 2020, le nombre total de migrants internationaux est estimé à

280,6 millions, contre 173 millions dans le milieu des années 2000 et 153 millions à la moitié de la décennie 1990-2000 (ONU DAES, 2020). L'analyse par région du monde montre une répartition disparate. Afrique (25,4 millions), Europe (86,7 millions), Asie (85,6 millions) et Amérique (73,5 millions) (Figure 0.1). Les statistiques montrent également, qu'en terme de flux migratoire, 35 à 40 millions de personnes migrent chaque année dans le monde. Cependant, la pandémie de la Covid-19 a provoqué un choc sur les flux migratoires dans toutes les régions du monde. Les estimations statistiques suggèrent, que le flux de migrants a baissé de près de 2 millions entre 2019 et 2020 (ONU DAES, 2020). La croissance potentielle de la migration internationale a décru de 27% entre 2019 et 2020 par suite de la pandémie de la COVID-19. Cette pandémie a fondamentalement affecté la mobilité humaine. Selon les estimations de l'Organisation Internationale du Travail (OIT, 2021), le stock des migrants a baissé de 2 millions en 2020 et plus de 3 millions de migrants (travailleurs saisonniers et étudiants internationaux y compris) se sont vu bloqués et incapables de regagner leur pays d'origine du fait des restrictions de voyages à cause de la pandémie.

Toutefois, en termes de proportion, l'évolution des flux migratoires est plus stable au cours de ces dernières années, où la part des migrants internationaux dans le monde a varié entre 2,9% et 3,6% entre 1990 et 2000 (ONU, DAES, 2020).

Figure 0.1. Population des migrants internationaux (millions de personnes, 2020)



Source: ONU-DAES, 2020

- **La majorité des migrants internationaux sont en âge de travailler (OIT,2020)**

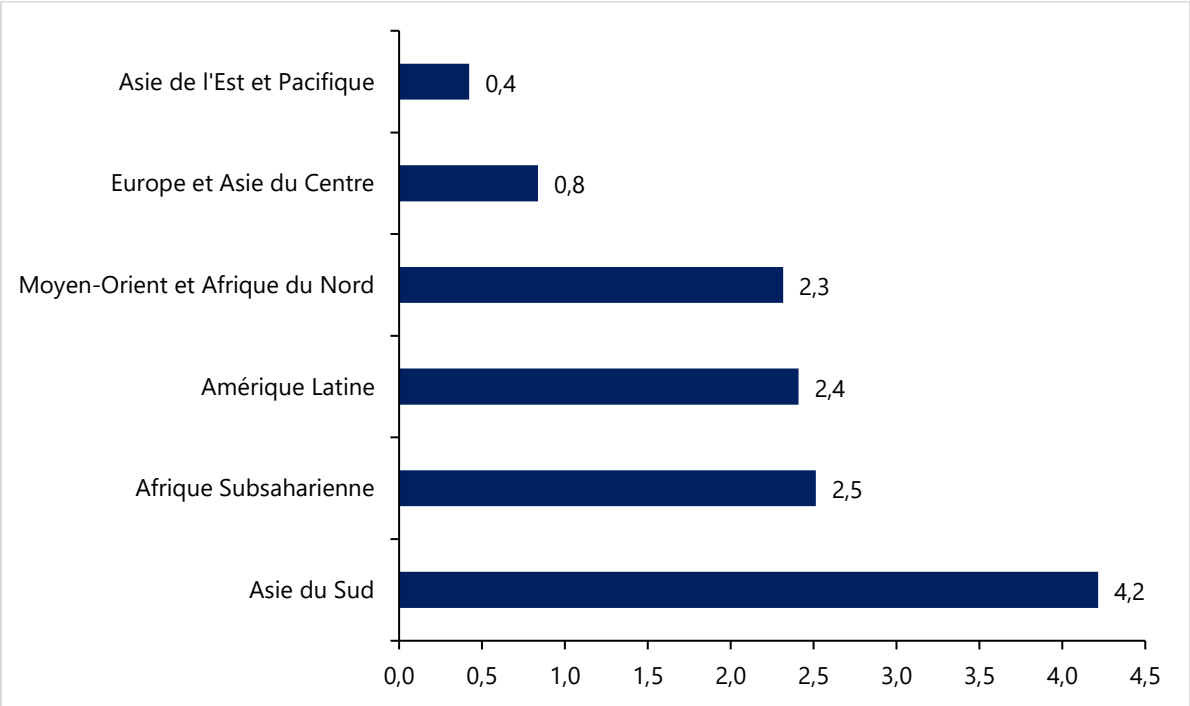
L'analyse par caractéristiques socio-démographique et socio-économique des migrants révèle que, 15% de ceux-ci ont moins de 20 ans et 73% des migrants internationaux sont en âge de travailler (OIT, 2021). Sur 280,6 millions de migrants, les travailleurs migrants représentent 169 millions d'individu soit 5% de la main d'œuvre mondiale (OIT, 2021). Selon les données de l'Organisation Internationale du Travail, 6% des flux migratoires internationaux sont des migrations de travail. Ces travailleurs migrants évoluent dans divers secteurs d'activité avec une répartition hétérogène selon les régions du monde. En effet, deux tiers des travailleurs migrants évoluent dans le secteur des services et plus de 60% d'entre eux sont concentrés en Europe, en Amérique du Nord et dans les pays Arabes (OIT, 2021). Il ressort aussi que 41,5% de ces travailleurs migrants sont des femmes et la grande majorité de celles-ci ont un âge compris entre 25 et 64 ans.[1]

- **Les transferts de fonds des migrants représentent plus de 5% du PIB pour au moins 60 pays à faible revenu (Banque Mondiale, 2024).**

Les transferts de fonds des migrants constituent une source non négligeable de revenu pour les pays en développement. Selon les statistiques de la Banque Mondiale, sur 857 milliards de dollars US de fonds, 656 milliards de dollars US ont été envoyés par les migrants vers les pays à revenu faible et intermédiaires en 2023. Contre 647 milliards de dollars US en 2022. Vers ces pays, ces fonds surpassent parfois les aides publique au développement (APD) et les investissements direct étrangers (IDE). En pourcentage du PIB, ces fonds représentent en moyenne 0,8% du PIB dans le monde entre 2010 et 2023. L'Afrique Subsaharienne (ASS) et l'Asie du Sud sont les régions dont la part des transferts de fonds des migrants reçus dans le PIB reste les plus élevée durant toute la période (Figure 0.2 et Figure 0.3). En 2022, typiquement, les envois de fonds des migrants comptaient pour 4% du PIB en moyenne Asie du Sud et 2,5% du PIB en moyenne en Afrique subsaharienne (Figure 0.2). Ces deux taux sont largement au-dessus de la moyenne mondiale (Figure 0.3). Vers l'Afrique en générale, au cours des deux dernières décennies, ces fonds sont devenus une importante sources financières externe dépassant largement les investissements directs étrangers et parfois les APD, (Figure 0.4).

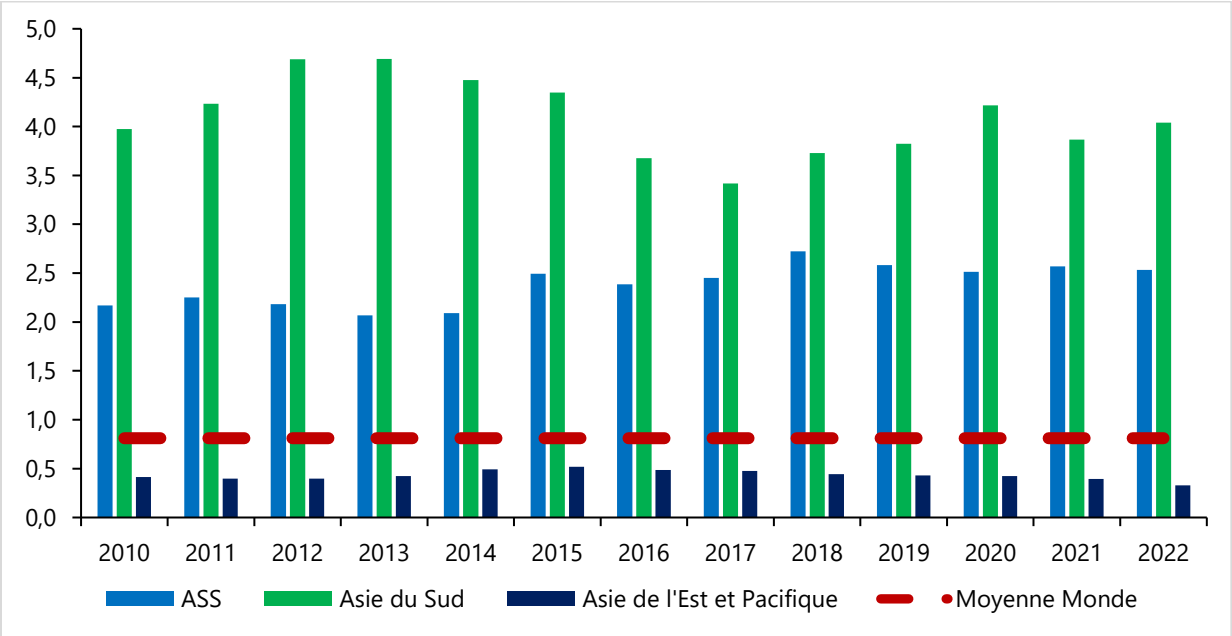
[1] Lire World Migration Report (2024)

Figure 0.2. Part des transferts de fonds des migrants reçus par région du monde en 2022 (% PIB)



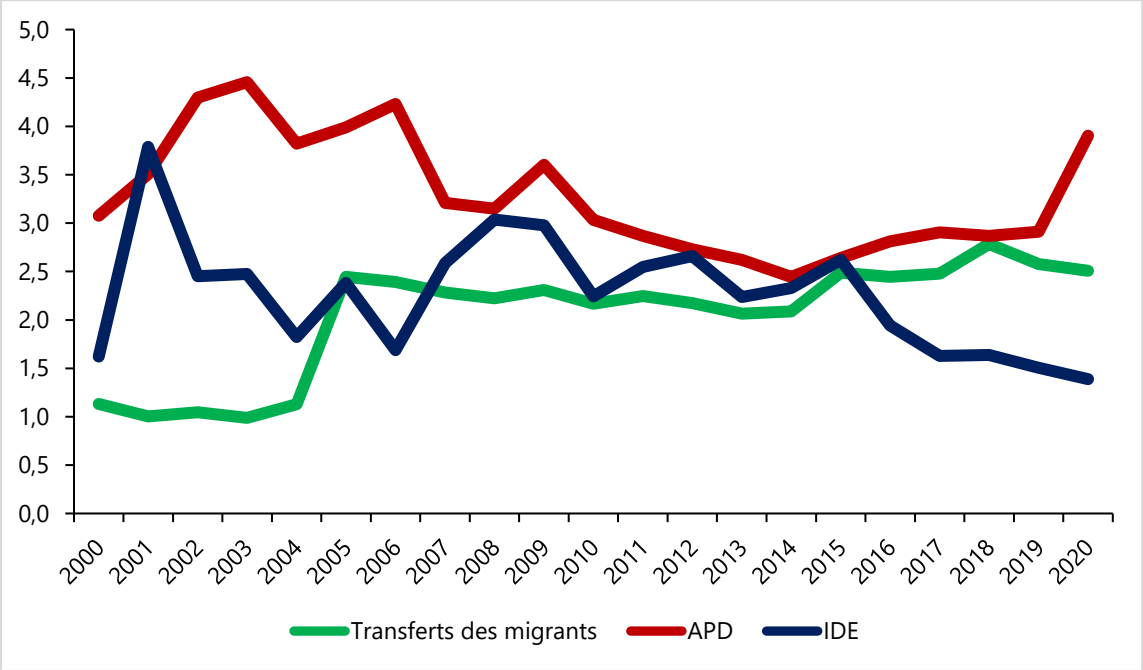
Source: World Development Indicators (WDI)

Figure 0.3. Dynamique des transferts de fonds des migrants reçus (% PIB ; 2010-2022)



Source: WDI

Figure 0.4. Dynamique des transferts de fonds des migrants reçus (% PIB ; 2010-2022)



Source : WDI

- **Les transferts de fonds des migrants sont restés beaucoup plus stable malgré la pandémie de la COVID-19**

Selon les statistiques de la Banque mondiale (2021), 75% des migrants dans le monde travaillent dans des pays où les trois quarts des cas de COVID-19 ont été signalés et 90% des remittances sont effectués par des migrants résidents dans ces pays. Par conséquent, il a été prévu une chute de 20% des transferts de fonds en 2020. Cependant, dans la réalité, les envois de fonds n'ont diminué que de 1,6% (voir Figure 0.3), une baisse moins importante que celle observée lors de la crise financière mondiale de 2009, lorsque les flux ont diminué de près de 5 % (WDI, 2021). Malgré la relative stabilité des envois de fonds, la baisse n'est pas sans conséquence pour les familles restées dans les pays d'origine. Les interruptions des flux financiers transfrontaliers liées à la pandémie de la COVID-19, a eu des effets sur les migrants et leur famille. Selon les conclusions du rapport de la Banque Mondiale (2021), les migrants sont les plus vulnérables en termes de filets de sécurité car ils occupent souvent des emplois, précaires d'où ces effets sur ces derniers.

- **La migration représente aussi depuis longtemps une caractéristique du paysage économique et social de l'Afrique**

A travers le monde, en moyenne les migrations internationales suivent une tendance haussière, même si les mobilités évoluent en proportion hétérogène entre les continents[2]. La migration internationale africaine est restée également dynamique (Figure 0.5). Typiquement, la part des immigrants africains dans le total des immigrants internationaux dans le monde est à peu près de 10% en 2020, contre 8% en 2015. L'Afrique est aussi connue pour son histoire de migration à l'intérieur comme en dehors du continent. En 2020, sur le stock des migrants africains dans le monde, 53% résidaient sur le continent avec pour premières destinations l'Afrique du Sud et la Côte d'Ivoire (UN-DESA, 2020). A ce titre, le récent sondage d'Afrobarometer[3] de 2018 mené dans 35 pays d'Afrique, suggère qu'en moyenne, un tiers des personnes interrogées ont envisagé d'émigrer, 20 % des répondants ont déclaré vouloir émigrer vers l'Europe contre 80% qui ont déclaré vouloir émigrer vers un autre pays du continent.

Plusieurs arguments laissent à penser que, la migration africaine s'expliquerait en partie par la croissance démographique que connait le continent, mais aussi par les conflits et les aléas climatiques (World Migration Report, 2024). Selon les statistiques, l'Afrique devrait connaitre d'ici 2050 une croissance démographique plus forte que les autres régions du monde (UN, Population Division, 2020). Cette évolution démographique entrainerait aussi des conséquences sur les migrations internationales et des répercussions sur le développement économique du continent. En effet, de nos jours, cette croissance démographique semble s'accompagner également de défis économiques, sociaux, culturels et sécuritaires. [4]

Néanmoins, malgré ces statistiques et malgré le rôle reconnu pour les migrations dans le développement de l'agenda mondial pour le développement, les connaissances restent insuffisantes quant aux effets économiques de la migration pour les pays africains, dans ce contexte de défis démographique, sécuritaire et socio-économique. Selon la Commission de l'Union Africaine (CUA), ce gap de connaissances sur la question des migrations internationales en Afrique serait dû en partie à l'insuffisance de données désagrégées, récurrentes, et fiables sur les flux migratoires observés sur le continent. Or, cette insuffisance ne serait pas sans répercussions : en l'absence des études sur les effets économiques de la migration africaine, les décideurs politiques seraient moins informés pour l'élaboration des

[2] Lire World Migration Report (2024).
[3] Afrobarometer est un Institut de recherche panafricain non partisan qui mène des sondages d'opinion publique en matière de démocratie, de gouvernance, d'économie et de société dans plus de 30 pays d'Afrique.
4 Lire Le développement économique en Afrique Rapport (2018).

politiques publiques visant à exploiter pleinement le potentiel de la migration africaine.[5] Fort de ce constat, les institutions régionales et sous régionales, particulièrement la CUA, s'est engagée à dégager des orientations sur la migration en travaillant en étroite collaboration avec ses États membres pour résoudre les enjeux des migrations internationales. A travers le Programme conjoint sur la gouvernance des migrations de main-d'œuvre au service du développement et de l'intégration (JLMP), la CUA donne des directives aux Etats membres de l'union sur la nécessité de constituer des statiques fiables, désagrégées nécessaires pour les études et l'atteinte des objectifs de l'Agenda 2063 de l'Union Africaine et du Programme de développement durable à l'horizon 2030 de l'Organisation des Nations Unies. De plus, l'évaluation et la révision du Cadre de politique migratoire pour l'Afrique (MPFA) en 2017 et 2018 ont offert l'occasion à l'Union africaine et à ses États membres, de réaffirmer l'importance d'une politique et d'un cadre institutionnel pour gérer efficacement la migration en soulignant la nécessité de considérer la migration comme une composante clé du développement. À cet égard, le MPFA révisé recommande des stratégies et des approches pour améliorer la gouvernance de la migration aux niveaux national et régional. Par conséquent, tout ceci dénote de l'émergence d'un consensus général croissant parmi les États membres de la CUA sur le fait que la migration fait partie intégrante de l'intégration et du développement et la question de l'impact économique de la migration africaine se pose.[6] Elle se pose davantage dans ce contexte de libéralisation des échanges, d'intégration régionale et sous régionale mis en place par le projet de la Zone de Libre Echange Continentale Africaine (ZLECAf) et le protocole de libre circulation de l'Union africaine (Union africaine, 2018) élaboré depuis 2013 et adopté lors du sommet de janvier 2018.

Dès lors, tous ces instruments et initiatives entrepris en Afrique soulignent que la mobilité des personnes fait partie d'un idéal plus vaste d'une Afrique unie. La libre circulation des personnes à travers les frontières du continent demeure un élément essentiel de l'intégration régionale pouvant affecter la croissance économique et le développement de l'Afrique, selon la CUA. Par ailleurs, le débat actuel sur les déterminants de la croissance, plus largement le développement en Afrique, porte notamment sur la promotion de l'investissement privé soutenu par l'investissement public ainsi que la promotion du capital humain. Les écarts de croissance observés entre les économies africaines et celle du monde seraient aussi imputables à des taux de dépendance élevés, conséquence de la forte natalité qui caractérise les pays d'Afrique

[5] Lire Le développement économique en Afrique Rapport (2018)
[6] Lire Africa Migration Report : Challenging the Narrative IOM (2020)

subsaharienne et du manque d'emplois formels et non précaires (OIT,2021). Ensuite, la faiblesse des espérances de vie à la naissance en Afrique subsaharienne expliquerait aussi une part non négligeable de cet écart. L'investissement reste faible, ce qui limite les efforts visant à diversifier les structures économiques et à stimuler la croissance. Particulièrement, les pays d'Afrique subsaharienne sont confrontés à des défis tels que, le creusement des inégalités sociales, le souci de l'intégration dans l'économie mondiale en participant aux chaînes de valeurs mondiales. Par conséquent, il apparait donc, qu'une augmentation soutenue, inclusive et substantielle des taux de croissance du PIB dans ces pays associée à des améliorations significatives des conditions sociales soient nécessaires.

Dans ce contexte, et au regard de la dynamique migratoire qui s'opère sur le continent, il est donc plus que nécessaire d'optimiser les bénéfices (envoi de fonds, compétences, investissement, capital humain, effets de réseaux…) de la migration africaine qui est un phénomène social important qui affecte la socio-économie et la politique des pays d'accueil et d'origine. La migration peut contribuer au développement économique des pays africains. Elle peut contribuer à relever les défis de croissance et d'amélioration des conditions de vie des populations africaines. Les migrants sont des individus ayant des caractéristiques spécifiques. Parmi ces caractéristiques, celles liées au capital humain, notamment le niveau d'éducation, peuvent s'avérer déterminantes dans la stimulation du niveau de production (Schwartz,1973). Quels que soient leur niveau d'études, les migrants ont une valeur ajoutée dans les économies d'accueil. L'immigration peut être coûteuse pour les pays d'accueil, mais à long terme, les bénéfices générés par l'immigration peuvent être plus importants que les coûts qu'elle aurait engendrés. De plus, l'émigration peut, à travers les transferts de fonds, les transferts de technologies, la migration de retour après acquisition de nouvelles compétences, les effets de la diaspora, favoriser l'insertion des pays d'origine dans des réseaux internationaux, commerciaux, scientifiques et d'affaires afin de contribuer à leur développement. Par conséquent, ce contexte a mobilisé les chercheurs, les acteurs économiques, les pouvoirs publics, les ONG etc…, à orienter leur point de vue sur ces questions de migrations internationales qui relèvent d'une importance majeure. Cependant, contrairement à la littérature qui a porté sur les migrations internationales et le développement dans les pays développés qui est très vaste[7], les connaissances restent encore très limitées dans le cas des pays d'Afrique. Toutefois, des auteurs comme (Azam et Gubert, 2006 ; Chort et al., 2012 ; Lim et Simmons,

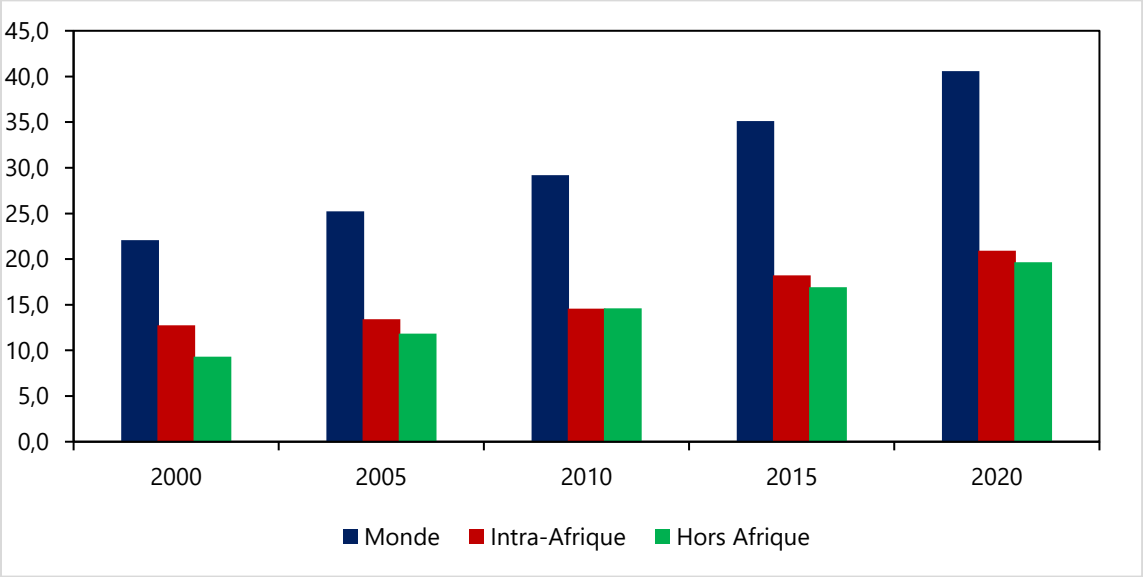
[7] Voir (Grossman 1982 ; Dolado et al., 1994 ; Boubtane et al., 2016 ; Borjas, 2003 ; Card 2001 ; Peri, 2012 ; d'Albis et al., 2018 ; Monras, 2020)

2015 ; Coulibaly, 2015 ; Coulibaly et al., 2018 ; Boubtane et Rault, 2023 ; Coulibaly et Gnimassoun, 2024) ont néanmoins analysé différentes implications économiques des migrations pour les pays d'Afrique. Mais, il n'en demeure pas moins qu'un gap de connaissances subsiste.

C'est dans cette perspective que cette thèse s'inscrit en posant la problématique suivante : ***Quels sont les effets des migrations internationales sur le développement économique en Afrique*** **?** Pour répondre à cette problématique, nous orienterons notre recherche sur trois principaux axes qui sont : (i) les implications des transferts de fonds des migrants sur l'inclusion financière dans les pays d'origine (ii) l'impact de l'immigration et de l'émigration sur la croissance économique des pays d'origine et de destination (iii) enfin les effets de l'immigration sur les variables du marché du travail des natifs dans le pays de destination. Ces trois points constituent les trois chapitres que nous développons dans la thèse.

Dans la suite du chapitre introductif, nous présentons les fondements théoriques qui globalement sous-tendent la relation entre migration et développement, ainsi qu'un état de la littérature empirique en la matière.

Figure 0.5. Évolution de la migration des africains en Afrique et en dehors de l'Afrique (millions de personnes,2000-2020)



Source : ONU-DAES, 2020

0.2. Fondements théoriques de la relation entre la migration internationale et le développement

La migration internationale et le développement sont des processus inséparables et interdépendants qui s'inscrivent dans un contexte davantage mondialisé. La migration ne peut remplacer le développement tout comme le développement ne dépend pas nécessairement de la migration, mais chaque processus peut influencer profondément l'autre, (OCDE, 2007). La problématique de la migration internationale demeure au cœur des enjeux environnementaux, économiques et sociaux contemporains. La question des liens entre la migration internationale et le développement occupe une place importante dans l'agenda des pays et des institutions. Parallèlement, elle suscite un intérêt majeur au sein de la littérature également. Fondamentalement, les différents auteurs, dont (Piper, 2009 ; Raghuram, 2009), dans l'étude de cette relation, mettent en évidence comment les mouvements de personnes, influencent le développement politique, social, économique et culturel des zones différemment impactées par ces mouvements. Inversement, ils explorent aussi, dans quelle mesure le développement de certains pays ou régions du monde est susceptible d'influencer les processus de migration, (Geiger et Pécoud, 2013 ; Bastia et Skeldon, 2020 ; de Haas, 2020). De ce fait, la migration et le développement sont analysées comme étant liées par des connexions complexes. Typiquement, de Haas (2010) propose un cadre conceptuel où la migration est perçue comme « une composante intégrante des processus sociaux et de développement plus vastes » mettant en lumière les interactions multidirectionnelles entre migration et développement à différentes échelles, « micro » et « macro ». En parallèle, aux débats sur l'usage et les impacts des transferts de fonds (de Haas, 2012 ; Levitt, 2015 ; Guermond, 2020), les conceptions de ce lien ont évolué en mettant davantage l'accent sur les potentialités des transferts de normes sociales également. Ces conceptualisations, ont également évolué pour intégrer les mobilités temporaires de personnes dans les analyses, et l'application d'une perspective de genre à la relation entre migration et développement (Piper, 2009 ; Bailey, 2010). Par conséquent, ces différentes études rendent compte d'une dynamique qui subsiste dans la littérature sur les questions de développement et de migration.

Toutefois, il convient de souligner que, l'impact de la migration sur le développement économique, trouve ses fondements historiques, théoriques dans les théories traditionnelles de la mobilité des facteurs de production, de la main d'œuvre en particulier et de leurs impacts sur le développement économique des nations, (Smith, 1776 ; Ratzel, 1882 ; Massey et al., 1999 ; Castles et Miller, 2009 ; Castles, 2009).

Les travaux d'Adam Smith, notamment dans La richesse des Nations (1776), offrent un cadre théorique traditionnel pour l'analyse des dynamiques entre migration et développement économique. Bien que, Smith dans ces travaux ne traite pas spécifiquement des migrations internationales, son intérêt pour le libre-échange et l'autorégulation des marchés, permet de considérer que, si pour l'auteur, le libre échange permet une création de richesse, alors la libre circulation du facteur travail aussi devrait être favorable au développement économique. Ici, la mobilité de la main-d'œuvre en termes géographiques telle que traitée par l'auteur peut être considérée comme des migrations. En effet, dans un contexte où certaines industries, ou régions manquent de main d'œuvre, la migration pourrait être considérée comme un mécanisme naturel d'ajustement économique (Smith, 1776). Par conséquent, en considérant la migration comme la libre circulation de la main d'œuvre, alors, l'émigration, en réduisant l'offre de main-d'œuvre, induit une raréfaction du facteur travail. Cette réduction crée une pression à la hausse sur les salaires, conformément à la loi de l'offre et de la demande, qui stipule qu'une diminution de l'offre d'un facteur de production, toutes choses égales par ailleurs, en augmente le prix. Par ailleurs, Smith met en lumière l'impact des disparités dans la dotation des facteurs de production entre les pays. Ces déséquilibres créent des écarts de rémunération, le facteur moins abondant bénéficiant d'une rente, définie comme un revenu excédentaire. Ainsi, dans les pays où la main-d'œuvre devient plus rare pour donner suite à l'émigration, les travailleurs restants peuvent percevoir une rémunération supérieure à leur productivité marginale, en raison de la tension sur le marché du travail. Adam Smith considérait la pauvreté et le chômage comme des causes qui incitent à la mobilité et les salaires suffisamment élevés pour subvenir aux besoins d'un travailleur et de sa famille comme un facteur d'attraction. La migration, en tant que libre mobilité de la main-d'œuvre, conduirait à une allocation optimale du facteur travail ainsi qu'à des changements d'emploi qui sont nécessaires pour égaliser les salaires entre les différentes zones géographiques. Ainsi, les conséquences sont non seulement la promotion de la croissance économique et de la prospérité, mais aussi la réduction de la pauvreté. Bien que Smith n'ait pas formulé explicitement le concept moderne de productivité marginale, sa théorie met en exergue des mécanismes économiques, qui influencent directement la fixation des salaires en fonction de la rareté relative des facteurs de production, ouvrant ainsi la voie à des développements théoriques ultérieurs (Rahut, 2010).

Dans la même veine, la position d'Adam Smith va aussi emmener des auteurs comme Mill (1848) à exposer son analyse sur le sujet en affirmant que, la migration permet de lutter contre l'évolution des rendements de la terre. Il considère également, qu'il s'agit d'un remède aux

faibles taux de salaire et à la baisse des taux de profit. De même dans ses travaux, l'auteur met en exergue le rôle du facteur travail dans la production de la richesse et la manière dont les salaires sont influencés par l'offre et la demande de main-d'œuvre. La migration, qui affecte l'offre de travail dans une région donnée, pourrait être considérée comme un facteur équilibrant le marché du travail. En effet, si les travailleurs migrent d'une région dont la main d'œuvre est abondante vers une région en pénurie de main-d'œuvre, cela tendrait à harmoniser les niveaux de salaire et à améliorer l'efficacité économique globale. En outre, Mill porte une attention particulière aux aspects sociaux de la migration. Il voit en la migration, un moyen d'équilibre et de maximisation du bien-être collectif. Il souligne cependant que, selon la manière dont elle est gérée, considérer la migration comme un mécanisme d'ajustement qui, bien que redistributif, pourrait détériorer ou atténuer les inégalités sociales. D'une part, la migration pourrait permettre aux travailleurs les plus pauvres d'améliorer leur condition, mais d'autre part, si elle n'est pas accompagnée d'une redistribution équitable des richesses, elle pourrait créer des tensions sociales. L'auteur soutient fortement la liberté des mouvements de facteur à condition que cela entraine une plus grande utilité collective. C'est ainsi que la majorité des théoriciens des 18ème et 19ème siècles mettaient en avant la migration comme un processus d'équilibre économique international, dans la mesure où le déclin de l'offre de main-d'œuvre qu'elle implique dans les pays d'émigration conduit à une augmentation de la rémunération de ce facteur.

Par la suite, dans les analyses théoriques portant particulièrement sur les causes et les conséquences de la migration, pour Ravenstein (1889), les mouvements de personnes sont bilatéraux, car la migration présenterait un processus de « push-pull ». Le processus de « push-pull » met en exergue les facteurs qui poussent les migrants à quitter un lieu et ceux qui les attirent vers un autre. En effet, l'auteur, dans l'élaboration des lois explicatives de la migration, observe au Royaume-Uni, l'exode des ruraux vers les villes. Ces lois explicatives de la migration reposent sur des critères tels que la distance (longue ou courte), la destination des migrants (rural ou urbain, périphérie ou centre) et la dimension. Ainsi, il montre que les flux migratoires entre deux pays ou zones dépendent donc de la distance qui les sépare et de l'espace qui va les accueillir. Pour les migrants, la force d'attraction d'un pays est d'autant plus forte que sa dimension est grande et sa distance par rapport aux autres pays est faible. Dans son analyse, les facteurs push sont des éléments liés aux conditions économiques, sociales, politiques, environnementales qui poussent les individus à quitter une zone. Et les facteurs pull, sont des conditions qui attirent les migrants vers une zone. Dans le contexte de la migration

économique, par exemple, les habitants d'une région rurale ou économiquement défavorisée en termes d'opportunités migrent vers les régions industrialisées où les opportunités d'emploi sont plus importantes. Le modèle « Push-Pull » de Ravenstein reste un cadre fondamental pour analyser la migration en termes de répulsion et d'attraction. Il permet de comprendre les causes profondes de la migration en distinguant entre les facteurs qui poussent les personnes à quitter un endroit et ceux qui les attirent ailleurs. Même si selon l'auteur, la cause la plus importante tiendrait aux motivations économiques des personnes migrantes, (Piguet, 2013).

A la suite de ces travaux théoriques prémisses, et afin de retrouver les mécanismes d'équilibre du marché et de rétablir la règle de rémunération du facteur travail en fonction de sa productivité marginale ; dans leur modèle d'équilibre général, typiquement, les néoclassiques se trouvent contraints d'introduire l'hypothèse de la mobilité des facteurs dans leurs analyses. Ceci, afin de faire face aux inégalités et contrer les rentes de situation. Pour ces derniers également, la migration est basée sur la différence des taux de salaires entre pays. Les travailleurs se déplacent d'un pays à taux de salaires bas vers un autre pays ayant un taux de salaire élevé. Dans le pays d'immigration, la migration abaisserait les salaires, car l'arrivée d'une main d'œuvre entraine une augmentation de l'offre de travail. Dans le pays d'émigration, le départ entraine une augmentation du taux de salaire résultant de la diminution de l'offre de travail. En conséquence, grâce à l'usage productif et optimal du facteur travail, cette mobilité conduira à l'égalisation des taux de salaire entre ces nations. L'égalisation des taux de salaire, résulte des différences de productivité entre les deux pays. Un processus d'égalisation des salaires se produira avec l'atténuation de la dynamique de la migration en diminuant les écarts de salaires entre les deux pays. Ce processus prend fin lorsque les productivités marginales du travail dans les deux pays s'égalisent. Dès lors, à l'équilibre, la migration internationale s'arrête et théoriquement elle n'est plus possible. Tout comme dans le contexte du commerce international pour les biens échangés entre pays. Selon Castles (2009), un cercle vertueux se dessine entre migration et développement. Au début du développement dans les pays pauvres, cela entraine la migration, à son tour, la migration renforce le développement qui conduira au rattrapage des taux de salaires entre pays pour ensuite diminuer les causes de la migration et enfin arrêter la dynamique de la migration. Cependant, Termote (1993) souligne que malgré les deux siècles de migrations internationales parfois massives, force est de constater que les écarts de salaire entre les pays riches et les pays pauvres se sont maintenus et parfois ceux sont accrus. Dieng (1998) renchérit en stipulant que ces controverses peuvent être liées à la productivité moyenne des migrants dans le pays de destination, mais aussi à une faible mobilité des travailleurs migrants entre les

secteurs d'activité dans l'économie d'accueil. En effet, les migrants n'ont pas forcément la même productivité en raison des difficultés d'intégration, d'adaptation culturelle, climatique, linguistique et de polyvalence, et donc le cercle vertueux serait remis en cause. De même, Baeck (1993) ; Portes (1997), montrent, dans une approche basée sur les fondements de l'économie politique marxiste, en particulier dans la théorie de la dépendance que, théoriquement la migration et le développement s'inscrivent dans un cercle vicieux. L'écart et la dépendance, du centre-périphérie conduisent à la migration, ceci accroît la dépendance des pays pauvres, qui conduit à l'appauvrissement et à la dégradation des écarts de revenus. A son tour, cette dégradation, représente une main d'œuvre librement disponible pour le capital dans les économies du centre.

Au regard des conclusions assez controversées, de nombreux travaux se sont encore attachés à modéliser les implications de la migration internationale sur le développement des économies des pays de destination d'une part et sur les économies des pays de départ d'autre part. Un pan de cette littérature s'inscrit dans le cadre conceptuel néoclassique standard. Dans cette approche, l'immigration est analysée comme un choc exogène affectant l'offre de travail et le niveau de capital physique par tête disponible dans l'économie d'accueil. Dans un modèle avec flexibilité parfaite des salaires et homogénéité du facteur travail, un afflux d'immigrés se traduit par une hausse de la population. À court terme, le stock de capital physique étant supposé fixe, le capital par tête diminue, ce qui réduit la productivité marginale du travail et donc le niveau de salaire d'équilibre. Cet effet de « dilution du capital », aurait des incidences négatives sur les variables des travailleurs dans l'économie d'accueil. Cependant, en relâchant certaines hypothèses restrictives, d'autres modèles démontrent des effets positifs de l'immigration. Ainsi, dans un cadre dynamique où la taille de la population active et le stock de capital s'ajustent graduellement, la baisse initiale des salaires induit en retour une hausse de l'épargne et de l'investissement. L'économie finit par contenir l'excès d'offre de travail induit par l'immigration et restaure l'équilibre économique pré-migratoire (Ben-Gad, 2004). Par ailleurs, en considérant la possibilité d'accumulation de capital humain grâce à la formation, l'expérience ou les transferts de compétences des migrants, l'afflux d'immigrés peut s'accompagner d'externalités positives sur les capacités productives des facteurs de production. Des auteurs montrent alors que dans une économie ouverte, la libre circulation des personnes, contribue à une accumulation de capital humain dans le pays d'accueil (Dolado et al., 1994 ; Boubtane et al., 2016), stimule l'innovation technologique, améliore l'allocation du capital entre secteurs d'activité et accroît les perspectives de croissance économique dans le pays

d'origine et de destination (Grossman, 1982 ; Williamson, 1995 ; Lundborg et Segerstrom, 2002 ; Dos Santos et Postel-Vinay, 2003 ; Clemens, 2011 ; Ottaviano et Peri, 2012).

En somme, si ce premier ensemble de contributions appuie son analyse sur des cadres conceptuels basés sur conceptions les théories entre autres néoclassiques d'une part, et les théories marxistes d'autre part ; ce qui nous procure des bases théoriques à l'analyse de la relation entre les migrations internationales et le développement ; une seconde approche mobilise des outils économétriques pour estimer les relations causales entre migration internationale et développement. Ces travaux empiriques, sont appliqués pour la plupart sur les économies des pays développés. Cette littérature estime l'impact de la migration internationale sur le développement des économies de destination d'une part et sur le développement des économies d'origine d'autre part. La section suivante, présente un état de la littérature empirique qui traite des effets de la migration sur les différents agrégats de développement des pays concernés.

0.3. Etat de la littérature sur les effets de la migration internationale sur le développement

La recherche sur la migration et le développement a évolué dans le monde en général, et ce de différentes manières. Cette section présente un état des connaissances empiriques sur les mécanismes par lesquels les migrations internationales peuvent affecter le développement économique. Pour chacun des canaux envisagés : la formation du capital humain, le capital physique, les transferts de fonds des migrants, les transferts de technologies et de normes sociales, la croissance économique, le marché du travail, la migration de retour, la stimulation des effets de réseaux d'affaires ; nous indiquons la littérature existante d'une part. D'autre part, nous, analysons cet état de la littérature des conséquences des migrations internationales dans le contexte des économies africaines.

0.3.1. Immigration et croissance économique des pays d'accueil

Sur la croissance économique, la littérature sur les migrations internationales distingue plusieurs mécanismes qui peuvent exister entre immigration et croissance à savoir entre autres le canal du capital humain, le capital physique, l'investissement public.

Le capital humain constitue l'un des principaux canaux par lequel l'immigration peut générer des effets sur la croissance économique des pays d'accueil. Les récents développements dans la littérature sur la croissance invitent les chercheurs à prendre en compte la contribution du capital humain des migrants à la croissance économique. Car le premier canal par lequel l'immigration impacte le pays d'accueil est un canal démographique. A travers ce choc démographique, dans le pays d'accueil, les immigrés peuvent contribuer de deux manières à l'accumulation du capital humain. Premièrement, à leurs arrivées ils accumulent des compétences et des connaissances. Ainsi, ils peuvent compléter ou même influencer l'accumulation des connaissances des natifs. Les immigrés peuvent jouer un rôle dans les professions en déclin (délaissé ou non par les natifs par exemples ou du au départ à la retraite dans des populations qui connaissent un vieillissement) et répondre aux besoins du marché de l'emploi. Par conséquent l'immigration contribuerait indirectement à l'accroissement total du capital humain ce qui se traduirait par une potentielle source de croissance économiques. Deuxièmement, les immigrés apportent pour la plupart d'entre eux un certain nombre de connaissances qui contribuent directement à l'accumulation du capital humain. A cet effet, Dolado et al. (1994) analysent l'effet du capital humain apporté par les immigrés sur le niveau de production et le taux de croissance des pays de l'OCDE. Dans un cadre conceptuel basée sur

les considérations du modèle de croissance de Solow augmenté du capital humain, la migration y est introduite. Les auteurs montrent qu'en effet, l'impact négatif de l'immigration sur la production par tête est d'autant plus faible que le capital humain des immigrés est plus élevé par rapport à celui des natifs. Ainsi l'impact négatif engendré par l'accroissement démographique est moindre lorsqu'il s'agit d'un accroissement induit par la migration. Cet effet négatif est estimé à moins de la moitié de celui induit par l'accroissement naturel de la population. Cette étude s'est essentiellement focalisée sur la contribution directe des immigrés au capital humain du pays d'accueil dès qu'ils arrivent. Alors que les immigrés peuvent contribuer indirectement à la formation du capital humain dans les économies qui les accueillent. Cela se produit si ces derniers suivent des formations et en acquièrent de nouvelles connaissances. A ce titre, il existe des preuves empiriques et un certain nombre d'arguments théoriques montrant que l'immigration peut avoir un impact positif à long terme sur la croissance du PIB des pays d'accueil que sont les pays de l'OCDE. (Lundborg et Segerstrom, 2002 ; d'Albis et al., 2018). La diversité accrue des compétences et dans une certaine mesure un taux d'innovation plus élevée induit par la migration peut engendrer un accroissement de la productivité globale des facteurs de production dans les pays en développement tels que les pays Africains, (soutiennent Ortega et Peri, 2014). Ces auteurs le démontrent dans leurs étude empirique menée sur un panel de pays en développement et pays développés. L'immigration à travers l'amélioration de la productivité globale des facteurs réussira à stimuler la croissance. Engler et Weisstanner (2020) trouve des effets similaires en estimant l'impact de l'immigration sur la croissance économique d'un panel de pays avancés. Ils montrent qu'en général, l'immigration améliore la croissance économique et constate qu'une augmentation de 1% des flux migratoires par rapport au total de la population active augmente la production d'environ 1% à la 5 -ème année. Ils expliquent qu'à court et moyen terme, les immigrés participent à la productivité des économies qui les accueillent. En effet, une augmentation des flux des migrants à une date donnée va avoir un impact sur la production à long terme. Le PIB par habitant va augmenter si et seulement si la production augmente plus vite que la population. A ce niveau le travail et son efficacité apparaissent comme une source de croissance. Le capital humain des migrants permet d'accroître la productivité des facteurs de production et donc peut stimuler la croissance.

Au regard des statistiques, sur les migrations, l'Afrique est aussi un continent dont le taux d'émigration est relativement élevé. Toutefois, la majorité des corridors d'émigration se produit entre différents pays du continent. La question des effets de la migration sur les économies du

continent qui accueillent ces émigrants se pose également. En prenant en compte les déterminants traditionnels et récents de la croissance, on s'interroge si la migration est bénéfique aux économies d'accueils Africaines. La migration en Afrique inclut de nombreuses personnes qui migrent à l'intérieur du continent ou vers d'autres continents. En 2020, selon le rapport de l'Organisation Internationale pour les Migrations (OIM) sur « *l'état de la migration dans le monde 2024 »*, plus de 21 millions d'immigrés d'africains vivent dans un autre pays du continent ce qui représente une hausse importante par rapport à 2015(environ 18,5 millions). Également le nombre d'africains vivants dans d'autres régions du monde a aussi connu une progression et on note 19 millions d'immigré africains vivant dans d'autres régions du monde en 2020 contre 17 millions en 2015. La dynamique migratoire observée sur le continent africain montre qu'il y'a une mobilité des personnes qui s'effectue entre les pays de ce continent et avec d'autres régions du monde. Cette mobilité que l'on observe est susceptible d'avoir des implications économiques. C'est ainsi, Ortega et Péri (2014) dans leurs études sur l'ouverture et le revenu ; estiment empiriquement sur un échantillon de pays en développement et pays développés, l'impact de l'immigration sur la croissance. Ils conclurent qu'à travers le canal du capital humain qui nourrit l'innovation et améliore la productivité globale des facteurs, l'ouverture à l'immigration impacte positivement le revenu des pays concernés. Typiquement, au Kenya, en Afrique du Sud, au Rwanda, en Ouganda, l'immigration est nourrie par la demande croissante de main d'œuvre qualifiée et non qualifiée aussi. Ces pays de l'Afrique subsaharienne au fur et à mesure que leurs économies se diversifient, elles attirent des migrants d'autres pays de la sous-région et même des autres régions du monde (Inde, Chine...). Les secteurs miniers, le secteur de la finance et de la technologie de l'information sont ces principaux secteurs qui font de ces pays une destination attrayante pour ces immigrés. Il apparaît alors que l'immigration peut contribuer à la production dans ces pays à moyen et long terme et dans une certaine mesure à court terme. Pareillement en Afrique de l'Ouest, le secteur agricole de la Côte d'Ivoire est l'un des secteurs qui attire les migrants notamment venus du Burkina Faso. Le Nigéria et le Ghana également accueillent une part non négligeable de migrants venant des autres pays de la sous-région. Le secteur du commerce est l'un des motifs de cette dynamique migratoire. Au regard de cette mobilité, la migration apparaît comme pouvant être un phénomène susceptible d'impacter les économies. Néanmoins, une prise en compte plus générale de l'effet de l'immigration sur les autres principaux déterminants de la croissance serait nécessaire pour effectuer une analyse plus complète.

En Afrique, cet aspect particulier de la contribution des immigrés à la croissance économique reste encore peu développé. En revanche, aux États-Unis Hunt et Gauthier-Loiselle (2010), évaluent la contribution des migrants qualifiés à la recherche fondamentale donc à l'innovation et montrent que les immigrés déposent deux fois plus de brevets que les natifs car ces derniers se spécialisent souvent dans le domaine de la science et de l'ingénierie. Ce phénomène peut également se produire dans les économies africaines contribuant ainsi à la stimulation de la croissance par l'amélioration de la productivité globale des facteurs. Peri (2012), en apporte la preuve empirique lorsqu'il étudie l'impact de long terme de l'immigration sur l'emploi, la productivité aux États-Unis au cours de la période 1990-2000. L'auteur montre que les immigrés ont favorisé une spécialisation efficace dans les tâches favorisant ainsi l'accroissement de la productivité globale des facteurs et aussi que l'immigration a favorisé l'adoption de nouvelles technologies très peu avancées. Il suppose, qu'une partie des effets positifs de l'immigration sur la productivité globale des facteurs serait due à une efficace spécialisation des immigrés et des natifs dans des tâches à forte intensité manuelle et à forte intensité de communication, dans lequel chaque groupe possède un avantage comparatif se traduisant par un gain sur l'efficacité globale des facteurs. Parallèlement à ces études, Coulibaly et al. (2018), estiment l'effet sur la croissance de l'ouverture au commerce et à la migration en se concentrant sur les pays africains. Les résultats de l'étude montrent que la migration n'a pas d'effet significatif sur le revenu par habitant en Afrique, quel que soit le partenaire. Cependant, Atanguegnima et al. (2023), estiment l'effet de l'émigration, immigration, sur la croissance économique de 54 pays d'Afrique. Les auteurs trouvent que l'immigration améliore la productivité globale des facteurs de production ce qui se traduit par un effet positif et significatif de l'immigration sur la croissance économique de ces pays.

En outre, au-delà du canal du capital humain mis en exergue précédemment, un autre canal de transmission de l'immigration sur la croissance est l'accumulation du capital technologique. si l'économie des pays d'accueil se développent à un rythme endogène la croissance induit par le capital humain des immigrés permettra d'acquérir de nouvelles technologies. Les entreprises acquièrent un stock de capital technologique qui permet d'améliorer les pratiques et générer encore la croissance. L'immigration peut également inciter les natifs à consommer les produits locaux stimulant la demande locale par conséquent l'investissement des entreprises locales. Elle pourrait accroître la compétitivité des entreprises africaines du moment où ces dernières seront amenées à investir dans leur capital technologique. L'investissement est un déterminant majeur de la compétitivité des entreprises. Il permet aussi d'augmenter les capacités de production des

entreprises leur permettant de répondre au surplus de demandes sans monter les prix donc sans baisser le pouvoir d'achat des travailleurs. L'idée est que les rendements marginaux décroissants du travail incitent l'entrepreneur à investir dans le capital. Cet effet de stimulation de la consommation locale pourrait s'observer à travers entre autres ces différents canaux : un effet multiplicateur sur la demande locale ; à travers la diversification de la demande et de l'offre local ; et à travers l'effet sur le marché du travail. Tout d'abord, en effet, l'arrivée d'immigrés peut entrainer une hausse de la demande de certains biens et services (logement, alimentation…). De ce fait, les entreprises en réponse à cette nouvelle demande peuvent augmenter leur production qui peut entrainer une hausse de la demande de travail venant de ces dernières, qui peut se répercuter sur les salaires et le pouvoir d'achat des natifs et immigrés qui seront embauchés. Cet effet sur les emplois et les salaires peut stimuler la consommation locale. L'effet de l'immigration sur la production et l'expansion des entreprises à fait l'objet d'études aux Etats-Unis d'Amérique. A cet effet, Olney (2013), a mis en exergue un effet positif de l'immigration sur l'expansion des entreprises locales aux Etats-Unis d'Amérique. Ensuite, l'arrivée d'immigrés avec des compétences complémentaires et surtout l'arrivée des migrants peu qualifiés qui pourraient occuper des emplois parfois délaissés ou non par les natifs, peut aider ces derniers à occuper des emplois d'avantage plus qualifiés et potentiellement mieux rémunérés qui pourrait agir sur les salaires et le pouvoir d'achat (Péri, 2012). Enfin, les immigrés peuvent introduire la consommation des produits et services diverses qui peuvent attirer aussi les natifs et s'intéresser à ce type de bien et donc stimuler la consommation locale, c'est le canal de la diversification, (Mazzolari and Neumark, 2009).

Enfin, l'immigration peut aussi avoir un impact sur l'investissement public et contribuer à la croissance économique (Grossman et Stadelmann, 2011 ; Speciale, 2012). L'investissement public par le biais de l'accroissement de la rentabilité du capital et des capacités de production d'une part et par le biais des externalités de croissance et de la productivité globale des facteurs d'autre part peut concourir à la croissance économique. A court terme l'accueil des migrants peut s'avérer couteux car elle engendrerait des dépenses supplémentaires pour l'intégration de ces derniers. Mais cette hausse des dépenses publics peut se traduire par un effet positif sur la croissance à long terme car cette nouvelle main d'œuvre qui aura été formée ou qui est déjà formée sera un enjeu central dans le futur de l'économie d'accueil. Théoriquement, dans un modèle de croissance endogène, il est démontré que l'investissement public joue un rôle très important dans la stimulation de croissance (Barro, 1990 ; Devarajan et al., 1996). Il facilite le travail des entreprises, améliore le capital humain des travailleurs et contribue à l'innovation.

Très peu d'études mettent en avant l'impact de l'immigration sur la croissance à travers le canal de l'investissement public en Afrique. A ce niveau également une piste de réflexion se dégage pour combler ce gap dans la littérature.

0.3.2. Émigration et croissance économique dans les pays d'origine

Les conséquences sur la croissance économique de l'émigration pour les pays d'origine les plus cités sont les transferts de fonds des migrants et la fuite de cerveaux. La fuite des cerveaux, phénomène caractérisé par le départ de travailleurs qualifiés. Ce départ prive les pays d'origine d'une force de travail qualifiée ce qui est perçue comme pouvant les appauvrir. Cependant, Docquier (2007) montre qu'un taux d'émigration qualifié limité entre 5 et 10% serait bénéfique à la fois pour les pays d'origine et de destination.

Au niveau des transferts de fonds et la croissance économique trois principales thèses se développent dans la littérature. La thèse développementaliste qui soutient que les transferts de fonds peuvent stimuler la croissance et le développement dans les pays d'origine à travers la réduction de la pauvreté et des inégalités, ou encore à travers la stimulation de l'investissement. La thèse pessimiste souligne que les transferts de fonds ont un impact négatif sur la croissance car ils favorisent la consommation des produits de base importés enrênant une appréciation du taux de change et la thèse neutre qui pour elle les transferts de fonds n'auraient aucun effet sur la croissance économique des pays d'origine (Clemens et McKenzie, 2018).

Stahl et Arnold (1986), dans leurs études sur le rôle des transferts de fonds dans le développement des pays asiatiques soulignent que théoriquement, dans une économie qui se développe à un rythme endogène pour répondre à la demande induite par la réception des remittances, les entreprises locales seront dans l'obligation d'accroître leur productivité et donc investiront dans les facteurs de production. Cet investissement en facteur de production est susceptible de stimuler la croissance à long terme. Néanmoins, l'augmentation de la consommation dans les pays d'origine des migrants peut avoir des effets différents selon l'activité économique et selon les capacités de production du pays d'origine. Si l'économie du pays d'origine n'est pas en mesure de répondre à la demande émanant des transferts des fonds en accroissant ses capacités productives alors la population pourrait se retourner vers la consommation des produits importés et donc ceci ne fera qu'aggraver le déficit commercial. Il est donc nécessaire que l'économie d'accueil s'organise pour répondre à la demande et optimiser l'accroissement de la demande induits par les transferts de fonds. On pourrait relever

ici le rôle de l'État qui pourrait faciliter l'activité des entreprises en mettant par exemple un certain nombre de taxes sur les produits importés. Ceci pourrait décourager la consommation de ces produits. Ensuite, l'État peut aider les entreprises avec la construction d'infrastructures et un soutien au financement du secteur privé pour que la demande des biens domestiques puisse avoir un effet positif sur l'expansion des entreprises locales.

En ce qui concerne le lien entre les transferts de fonds des migrants, le développement financier et l'investissement privé cette question est d'autant plus importante que l'investissement est un facteur déterminant de la croissance économique. Le développement du secteur privé étant un enjeu majeur pour la création de la valeur en Afrique particulièrement, l'émigration à travers les transferts de fonds serait donc susceptible d'avoir un impact positif sur le financement de ce secteur à travers l'amélioration du système financier. Les récentes études sur les principaux leviers pouvant stimuler l'investissement privé montrent que le relâchement des contraintes de liquidité est l'un des principaux leviers de l'investissement. Dans ce cas, les transferts de fonds étant une source de revenu supplémentaire peuvent avoir un impact ou peuvent être corrélés au crédit ou à l'épargne donc à des dépôts bancaires impliquant ainsi un développement du secteur financier favorable à l'investissement. L'effet des transferts des migrants seront d'autant plus importants que le secteur financier est moins développé. Ils permettront de palier aux problèmes de liquidité et d'accès au crédit. Ainsi les transferts de fonds sont susceptibles d'avoir un impact sur le développement financier et même sur l'inclusion financière et par là avoir un impact sur l'investissement pour stimuler la production de long terme. Ceci sera possible si les transferts de fonds engendrent une demande supplémentaire des services financiers. Théoriquement, le lien entre développement financier et croissance remonte au 20ème siècle. Schumpeter (1982), souligne qu'un système bancaire efficace stimule l'innovation technologique en identifiant les projets les plus rentables susceptibles d'accroître la productivité et par conséquent la croissance. Parallèlement aux études de Schumpeter, d'autres auteurs montrent que le développement financier n'implique pas seulement un accroissement de la productivité mais également une hausse de l'épargne et par conséquent un volume d'investissement plus élevé. Dans cette littérature théorique il existe également des auteurs (Beck et Levine, 2005 ; Levine,2005) qui montrent que la relation entre développement financier et la croissance économique n'est pas seulement une relation de cause à effet ; mais plutôt une relation bidirectionnelle. En effet, ces auteurs démontrent que le développement financier induit par l'offre pourrait avoir un impact positif sur la croissance (Beck et Levine, 2005 ; Levine, 2005). Cela s'explique par le fait que le secteur financier offrira des services aux agents économiques ce qui leur permettra d'investir

et d'avoir ainsi un impact expansionniste sur la croissance. Cependant, le développement financier induit par la demande serait plutôt le résultat d'une croissance économique. Car en période d'expansion les agents économiques développent plus de besoins financiers et ceci est susceptible d'avoir un impact sur le développement financier et ensuite sur l'investissement.

De tout ce qui précède, il en ressort que le développement financier peut avoir un impact sur la croissance économique à travers l'amélioration de la productivité, la stimulation de l'innovation et même la stimulation de l'épargne qui assurera l'investissement. En Afrique et précisément en Afrique subsaharienne le lien entre développement financier et croissance à fait l'objet de plusieurs études qui conclurent un rôle positif du développement financier dans la stimulation de la croissance économique à travers le financement de l'investissement des entreprises et des porteurs de projet à fort potentiel de croissance. C'est donc à juste titre que théoriquement les transferts de fonds des migrants étant corrélés avec les dépôts bancaires et les crédits sont susceptibles d'avoir un impact sur le développement financier et par conséquent la croissance économique dans les pays en développement. Par leur impact sur les contraintes de crédit ils sont susceptibles de stimuler de l'investissement. Les transferts de fonds après avoir servi à la consommation, serviront à investir dans des activités génératrices de revenu en milieu rural comme en milieu urbain. Cependant, le lien entre transferts de fonds et croissance par le canal de l'inclusion financière est très peu développés dans la littérature dans le contexte africains. Pourtant, théoriquement les transferts de fonds peuvent stimuler la demande des services financiers de base et l'inclusion financière en Afrique peut stimuler la croissance à travers la consommation, la formation du capital humain, la mobilisation des recettes fiscales domestiques et à travers l'investissement productif. A ce niveau également une piste de réflexion s'ouvre. En Afrique tout comme ou dans les autres économies en développement l'impact positif des transferts de fonds sur le développement financier et l'investissement est très peu reconnu. Les évidences empiriques qui ont traité de la question ont très souvent conclu que les transferts de fonds n'avaient aucun impact sur le développement financier et l'investissement privé et par conséquent sur la croissance (Azam et Gubert, 2006 ; Lim et Simmons, 2015 ; Coulibaly, 2015). Pour ces auteurs, les envois de fonds incitent les récipiendaires à réduire leurs efforts ou leur temps consacré au travail (problème d'aléa moral) et accroit les dépenses de consommation, précisément ceux des biens importés plutôt que le financement de l'investissement et de l'épargne.

Néanmoins, quelques études notamment celle de Coulibaly et Gnimassoun (2024), apportent la preuve empirique selon laquelle, pour un panel de pays d'ASS, les transferts de fonds des

migrants améliorent le déficit de la balance extérieur. Dans la même veine, l'études de d'Imad El Hamma (2018) portant sur l'Afrique du Nord et le Moyen-Orient, ont pu montrer que les transferts de fonds avaient un impact positif sur le développement de microentreprises et sur l'investissement. De nombreux migrants investissent leur épargne dans de petites entreprises, les biens immobiliers ou d'autres actifs dans les pays d'origine parce qu'ils connaissent les marchés locaux mieux que celui de leurs pays d'accueil. Olayungbo et Quadri (2019) montrent que les transferts de fonds avaient un impact positif sur la croissance à travers le développement financier dans 20 pays d'Afrique Subsaharienne. Parallèlement, des études récentes portant sur les transferts de fonds et l'industrialisation en Afrique ont apporté une preuve empirique selon laquelle les transferts de fonds avaient un impact positif sur les entreprises en générale et sur la création des entreprises manufacturières en Afrique en particulier, (Kaba et Moustapha, 2021). Dans l'industrialisation de l'Afrique on pourrait noter deux types d'effets des transferts de fonds un effet intensif parce que les transferts de fonds pourront permettre aux entreprises déjà existantes d'investir en capital pour entamer la transformation des produits locaux il pourrait également avoir un effet extensible c'est à dire les transferts de fonds peuvent directement aider à la création de nouvelles entreprises manufacturière et donc à la création d'emplois. Il ressort dès lors que le consensus sur l'impact positif des transferts de fonds sur le développement financier et sur l'investissement privé n'est pas encore trouvé mais on pourrait s'imaginer que des pays tels que le Kenya, le Nigeria, le Sénégal (Banque Mondiale, 2020) qui sont assez dépendants des transferts de fonds peuvent orienter ces transferts de fonds pour mieux stimuler l'investissement.

Même si la preuve empirique de l'impact direct des transferts de fonds sur l'investissement privé est très peu démontrée, ils ont une spécificité d'être contracycliques, ils augmentent en cas de ralentissement économique ou en cas de chocs macroéconomiques dus par exemple à des crises financières ou même en cas de crises sanitaire comme celle de la COVID-19, (Chami et al., 2005). Ces transferts de fonds soutiennent donc la stabilité macroéconomique et peuvent jouer un rôle stabilisateur qui contribuerait à la décision d'investissement (Ebeke, 2011). Dans une étude connexe utilisant des données de panel pour 64 pays d'Afrique, d'Asie et d'Amérique latine et des Caraïbes de 1987 à 2007, Fayissa et Nsiah (2012) constatent que les envois de fonds stimulent la croissance dans les pays dotés de systèmes financiers peu développés, en apportant une solution alternative de financement des investissements et en aidant à surmonter les contraintes de liquidité. En ce qui concerne toujours les investissements, la Banque africaine de développement (BAD) affirme qu'au Sénégal, en 2007, 11% des investissements productifs

ont été financés par les transferts de fonds. Ces investissements réduisent la pression sur le migrant en permettant à la famille de générer ses propres revenus. Ils peuvent également préparer le retour du migrant. En définitif, ils assurent la sécurité financière du migrant et de sa famille.

Outre le développement financier, les transferts de fonds peuvent contribuer à la formation du capital humain dans les pays d'origine. Les ménages qui reçoivent les transferts de fonds ont tendance à investir beaucoup plus dans la scolarisation des enfants et donc le capital humain qui en découle pourrait avoir un effet positif sur la production à long terme et sur la croissance. Il existe des études empiriques qui démontrent que les transferts de fonds stimulent la décision d'envoyer les enfants dans des établissements privés pour acquérir de meilleures compétences. Également, les ménages qui reçoivent ces transferts de fonds sont plus enclin à financer les études de leurs enfants sur le long terme. Cependant, il existe très peu d'évidence empirique sur le lien entre les transferts de fonds et la croissance à travers le canal du capital humain en Afrique. Cependant, des auteurs comme Garcia-Fuentes et Kennedy (2009), dans l'optique de trouver l'impact qu'ont les transferts de fonds sur la croissance économique par le biais du capital humain, testent cet effet sur un échantillon de 14 pays d'Amérique latine et des Caraïbes sur la période de 1975-2000. Leurs estimations montrent que les transferts ont un impact positif sur la croissance économique dans les pays représentatifs de la région Amérique latine et les Caraïbes. Cela n'est vérifié que lorsque, les pays bénéficiant de ces transferts de fonds ont un seuil minimum de scolarisation dans la population. Les transferts de fonds dans le contexte africain où la plupart des pays d'Afrique subsaharienne sont caractérisé par une prédominance du secteur primaire en l'occurrence l'agriculture peuvent stimuler la productivité agricole. En effet, lorsqu'un ménage agricole reçoit des transferts il dispose donc de revenus supplémentaires qui lui permettront de mécaniser un peu son agriculture d'accroître sa productivité ceci le permettra également de racheter beaucoup plus de terre et donc augmenter sa production. Autrement les transferts de fonds, permettront également de pouvoir se déplacer, de commercialiser ces produits et de diversifier ses activités.

La diversité des effets des transferts de fonds explique la difficulté à définir son impact direct sur la croissance économique des pays d'origine. Si les transferts de fonds sont susceptibles d'augmenter la consommation locale, ils peuvent tout de même entraîner une augmentation des produits importés si la production locale n'est pas suffisante. Également le relâchement du crédit induit par la croissance de ces transferts dans les pays récipiendaires peut avoir un effet positif sur l'appréciation du taux de change réel. A ce sujet, Acosta et al. (2007) ont développé

un modèle d'équilibre général dynamique stochastique sous un angle microéconomique qui considère aussi un canal additionnel par lequel les flux entrants de capitaux peuvent engendrer une appréciation du taux de change. En effet, une augmentation du revenu du ménage bénéficiaire entraîne une diminution de leur offre de travail. Or, une offre de travail craintive est associée à un niveau de salaire plus élevé (en termes de prix dans le secteur des biens échangeables), ce qui en retour se solde par un accroissement des coûts de production et une contraction du secteur des biens échangeables. Cela accélère donc l'inflation et réduit la compétitivité du pays d'origines (Khan & Islam, 2013). Ses effets négatifs sur le taux de change réel dépendront probablement du régime de change de l'économie d'accueil. Évidemment si l'économie d'accueil a un régime de change fixe cela peut amortir l'impact négatif des transferts de fonds sur le taux de change. Il en ressort donc que les effets des transferts de fonds sur l'investissement, le taux de change, la formation du capital humain et sur la consommation dépendent aussi du développement financier, du régime de change, de l'investissement public et le cadre institutionnel. Au niveau de la formation du capital humain par le financement de l'éducation des enfants les transferts de fonds peuvent simuler des dépenses d'éducation des ménages mais au même moment le fait de l'absence du parent peut entraîner un effet négatif sur la qualité du niveau scolaire de l'enfant. Puisque l'enfant est soumis à moins de contrôle parental dû à l'absence de ces parents migrants. Le cadre institutionnel des pays récipiendaires constitue également un moteur pouvant favoriser les effets bénéfiques des transferts de fonds sur la croissance. Ebeke (2012), montre que lorsque les transferts de fonds sont dirigés vers des pays à fort taux de corruption ceci est négativement corrélé aux dépenses publiques de santé et d'éducation. Mais en raison du manque de données sur la qualité institutionnelle, l'identification du mécanisme précis est extrêmement difficile à déterminer. En conclusion un niveau élevé de développement financier et un environnement institutionnel solide est nécessaire pour permettre aux transferts d'améliorer la croissance économique. Au regard de tout ce qui précède les transferts de fonds des migrants peuvent influencer la croissance économique des États concernés. Ces effets transitent par trois principaux canaux qui sont : les investissements (El Hamma, 2018), la facilitation de l'accumulation du capital humain (Mim et Mabrouk, 2014 ; Garcia-Fuentes et Kennedy, 2009), l'amélioration de la productivité totale des facteurs de production (Lim et Simmons, 2014) ; la balance courante (Coulibaly et Gnimassoun, 2024).

Outre le canal des transferts de fonds, l'émigration peut favoriser le commerce inter-régional ou les investissements bilatéraux à travers l'implication de la diaspora dans le développement de leurs pays d'origine. Elle peut également générer des transferts de normes sociaux qui auront

un impact sur la décision d'investissement indépendamment des transferts de fonds. Dès lors, il ressort que l'impact négatif qui est la fuite des cerveaux induits par l'émigration peut être relativement compensé par les bénéfices que l'émigration peut induire sur le moyen et long terme. Typiquement dans le cas de l'Afrique, les diasporas africaines peuvent contribuer à la simulation de la croissance dans leur pays d'origine en jouant un rôle déterminant dans le commerce bilatéral ou dans les relations bilatérales et dans la promotion les investissements directs étrangers. A ce titre, l'exemple de la compagnie aérienne Ethiopians Airlines détenus majoritairement par la diaspora éthiopienne peut être cité. Il y a de plus en plus des migrants africains qui décident de rentrer dans leur pays d'origine et de se lancer dans l'entreprenariat contribuant à la création de valeur. Le manque de données sur la migration de retour des diasporas africaines rend compte du manque d'études empirique évaluant l'effet de cette migration de retour sur le développement du continespént. Dans le corridor France et Afrique par exemple avec le programme du « Pass Africa » du Conseil Présidentiel Français pour l'Afrique, on note de plus en plus que la diaspora africaine, qui a décidé de s'installer définitivement ou sur le long terme à l'étranger contribue au tissu productif de leur pays d'origine à travers la création d'entreprise dans leurs pays d'origine, en France ou entre les deux espaces.

0.3.3. Immigration et marché du travail

L'estimation des effets de l'immigration sur les variables du marché du travail a fait l'objet d'une vaste littérature utilisant différentes approches méthodologiques pouvant prendre en compte un défis majeur des problèmes d'endogénéité. Tout d'abord, nous avons une approche méthodologique dans laquelle les auteurs estiment l'impact de l'immigration par marché de travail régionaux. Cette approche est une approche par zone géographique. On estime l'impact de la part des travailleurs immigrés dans les populations régionales sur l'emploi et les salaires des travailleurs natifs dans ces régions. En supposant que ces différents marchés de travail régionaux sont relativement autonomes, suffisamment isolés les uns des autres. Les unités d'observation dans cette approche sont les différentes régions considérées. En suite une autre approche méthodologique se base sur des expériences naturelles pour estimer l'impact des immigrés sur les variables du marché de travail. Les auteurs observent des situations dans lesquelles les immigrants ont migré massivement vers un endroit pour une courte période et pour des raisons totalement exogènes. Enfin une méthodologie s'est également développée en utilisant des modèles structurels du marché du travail qui estiment l'impact de l'immigration au niveau du marché du travail national selon des interactions entre des travailleurs natifs et

immigrés possédant différents niveaux d'éducation et d'expériences. Dans ce cas les unités d'observations sont les différents groupes de compétences résultants de la combinaison entre niveau d'éducation et expérience professionnelle.

Premièrement, parmi les travaux utilisant la méthodologie qui se base sur une approche par zone géographique, nous notons Grossman (1982). L'auteur, en estimant une fonction de production translog avec des données des régions métropolitaines issues du recensement des Etats-Unis d'Amérique de 1970 ne trouve pas d'impact significatif de l'immigration sur les conditions du marché de travail des natifs. Dans ladite fonction de production, il considère les travailleurs natifs et immigrés comme facteur de productions distincts. Grossman (1982) fait son analyse en coupe instantanée et utilise l'estimateur « Seemingly unrelated regression equation » pour estimer l'impact de la proportion d'immigrés suivant les différents marchés de travail régionaux sur l'emploi et les salaires des natifs. Suivant cette même approche méthodologique, Borjas (1983, 1987) utilise une fonction de production de type Leontief généralisé et en arrive aux mêmes conclusions. Altonji et Card (1991), pour leur part sans émettre d'hypothèse sur le type de fonction de production, estiment l'impact que des changements dans la proportion d'immigrés dans la population régionale peuvent avoir sur les salaires et l'emploi des travailleurs natifs de plusieurs régions métropolitaines. Les résultats pour les estimations en coupe instantanée et en différence premières suggèrent que l'immigration n'a pas d'impact significatif sur les salaires ni sur l'emploi des natifs en utilisant l'estimateur des moindres carrées ordinaire et des variables instrumentales pour les estimations en différence première. L'instrumentation consiste à utiliser la part des immigrés par région pour la période précédente afin expliquer la variation dans le stock d'immigrés au cours de la période d'étude. Les auteurs expliquent que les immigrants ont tendance à se diriger plus vers des régions où il y'a déjà une forte concentration d'immigrés. Dans la même veine, Grenier (1992) a mené une analyse au Canada. Il estime l'impact de la proportion des immigrés par régions sur les salaires des travailleurs natifs peu qualifiés et des jeunes dans ces différentes régions. Leurs résultats d'estimation montrent également que l'immigration n'a pas d'impact significatif sur les salaires des natifs considérés. Parallèlement à cette étude, Akbari et DeVoretz (1992) font une analyse du même type que celle que Grossman (1982) a faite pour les États-Unis. Toutefois, même en estimant une fonction de production translog, les auteurs utilisent l'industrie plutôt que la région comme unité d'observation. Ils utilisent une répartition des immigrés et des natifs dans 125 industries des différentes régions du Canada pour l'année 1980. Ces derniers arrivent à la conclusion selon laquelle l'immigration n'a pas d'impact significatif

sur les variables du marché de travail des natifs. Card (2001) dans son étude sur l'impact de l'immigration sur les emplois des natifs aux États Unis d'Amérique apporte la preuve empirique selon laquelle une augmentation d'un point de pourcentage de la part d'immigrés entraîne une diminution de l'emploi des natifs de 1 point de pourcentage. L'auteur adopte une approche par région et utilise l'estimateur des variables instrumentales pour prendre en compte des biais d'endogénéité. En utilisant le taux d'immigrés dans une région i donnée de la période précédente celle de l'étude, il fait l'hypothèse que les effets de réseau peuvent être des sources de motivation pour des immigrations futures.

Deuxièmement, la méthodologie également dominante dans la littérature empirique s'appuie sur l'approche par groupes de compétences de Borjas (2003). Elle consiste à ventiler les travailleurs natifs et immigrés dans des groupes homogènes sur la base de leur niveau d'éducation formelle et de leur expérience professionnelle accumulée. On suppose alors que les membres d'un groupe de compétence donné sont facilement substituables entre eux, mais plus difficilement avec ceux d'autres groupes. Des variations de la part de migrants au sein de chaque groupe permettent d'identifier l'impact causal de l'immigration sur les salaires et les taux d'emploi des natifs au niveau du marché du travail national. Cette méthode permet notamment de contrôler les biais supplémentaires liés à la relocalisation des natifs des suites de l'immigration. Cette méthodologie proposée par Borjas (2003) se fonde principalement sur deux hypothèses structurelles. D'une part, elle considère que les travailleurs au sein d'un segment du marché du travail défini par le croisement d'un niveau de qualification et d'une tranche d'expérience professionnelle sont parfaitement substituables. Autrement dit, un jeune diplômé du supérieur est facilement remplaçable par un autre jeune diplômé aux qualifications équivalentes. À l'inverse, sa substituabilité est plus limitée avec des profils différents comme un ouvrier expérimenté sans diplôme. D'autre part, la mobilité des travailleurs natifs entre cellules de qualification est supposée plus coûteuse que leur réallocation géographique au sein du pays. Ainsi, un jeune diplômé aura du mal à devenir ouvrier spécialisé même s'il déménage, alors qu'un ouvrier pourra changer de région sans modifier radicalement de métier. Partant de ces deux postulats, des variations exogènes de la part de migrants au sein de chaque segment professionnel permettent d'identifier l'impact causal des flux migratoires sur les perspectives d'emploi et de salaires des travailleurs natifs. En effet, si l'afflux de migrants détériore les conditions des natifs, on doit observer une relation négative entre variation migratoire et évolution des revenus ou taux d'emploi au sein des cellules affectées. Par conséquent, un signe négatif (positif) suggère que les natifs et les migrants au sein de la cellule sont substituables

(complémentaires), tandis qu'une absence d'impact traduit une ségrégation des immigrants sur des créneaux professionnels distincts.

Le débat sur la substituabilité et ou la complémentarité entre les travailleurs immigrés et natifs est un des principaux sujets de discussion dans la recherche sur les migrations internationales et le marché du travail. Cette question reste déterminante pour comprendre et estimer l'impact de l'immigration sur les variables du marché du travail des pays d'accueil. Ottaviano et Peri (2012) ont souligné que si les migrants apportent des compétences spécifiquement demandées dans l'économie d'accueil, leur présence peut ne pas affecter négativement les salaires et les perspectives d'emploi des travailleurs natifs. En effet, dans ce scénario, les immigrants complètent la main-d'œuvre existante, apportant des compétences distinctes qui peuvent manquer dans la population native. Cependant, cette vision est contrastée par des observations qui indiquent qu'un afflux de main-d'œuvre immigrée, surtout si elle possède des qualifications similaires à celles des travailleurs natifs, peut se révéler néfaste pour ces derniers. Dans de tels cas, les immigrants entrent en concurrence directe avec la force de travail des natifs, ce qui peut conduire à une pression à la baisse sur les salaires et à une réduction des opportunités d'emploi pour les natifs, particulièrement dans les secteurs où les compétences des immigrants et des natifs sont largement interchangeables. D'autres recherches empiriques sont nécessaires pour comprendre les implications migratoires sur les marchés du travail africains aux niveaux micro et macroéconomique. Les questions ouvertes portent notamment sur les effets selon les profils de qualifications, les secteurs économiques, l'économie formelle et informelle, ou encore entre pays de départ et d'arrivée. Les impacts sur la création d'emplois et la productivité sont aussi relativement peu étudiés. Dans le contexte africain, l'impact de la migration sur les marchés de l'emploi est un sujet de préoccupation croissante. L'Afrique, avec sa population jeune et en croissance, fait face à des défis uniques en matière de création d'emploi et de gestion des flux migratoires. Ainsi, la question de l'impact de la migration sur les variables du marché du travail en Afrique se pose davantage.

0.3.4. Effets de réseaux : diaspora, commerce international, IDE

Outre la croissance économique, le marché du travail, la migration peut avoir des effets sur la balance commerciale et sur les investissements indirects étrangers (IDE). La création de réseaux des migrants peut faciliter les mouvements de marchandises, et des savoirs entre pays. Il existe une vaste littérature sociologique et quelques études des économistes sur la question des effets

de réseaux, des IDE induits par la migration (Gaillard et Gaillard, 1998 ; McKenzie et Rapoport, 2004 ; Kugler et Rapoport, 2005 ; El Yaman et al., 2007).

Les effets de réseaux peuvent se produire de la façon suivante : la migration peut entraîner des migrations ultérieures et favoriser également le commerce international, les investissements directs étrangers, les transferts de technologies et de normes vers les pays d'origine. Il s'agit des effets de réseaux résultants de la création de réseaux d'affaires, de commerce de biens et d'IDE (Combes et al., 2005). Les sociologues Gaillard et Gaillard, (1998) avaient relevé qu'un effet de réseau résultant de la création de réseaux d'affaires et de commerce étaient dû aux externalités de la diaspora. (Faini, 2002) démontre également que le commerce international et la migration internationale sont complémentaires. Cette complémentarité viendrait du fait que les réseaux de migrants permettent de lever les contraintes du commerce liées aux asymétries d'informations sur la nature des biens échangés par exemple. Parallèlement, Coulibaly et Gnimassoun (2024) montrent dans leurs études sur un panel de pays d'ASS que l'émigration impacte le solde de la balance courante des pays d'origine. En effet, pour ces auteurs l'émigration des personnes moins qualifiés vers les pays développés contribuerait davantage à améliorer le déficit extérieur à travers les remittances reçus. Car ces fonds favoriseront l'épargne domestique et amélioreront le déficit. Malgré les études sur la question, le canal de transmission de la migration vers la balance commerciale reste encore très peu développé et la question demeure ouverte. La libre circulation des biens et des personnes sont complémentaires et pourrait être favorable au développement du commerce intra africain. Pour se faire, un cadre institutionnel apparaît donc nécessaire pour pouvoir tirer bénéfice de la migration. Ce constat est aussi valable pour le lien entre migration et investissement direct étranger. A ce niveau également, une piste de recherches s'ouvre concernant, le rôle que peuvent jouer les migrations internationales dans le développement du commerce intra et extra Africain à l'aube de la ZLECAf. Néanmoins, la littérature empirique existante sur la question, et qui a porté pour la plupart sur les pays développés, démontre que principalement la migration qualifiée facilite les transferts de technologies, les relations entre investisseurs des pays d'accueil et des pays d'origine. A cet effet, Kugler et Rapoport (2005), démontrent que dans les années quatre-vingt-dix, les investissements directs américains vers un pays donné étaient positivement corrélés au stock d'immigrés qualifiés originaires de ce pays mais négativement corrélés au flux des migrants au cours de la période considérée. On note dès lors qu'à long terne la migration peut stimuler les investissements directs étrangers des pays d'accueil vers les pays d'origine des migrants. Ceci s'expliquerait par l'effet de réseaux qu'aurait constitué ces immigrés au fil des

années dans l'économie d'accueil et également des liens que ces derniers auraient gardés avec leur pays d'origine. Par ailleurs, veine El Yaman et al. (2007), montrent dans leurs études sur les migrations, en utilisant des données sur les migrations et les IDE intra -européens, entre 1990- 2000, qu'il existe une complémentarité entre migration qualifiée et les IDE alors que les liens entre migration non qualifiée et IDE se caractérisent plutôt par une relation de substituabilité.

Le second effet de réseaux qui concernent la promotion de la migration future peut s'expliquer par le fait que : les immigrés à leurs arrivés forment des groupes et des associations pour faciliter l'intégration des futurs migrants. Ils font circuler les informations sur les processus d'immigration ce qui peut rendre moins coûteuse la migration au fil du temps. Ce canal à fait l'objet de plusieurs études sociologiques, mais très peu d'études économiques dont celles de McKenzie et Rapoport, (2004) ; Docquier et Rapoport, (2005). Ces auteurs viennent aux mêmes conclusions que les sociologues et démontrent que les réseaux de migrants ainsi crées fournissent de l'aide aux futurs migrants dans leur recherche d'emploi réduisant ainsi les coûts et les risques liés à la migration. Les coûts de la migration décroissent avec la taille du réseaux formé dans les pays d'accueil. Ceci accroît dans le pays d'origine le rendement espéré de l'émigration et de l'éducation et donc la formation du capital humain. Ils conclurent en disant qu'une fois que les réseaux se forment, la migration devient de plus en plus un phénomène endogène.

Sommes toutes, malgré tous ces mécanismes à l'œuvre entre migrations et développement, et cette littérature abondante qui estime les effets de la migration sur le développement, force est de constater que tous ces aspects des effets de la migration sont encore très peu étudiés dans le cas des économies africaines. D'où cette question de recherche qui innerve la présente thèse. ***Quels sont les effets des migrations internationales sur le développement économique des pays Africains ?*** L'objectif de la thèse est : Premièrement, d'estimer les effets des transferts de fonds des migrants sur l'inclusion financière dans les pays d'origine en Afrique subsaharienne. Deuxièmement, estimer les effets des flux migratoires sur la productivité totale des facteurs, en accordant une attention particulière au rôle du capital humain et des transferts de fonds des migrants. Troisièmement, dans une perspective d'analyse microéconomique, l'objectif est d'estimer l'impact de l'immigration sur l'emploi, le temps de recherche d'emploi et les salaires des natifs sur le marché du travail du pays de destination. A travers cet objectif, la thèse vise à contribuer à la littérature économique sur les migrations internationales et le

développement des économies en développement. Dans la section suivante nous explicitons les contributions spécifiques à cette littérature.

0.4. Contribution de la thèse

L'objectif de cette thèse est d'analyser l'impact des migrations internationales sur le développement des économies des pays d'Afrique. Cet objectif se décline en plusieurs sous objectifs traités dans trois chapitres distincts. Chaque chapitre a été rédigé sous la forme d'un article destiné à une publication dans une revue académique. La thèse cherche à contribuer globalement à la littérature qui analyse les effets des migrations internationales sur le développement des économies en développement à travers ces trois essais.

Précisément, sous la théorie de l'intermédiation financière et de son impact sur le développement (Schumpeter, 1982), le premier essai estime les effets des transferts de fonds des migrants sur l'inclusion financière dans les pays d'Afrique subsaharienne. L'inclusion financière fait référence à l'accès et à l'utilisation des services financiers par tous les segments de la population. Huit indicateurs d'inclusion financière sont utilisés. Ces indicateurs sont liés aux services bancaires classiques et aux services des institutions de microfinance. La méthodologie dans ce premier essai repose sur un modèle de panel dynamique estimé par la méthode des moments généralisés en système (SYS-GMM) afin de prendre en compte des biais d'endogénéité. Les résultats montrent que les remittances ont un impact positif et significatif sur le niveau d'inclusion financière, en particulier sur les indicateurs des institutions de microfinance. Par ailleurs, des régressions économétriques supplémentaires, ont permis de mettre en évidence les canaux de revenu, de réduction d'inégalités et de promotion d'investissement comme canaux de transmission entre remittances et inclusion financière en ASS. Ce premier essai se situe dans le prolongement de la littérature qui analyse l'impact macroéconomique des remittances sur le développement financier, particulièrement sur l'inclusion financière (Gupta et al., 2009 ; Aggarwal et al., 2011 ; Coulibaly, 2015 ; Inoue et Hamori, 2016 ; Machasio, 2018). Par rapport à cette littérature, l'étude se distingue en utilisant des indicateurs supplémentaires des institutions de microfinance comme indicateurs de finance inclusive. L'ajout de ces indicateurs offre une perspective plus large sur les effets des remittances en matière d'inclusion financière en Afrique. Car l'inclusion financière étant un concept multidimensionnel, se limiter aux seuls indicateurs bancaires à notre sens limiterait l'état des connaissances en matière de migration et de finance inclusive. De plus, notre objectif fut d'analyser les effets des remittances sur l'inclusion financière dépendamment des différents prestataires de services financiers en ASS. Cette démarche, à notre connaissance, n'a pas encore fait l'objet d'étude dans le cas des pays d'Afrique.

En effet, ce premier chapitre qui estime les effets des remittances sur l'inclusion financière dans les pays d'ASS, révèle des implications pour le développement économique. Les résultats montrent que ces flux financiers jouent un rôle important, en améliorant l'accès aux services financiers pour les populations qui, autrement, seraient exclues du système bancaire classique. Car, en étant une source de revenu supplémentaire, les remittances facilitent l'accès aux services financiers des bénéficiaires, contribuant ainsi à une plus grande inclusion financière. Cette dynamique est particulièrement notable dans les régions où les systèmes bancaires sont peu-développés ou inaccessibles à une partie de la population. L'afflux de remittances peut stimuler la demande de services financiers, encourager l'innovation dans le système financier et inciter les institutions financières à étendre leurs services à des segments de population auparavant exclus. Par ailleurs, les ménages bénéficiaires peuvent davantage utiliser ces fonds pour investir dans l'éducation, l'immobilier, les petites entreprises, stimulant ainsi l'activité économique et la création d'emplois. Ce phénomène peut conduire à un cycle vertueux de croissance économique, où l'augmentation de l'épargne et de l'investissement se traduit potentiellement par une amélioration des conditions de vie et une augmentation des opportunités économiques.

Le deuxième essai de cette thèse cherche à comprendre les dynamiques de croissance économique en Afrique en lien avec la migration, en estimant l'impact des flux migratoires tant l'immigration que l'émigration sur la productivité totale des facteurs (PTF). Ce chapitre cherche à contribuer à la littérature qui analyse les effets de la migration internationale sur la croissance économique des pays en développement (Ortega et Peri, 2014 ; Coulibaly et al., 2018 ; Boubtane et Rault, 2023). Ainsi, dans le cadre de ce deuxième essai, nous analysons les effets de la migration sur la productivité totale des facteurs dans un cadre conceptuel basé sur les considérations des modèles de croissance endogène.

L'analyse économétrique est basée sur un ensemble de données que nous avons compilé et qui nous permet d'évaluer l'impact des flux migratoires sur la PTF en distinguant l'émigration des populations natives et l'immigration des étrangers par niveau d'éducation. Sur un panel de 53 pays d'Afrique allant de 2000 à 2020, afin de prendre en compte les biais d'endogénéité, nous estimons une équation de panel, en utilisant la méthode des moments généralisés (GMM) avec des variables instrumentales externes. Les résultats montrent d'une part, un effet positif de l'immigration sur la PTF. Cela suggère que les immigrants contribuent à la croissance économique non seulement par leur force de travail, mais aussi par leur apport en compétences et en connaissances, qui peuvent stimuler la productivité totale des facteurs. En revanche, l'émigration, notamment celle des travailleurs qualifiés, a un effet négatif sur la PTF.

Les résultats de cet essai ont des implications pour les politiques de développement en Afrique. Ils soulignent la nécessité d'adopter des politiques migratoires qui maximisent les bénéfices de l'immigration tout en atténuant les effets négatifs de l'émigration. Cela peut inclure des stratégies pour attirer et retenir les compétences au sein des pays africains, ainsi que des mesures pour garantir que les remittances soient utilisées de manière productive. Il serait également important pour les pays Africains de créer des environnements propices à l'investissement et à l'utilisation efficace et productive des remittances. Cela implique de développer des systèmes financiers solides et adéquats, d'améliorer la gouvernance des migrations internationales et de fournir un cadre réglementaire stable qui encourage l'investissement productif.

Le troisième essai, de cette recherche aborde l'impact de l'immigration sur le marché du travail des pays en développement comme les pays de destination, avec une application spécifique au cas du Togo. L'essai se penche sur trois variables du marché du travail : l'emploi, les salaires et le temps de recherche d'emploi des travailleurs natifs. L'approche méthodologique s'inspire des travaux de Borjas (2003), en effectuant des régressions par doubles moindres carrés ordinaires (DMC) sur des données issues de la première et dernière enquête emploi disponible. L'approche méthodologique consiste d'abord à regrouper les travailleurs dans des groupes de compétences basés sur leurs niveaux d'éducation et leurs expériences professionnelles. Ensuite, elle consiste à estimer, un effet direct de la part des travailleurs immigrés dans ces groupes sur les variables du marché du travail des natifs dans les groupes correspondants. Ainsi, les résultats économétriques montrent que globalement, l'immigration a un impact négatif peu significatif sur l'emploi et les salaires des natifs.

Ce dernier chapitre vise à contribuer à la littérature qui analyse les effets de l'immigration sur le marché du travail des pays en développement comme pays de destination (Gindling, 2009 ;Ozden et Wagner, 2014 ; Biavashi et al., 2018 ; Viseth, 2020). Par rapport à cette littérature, nous adoptons une approche complémentaire qui réside dans l'approche méthodologue et dans l'utilisation d'une base de données emploi qui n'a encore fait l'objet d'aucune étude sur la migration dans le cas du Togo. L'essai prend en compte dans ses estimations, les effets de l'immigration sur les emplois des hommes et des femmes occupant les emplois formels et informels dans des groupes de compétences d'éducation et d'expérience professionnelle. Par ailleurs, l'essai définit des groupes de compétences alternatives basés sur l'expérience professionnelle et le secteur d'activité. En regroupant les travailleurs par secteur et expérience plutôt que par éducation, nous proposons une définition alternative des groupes de compétences. Cela permet de tenir compte des spécificités des pays en développement, où une

grande part des actifs sont peu diplômés, mais possèdent des compétences professionnelles. Ainsi, nous apportons des informations supplémentaires sur les hétérogénéités qui existent sur les effets de l'immigration selon les différents secteurs d'activités et le genre. En outre, la mesure du salaire que nous utilisons provient d'une enquête emploi. Il s'agit des salaires perçus à la suite d'un emploi occupé par l'individu et non de son revenu total incluant tous types de revenus, comme ce fut le cas dans les études existantes. De plus, les variables salaires et temps de recherche de l'emploi offriraient une nouvelle information sur l'impact de l'immigration sur le marché du travail au Togo.

En définitive, cette thèse se veut apporter un éclairage empirique supplémentaire sur l'aspect économique des migrations internationales en Afrique, que ce soit dans les pays d'origine ou de destination. La combinaison de différentes méthodologies économétriques sur des données disponibles permet de mieux comprendre les effets économiques et de servir de soubassement pour des recommandations en termes de politiques publiques.

0.5. Bibliographie

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1. Chapter 1 : Migration, Remittances and Financial Inclusion : What Do We Learn from African Countries?

1.1. Introduction

Africa is still among the regions that observe the fastest growing concerning the annual gross domestic product (GDP) growth rates (WDI, 2021). Despite this economic growth, several observations are emerging about the fact that this growth is not translating into social inclusion and improved living conditions (Ngepah, 2017). For development-finance authors such as Levine (2005) and Demirguc-Kunt et al. (2017); one of the levers the continent could rely on, to stimulate inclusive growth is the financial inclusion of all populations. A financial system that can provide different services at different stages of economic development to ensure continued inclusive growth. But, speaking of financial inclusion, Africa is still lagging other regions of the world. According to the Global Findex Database Report (2017), in Sub-Saharan Africa, the average bank penetration rate is 20%, compared to nearly 100% in Organization for Economic Co-operation and Development (OECD) countries and 63% in the rest of the developing countries. As a result, the trend today is for countries to adopt more commitments to financial inclusion, considering that financial development that stifles access and effective use of financial services by economic agents would be counterproductive.[8]

Financial inclusion is not fully different from financial development. However, the latter occurs when financial instruments, markets, and intermediaries improve information and transaction costs and, as a result, can better perform the five financial functions (Levine, 2005). While the former is a dimension of the latter (Sahay et al., 2015). The arguments for financial inclusion in development as outlined by the authors are clear: it facilitates the efficient allocation of productive resources and reduces the cost of capital. In addition, access to appropriate financial services significantly improves day-to-day financial management, increases the mobilization of savings for investment, expands the class of micro-entrepreneurs, and enables more poor people to invest in themselves, thereby creating employment that can help Africa's development (Sarma and Pais, 2011). From the above, there is no doubt that the direction of the financial landscape has changed in recent years in developing countries and the focus has now shifted from financial development in general to financial inclusion.

[8] The World Bank provides support to governments in their strategy to fight financial exclusion as well as sub-regional central banks such as the Central Bank of West African States.

Financial inclusion refers to all initiatives that make financial services available, accessible, and affordable to all population segments. It goes beyond improving access to credit to include improved access to savings and insurance products and access to financial education. It is also a well-functioning financial system that enables households and businesses to engage more actively in the economy while protecting the rights of users. Financial inclusion is a recent concept, but it is also very complex and multidimensional. It encompasses a variety of aspects related to the accessibility, availability, use, and efficiency of financial services offered and available to economic agents (Sarma, 2008). According to the African Development Bank Report on Financial Inclusion in Africa (2013), financial inclusion is provided mainly in Africa by banks and credit institutions such as microfinance institutions (MFIs) to remove constraints related to access to bank credit and the effective use of the latter at lower costs. Recently, another dimension of financial inclusion has emerged, namely access to mobile banking or "mobile money." It has revolutionized the context of financial inclusion in Sub-Sahara African countries, through the widespread use of smartphones and the internet, which allow people to have a mobile bank account on their phone to carry out transactions (receive or send money) without going through traditional bank branches. The other components of the financial system are either developing (in the case of markets) or undergoing restructuring. Financial exclusion in Sub-Sahara Africa is actual. This situation is maintained by ricochet the population depletion, especially for women and youth. Exclusion also affects small companies, thus contributing to the regression of the development of local communities.

While inclusive growth requires access to financing, there is no doubt that this financing today goes beyond internal financing, driven by banks, microfinance, and credit agencies, to international funding for development. In this context, migrant remittances have also become an important resource for African economies. It complements Official Development Assistance (ODA) and Foreign Direct Investment (FDI) and tends to surpass them (WDI, 2019). For this reason, Africa is now part of those regions of the world that are experiencing strong migration dynamics, with 40 million Africans living outside their country of birth, according to the United Nations Department of Economic and Social Affairs (UN-DESA, 2020). World Bank estimations show that these financial flows from migration reached about USD 548 billion in 2019, far exceeding ODA and FDI, which amounted to USD 166 billion and USD 534 billion, respectively. Despite a slight downturn following the Covid-19 pandemic, at the macroeconomic level, remittances are becoming an important and reliable source of external financing for African economies. They also allow households and economic agents to build up

savings, which allows them to access capital and smooth out their resource constraints on production needs. At the microeconomic level, remittances have the particularity of reaching households directly to contribute to an increase in their resources, which will be allocated to investments, improvement in living conditions, and even a reduction in inequalities in access to bank credit in the countries. Abundant literature has therefore focused on the macro and microeconomic impacts of remittances on several development outcomes. These studies have particularly focused on the role that remittances could play, in consumption, human capital accumulation, investment (Garcia-Fuentes and Kennedy, 2009; Combes and Ebéké, 2011; Docquier et al., 2012; Chort et al., 2012), economic growth, and financial development (Coulibaly, 2015).

However, very few studies have analyzed the effect of remittances on financial inclusion in migrants' countries of origin, depending on the financial services providers. For banks or MFIs, for instance, remittances could enable them to build a profile of potential future clients. Probably, the better they perform, the more they can freeze the credit constraints on households, which will become more relaxed. This will lead to easier access to credit in these countries and their effective use. In addition, the migrants who send the money encourage the recipient to contact the institution through which the money is sent. Suppose that institution is a bank or microfinance offering additional financial products, in that case, this interaction can create demand for products such as bank account opening, savings, credit, mortgages, and insurance, enhance financial literacy, and build a healthy financial backlog with these institutions. Through the inflow of remittances, the bank gains insight into the client's income and expected future funds, thus indicating the potential creditworthiness of the recipient, as a constant (future) flow of transfers can be used to repay loans, thus reducing the client's risk profile (Anzoategui et al., 2014).

Therefore, this study aims to analyze the effect of remittances on eight dimensions of financial inclusion in SSA countries, particularly on the indicators drown by banks and microfinance institutions. The paper builds on the literature that analyzes the macroeconomics effect of remittances on financial development in developing countries. But we put a greater focus on financial inclusion, which is currently the focus of debate, particularly its effects on enhancing inclusive growth in developing countries in general and Sub-Saharan Africa in particular. By emphasizing the role of remittances in promoting financial inclusion through two main financial intermediaries, banks and MFIs, our analysis is more complete. In contrast to the existing

literature (Aga and Peria, 2014; Machasio, 2018; Ojefu and Ogebe, 2019), which is limited to banks variables as financial inclusion indicators, we go further by introducing MFIs. Thus, we have paid particular attention to these gaps by considering several alternative indicators to capture financial inclusion more comprehensively. Moreover, we contribute to the literature that considers that African international migration is not a fatality for the origin economies. It can also be beneficial. Concretely, our contribution to literature is in two folds. This study will contribute to the existing literature in Sub-Saharan Africa on the issues of maximizing the benefits of African migration and the relationship between remittances and financial inclusion by highlighting MFIs. It also proposes to highlight heterogeneities depending on the service provider (banks versus microfinance), since MFIs are closer to the vulnerable and rural populations who are in general the remittance recipients than the traditional banks in the fight against financial exclusion in Sub-Saharan Africa. MFIs are mostly intended for low- and middle-income households, which are most excluded from the banking system in Africa, hence the interest in adding MFIs services. In sum, we introduce news indicators of financial inclusion and use a methodology and a macroeconomic approach that is not yet widely used to our best known in the relation between remittances and financial inclusion in SSA.

Thus, the study uses a sample of 32 SSA countries over the period 2004–2019 and relies on the dynamic generalized method of moments (GMM) in the system to overcome the endogeneity issues related to the endogenous character of remittances, bidirectional causality and other factors. The GMM system estimator combines first-difference equations with level equations in which their first differences instrument the variables. By doing so, the results show an overall positive effect of remittances on the level of financial inclusion. These effects are more significant for microfinance institutions indicators than for those of traditional banks. Specifically, a one percentage point increase in the share of remittances in GDP leads to a 5.6% increase in MFIs penetration through the number of MFIs versus a 1.8% increase in bank penetration. This suggests that remittances provide recipients with the opportunity to open bank accounts, increase their savings, and access the financial system while allowing also the unbanked to access existing and new financial products such as those from microfinance institutions. Exploring the channels through which remittances influence financial inclusion, our empirical results highlight that the positive effect mainly operates through revenue, private investment and reduction of inequalities. Our results survived a battery of robustness exercises including additional control variables, excluding outliers. We also present heterogeneity

analysis to capture the effects of remittances population type, followed by a comparative analysis with other external financial inflows.

To achieve our objectives, this study will be structured as follows: the first part will be devoted to a literature review on the link between remittances, banks, and MFIs. The second part will present the data used, followed by stylized facts. Finally, we will lay out an empirical framework to investigate the impact of remittances on financial inclusion, followed by a discussion of the results and robustness measures that will conclude the study.

1.2. Literature Review

1.2.1. Remittances and Financial Development

The literature analyzing the macroeconomic effects of remittances has long focused on the link between remittances and economic growth and poverty. The results of this literature have been mixed. On the one hand, it shows that remittances have no significant impact on the growth of recipient economies (Acosta et al., 2007; Chami et al., 2009), while on the other hand, some publications emphasized that remittances promote economic growth (Giuliano et Ruiz-Arranz, 2009; Adams et Cuecuecha, 2013; Lim et Simmons, 2014). However, these results remain conditioned by the level of financial development, the quality of the institutions in the recipient countries, the composition of the samples, and the estimation methods used. In that way, the relationship between remittances and financial development has been put forward and has also given rise to extensive literature that provides controversial results. As mentioned by Aggarwal et al. (2011); Karikari et al. (2016), remittances positively impact financial development in the short run by allowing households to access bank credit. To the extent that remittances appear to be more stable than other foreign capital flows and counter-cyclical. They can also increase banks' loanable funds, promote the development of banks, and promote domestic credit. Olayungbo and Quadri (2019) reached similar conclusions on a sample of 20 sub-Saharan African countries from 2000-2015 using Pooled Mean Group (PMG). On the other hand, Bettin and Zazzaro (2012), considering the interaction between remittances and banking efficiency, find that remittances are complementary to financial development rather than promoting the financial system. Similar results were obtained by El Hamma (2019) using the instrumental variables method to address possible endogeneity of remittances to assess the relationship between remittances and financial development based on a study of a sample of 14 countries in the Middle East and North Africa. At the same time, by relaxing household financial constraints, these transfers may reduce household demand for loans and reduce financial sector development. Coulibaly (2015) demonstrated in a sample of 19 Sub-Saharan African countries from 1980 to 2010 that remittances have no significant impact on financial development. He uses the Seemingly Unrelated Regressions (SUR) method to demonstrate that there is no evidence to support the idea that remittances promote financial development in SSA countries, and that financial development does not seem to be a relevant determinant of remittances received in these countries either. Ambrosius and Cuecuecha (2016), find a negative effect on the demand for financial services from banks of remittances recipients, thus constraining financial development. The results of Karikari et al. (2016), confirm this finding when they

demonstrate a negative impact of remittances on long-term financial development in a sample of 50 African countries from 1990-2011. From the above, there is still no consensus on the impact of remittances on the financial development of recipient economies especially in African economies.

Therefore, the questions that arise are: Is it appropriate to talk about financial development in Sub-Saharan Africa? Could this lack of consensus be due to the indicators used to measure financial development, given that the financial system in Sub-Saharan Africa is mainly driven by banks, microfinance institutions, and mobile banking?

Financial development is often measured in the literature by variables such as bank credit to the private sector, credit ratio to the private sector to GDP, and broad money to GDP (M2). (Beck et al., 2000 ; Gupta et al., 2009 ; Nyamongo et al., 2012 ; Coulibaly, 2015). These different variables are somewhat formal proxies for the state of a country's financial system. Moreover, Gregorio and Guidotti (1995) emphasized that the main channel of transmission and assessment of the financial system should be the productivity of investment and not its initial volume measured by bank credit. Furthermore, these financial development indicators in Africa are generally low, reflecting a very weak formal financial system. Yet, remittances are mostly funds for low-income households (sometimes transiting through informal channels) who are mostly excluded from the mainstream banking system and even from financial markets. All these factors could be reasons for the mixed results of the effects of remittances on financial development in SSA. In addition, following the adoption of the Millennium Development Goals (MDGs) in 2000 by the United Nations and the Sustainable Development Goals (SDGs) in 2015, which considered financial inclusion as a key foundation for development, have gradually prompted Sub-saharan African governments to work towards a more inclusive financial system. From now on, we will talk more about financial inclusion than financial development. Promoting financial inclusion has become a major objective for most African economies. The financial inclusion project in Sub-Sharan Africa aims to increase access to finance for micro, small and medium enterprises to ensure sustainable private sector financing for job creation for youth. Indeed, these countries have been focusing on financial inclusion as a lever for economic and social development. This has prompted researchers to reorient their research, and over the past few decades, they have been working to assess the role of remittances in promoting financial inclusion. To this end, the following section provides a synthesis of this literature. We first present the theoretical assumptions that support the relationship between financial inclusion and remittances, and then we present the results of major empirical studies on the

topic. We distinguish those that have addressed the relationship between remittances and microfinance institutions.

1.2.2. Remittances and Financial Inclusion

Recent developments in literature have yielded few studies on the determinants of financial inclusion and its relationship with international migration and remittances. This justifies the lack of theoretical studies on remittances as determinants of financial inclusion. Yet, theoretically, Schumpeter (1912) emphasized the primary role of financial institutions, in this case, banks, who, target financial entrepreneurs, encourage technological innovation, and capital accumulation and thus stimulate economic growth. Thus, financial development stimulates growth by increasing the investment rate and by allocating capital to the most productive projects. For Levine (1997), financial intermediaries must facilitate financial transactions and provide risk coverage and diversification of assets. Hence, the efficiency of the financial system stimulates growth by reducing transaction costs while ensuring that capital is allocated to the most profitable projects. To do this, the financial system must be inclusive to allow all segments of the population to have access to financial services. Johnson and Arnold (2012); Demirgüç-Kunt et al. (2017) and Dissaux (2019), demonstrate that an inclusive financial system promotes inclusive and sustainable growth. They point out that once the financial system can provide services according to the population's needs, this will encourage growth. This positive impact on growth will depend on the number of people using these services. The higher the number, the higher the growth rate. The literature has been looking at the potential determinants of the efficiency of this financial system. And remittances have emerged to promote the activity of financial institutions, the main actors in this inclusive finance.

Theoretically, remittances can impact the activity of its providers and promote inclusive finance in several ways. Anzoategui et al. (2014) identify two channels through which remittances can affect financial inclusion. First, remittances may create a need for financial services among recipient households and make them eligible to access savings products offered by financial institutions. Second, remittances would increase the likelihood for recipient households to obtain loans. Indeed, by reducing the information asymmetry between lenders and borrowers, financial institutions would be more willing to lend to remittance recipients. This can improve the activities of these institutions and the financial inclusion of these households.

The empirical literature has taken two main directions. The first is the analysis of the direct effects of remittances on financial inclusion. Most of the works conclude that remittances positively impact financial inclusion on the one hand and have a negative or neutral impact on the other. Much of these works are conducted in a South American context and at the microeconomic level. Reasons for the positive effects of remittances on financial inclusion include that the increased income of recipient households leads to an increase in demand for financial services (Ambrosius and Cuecuecha, 2016), the promotion of financial literacy that ultimately leads to financial inclusion, and the reduction of information asymmetry risk that increases the creditworthiness of remittance recipients with lenders (Yoshino et al. 2017). Ambrosius and Cuecuecha (2016), show from a survey of Mexican households that remittances encourage informal financial services more than services from banks. Households that reported receiving migrant remittances made greater use of deposit accounts with credit unions and savings cooperatives and formed tontines and village savings banks. The results of the Bangake and Eggoh (2020), study confirm these findings. Demirgüç-Kunt et al. (2011), also show that remittances, by stimulating household demand, contribute to a significant increase in financial depth, particularly the number of bank branches and the number of deposits in banks. In the same vein, El-Savador, Anzoategui et al. (2014), use household survey data to examine the effect of migrant remittances on household use of savings and credit products from formal financial institutions. They find that although remittances positively impact financial inclusion by promoting the use of deposit accounts, they do not have a significant effect on the demand for and use of credit from banks. They support their results by showing that by relaxing credit constraints, remittances could reduce the need for financing from banks while increasing the demand for savings instruments. Most of the existing work in Africa is also microeconomic. Kassim and Tomoya (2014); Munyegera and Matsumoto (2016), show a positive and significant effect of remittances on the probability of requesting and using mobile money that translates into an improvement in household living standards in Uganda. In parallel to this study, Aga and Peria (2014) show that remittances significantly influence the probability of opening an account with a banking institution. Ajefu and Ogebe (2019), come to the same conclusions by proving that in Nigeria, receiving remittances increases the likelihood of using financial banking services such as opening deposit accounts and mobile money services. In contrast, Uchenna et al. (2015), use logistic regression to analyze the link between remittances and financial inclusion and provide empirical evidence that remittances do not increase the demand for banking services among recipients. Aga and Pería (2014), use survey data covering 10,000 households in five Sub-Saharan African counties to estimate the impact of remittances

on financial inclusion. They find that remittances increase the probability of opening a bank account.

At the macroeconomic level, improved data on financial inclusion has allowed for the occurrence of a few rare studies on the link between remittances and financial inclusion in recent years. But in the context of Sub-Saharan Africa, there are no macro-level studies on this issue to our knowledge.

Nevertheless, in a larger sample of 38 countries in Asia and Oceania between 2001 and 2012, Inoue and Hamori (2016), conducted a study analyzing the macroeconomic impact of remittances on banks' financial services. They provide empirical evidence that remittances contribute to expanding the domestic network of commercial banks. Aggarwal et al. (2011), on 109 countries from 1975 to 2017, found that remittances impact positively credit and deposits. Similarly, in a sample of 61 developing countries, Machasio (2018), also finds that remittances positively impact financial inclusion by increasing financial inclusion by about 2.49 per cent. In contrast, Gautam's (2019) results question the ability of remittances to boost the level of financial inclusion in developing countries. His study covers 107 developing countries. He shows that remittances lead to a significant decline in deposit accounts in banks. On the other hand, they do not significantly affect the level of credit from these institutions. Based on the banks as the only actors in financial inclusion, in developing countries, especially in poor countries, households receiving remittances are mostly excluded from the banking system. This could explain the negative effect that the author finds. Therefore, it would be more interesting to go further in the analysis by looking at other financial service providers' closeness to low-income populations to get a more comprehensive view of the macroeconomic impact of remittances on financial inclusion. This is the question that this study addresses in the context of Sub-Saharan Africa.

The second direction taken by the empirical literature is to analyze the effects of financial inclusion in the relation between remittances and economic growth. Most notably, Orozco and Fedewa (2006), show a strong potential for financial inclusion to enhance the beneficial effect of remittances on countries' economic growth. Chuc et al. (2021), come to similar conclusions by analyzing financial inclusion as a transmission channel between remittances and economic growth. They conclude that by increasing household financial inclusion, remittances positively impact economic growth in 60 low- and middle-income countries over the period from 1996 to 2018. Their results show that financial inclusion, in general, could exacerbate the growth-

stimulating effect of remittances. This is because the actual use of financial services by recipients could boost this effect. Nyamongo et al. (2012), also come to the same conclusion. They conclude that promoting an inclusive financial sector would reduce the number of unbanked populations and encourage the effective use of products for productive investment, which would positively affect growth.

1.2.3. Remittances and Microfinance Institutions

The exclusion of low-income households from financial services is widely recognized as a barrier to growth and poverty reduction in developing countries (Jalilian and Kirkpatrick, 2002; Beck et al. 2007; Honohan and Beck, 2007). The value of microfinance is that it provides hope for a better life (living better) by reducing economic vulnerability, increasing people's capabilities and initiative, and federating around them the imperative of strengthening relationships. The contribution of MFIs to development is found at the economic, political, and social levels. Despite this interest, the above-mentioned empirical studies focus more on remittances in the traditional banking sector as covered by official data. Generally, they do not include information on MFIs, even though they are, on average, both socially and geographically "closer" to remittance recipients than traditional banks. MFIs have considerable experience serving low-income clients with characteristics like those of remittance recipients, and they are often located in rural areas where traditional banks are not present. Therefore, a few studies point to the combination of remittances with MFIs services as particularly promising for the financial inclusion project (Sander and Barro, 2003; Orozco and Hamilton, 2005; Hastings, 2006; Ambrosius, 2011). In a study based on Mexican household data, Ambrosius and Cuecuecha (2016), found a significant and positive correlation between remittances and ownership of savings and credit accounts with cooperatives and village credit unions but not with commercial banks and formal institutions. Anzoategui et al. (2014), demonstrate that remittances have favoured the use of savings and deposit accounts with MFIs and banks in El-Salvador. Nevertheless, despite this empirical evidence, the potential of remittances to foster inclusive finance for low-income households by MFIs in Africa has been and remains largely unexplored. Hence the interest of our study is to fill the gap in the literature.

1.2.4. Transmission Channels and Conceptual Framework

We theoretically highlight two direct main channels through which remittances will influence the level of financial inclusion. Remember that the issue of financial inclusion is part of the theory of financial intermediation and its impact on economic development (Schumpeter, 1982). So, the direct channels are, revenue and investment channels. However, an indirect channel could be the improvement of the performances of MFIs and the reduction of inequalities.

First, we have the revenue channel to explain the mechanism between remittances and financial inclusion. It is glaring that, by increasing household income, remittances could create a need for financial services such as savings among recipient households and make them eligible to access the various financial products offered by financial institutions. As a result, there will be an improvement in the indicators of inclusive finance in the migrant's home economy as financial intermediaries will have to respond to the demand induced by the influx of remittances. Secondly, through the investment channel, remittances would increase the likelihood of recipient households' chances of credit from financial intermediaries. In fact, by reducing information asymmetry problems between lenders and borrowers, financial institutions would be more willing and able to lend to remittance recipients so that they can finance projects. This will be possible because, by maintaining a deposit book with them, the institutions have a certain amount of information that allows them to know the profile of the potential borrower. This can therefore improve the activity of these institutions and promote the financial inclusion of these households. Particularly at the level of commercial banks, by stimulating demand and effective use of services by households, remittances can contribute to increasing the demographic and geographic penetration of banks. We hypothesize that remittances will positively impact the opening of deposit accounts and access to credit by commercial banks.

At the level of MFIs, where the particularity of our study lies, remittances will essentially contribute to the improvement of the social and financial performance of these institutions whose main objective is to promote microcredit to the poor. Unlike previous studies such as those (Aga and Peria, 2014; Coulibaly, 2015; Ogebe and Ajefu, 2019), which only focus on bank penetration and credit provided by commercial banks as an indicator of inclusive finance and financial development, we introduce the contribution of MFIs to financial inclusion in SSA. Certainly, by using MFIs performance variables as an indicator of financial inclusion, we expect

to capture the effect of remittances on demand for financial services (savings and credit) among all other categories of the population, especially among those excluded from the banking system but who also participate in the economic activity of the countries in our sample. This is because those MFIs' performance variables capture information on clients who are excluded from the banking system. Therefore, limiting ourselves to the banking system variables as an indicator of inclusive finance seems relevant to us, but it remains less comprehensive and less inclusive. There may be a loss of information on the capacity of remittances to promote inclusive finance in sub-Saharan Africa. The additional information that these indicators provide is on the inclusive aspect of financial development. They provide information on financial practices among the poor and those excluded from the banking system and financial markets. The main reason behind the choice of this approach is that remittances contribute to the performance of MFIs, and indirectly contribute to the promotion of financial inclusion of poor populations. This is because the more efficient MFIs are, the more sustainable they are, and the more sustainable they are, the more they will be able to meet the needs of economic agents. This hypothesis is inspired by the results of the study by Ambrosius and Cuecuecha (2016).

The performance of MFIs is captured firstly by the scope of their activities which counts the number of clients served by the MFI. This is usually measured in the number of active borrowers (Schreiner, 2002). Next, outreach counts the volume of deposits collected and the number of deposit accounts opened. Deposits are important because, although all poor people (most of the MFI's clients) can make deposits and save to facilitate consumption and invest later, they are not all creditworthy. Thus, deposits reinforce the incentives for sustainability and duration of savings. Depositors avoid some MFIs if they are not sure of their financial viability because they fear that they will not get their deposits back. To have deposits, an MFI must have the confidence not only of donors, investors, and regulators but above all of its clients. And finally, depth, which considers the type of client through the level of social income, is usually measured by the average size of loans granted to beneficiaries (Barry and Tacneng, 2014). These three main indicators are practical tools for MFIs and stakeholders to assess these institutions' social and financial performance. In this study, we use these three indicators to measure the demand for financial services from MFIs and add the number of MFIs per country to capture the supply of services or penetration. On these four indicators, we expect a positive impact on remittance flows. If the performance of an MFI conditions its capacity to last over time to allow its clients to have stable income over the long term, the mechanism remains the same as that of the banks. Still, the effect is likely to be more amplified given the similarities

between the profiles of MFIs clients and most remittance beneficiaries. A plausible explanation could be that remittances allow beneficiaries to save cash, which is reflected in demand for deposit accounts. It also allows them to access other potential products such as financial education services, establishing tontines and village funds that are not available in banks, or payment or even credit. These demands, in turn, could be met by increasing the supply of financial services by promoting the viability of MFIs. In this way, remittances could improve the accessibility of their beneficiaries in rural areas or not to financial services. Consequently, remittances appear to ease the financing constraints of recipients with traditional banks by enabling them to access credit with MFIs, given that it is based on a relationship of trust that MFIs grant credit.

1.3. Empirical Strategy

This section will conduct an analysis that will highlight the impact of remittances on financial inclusion in Sub-Saharan Africa. Indeed, financial inclusion and financial development seem to be strongly correlated, to the extent that financial development is sometimes used as a broader indicator of financial inclusion. Also, the effect of remittances on financial inclusion may depend on the country's financial system structure. However, in the presence of financial inclusion, the financial development indicator (M2 or credit to the private sector) is not included in the model because we are interested in the inclusiveness of the inclusive financial sector in Africa, which has been an issue in vogue in recent decades. Therefore, the focus will be on the contribution of remittances to the promotion of financial inclusion indicators, which we believe are more likely to promote a more inclusive financial system, thereby making it more appropriate to the Sub-Saharan context.

1.3.1. Data and Sources

The study covers a panel of 32 Sub-Saharan African countries spanning between 2004 and 2019, for which data are available. Moreover, the financial inclusion concept was propelled in the 2000s in these countries, which justifies the choice of our study period. Data were extracted from the Financial Access Survey (FAS) for the main banking indicators of financial inclusion; from the Microfinance Information Exchange, Inc., Market database (MIX market) for data on Microfinance Institutions and from the World Development Indicators (WDI) for remittance flows and control variables such as gross domestic product per capita, total population, level of education and trade openness.

The variable of interest concerns remittances. It is measured as the personal remittances of emigrants received by countries of origin relative to GDP. Personal remittances include all the transfers either in cash or kind sent by migrants and individuals in the country of origin. The definition provided by the World Bank, which we will describe as "strict", states: "Personal transfers represent all current monetary transfers received by resident households and sent by a non-resident household. They, therefore, include all current transfers between residents and non-residents." This narrower definition has the advantage of better targeting migrants' transfers by excluding other flows and accounts for remittances from non-salaried individuals.

To measure financial inclusion, the literature emphasizes that the measurement indicators are multiple and varied. They range from service supply indicators to demand indicators. The

supply of financial services is mainly assessed by two indicators: the overall demographic penetration rate and the overall geographical penetration rate of banks. Demand is captured by indicators related to the actual use of financial services, which include the number of bank accounts, the number of deposit accounts with financial institutions, the value of loans granted by these institutions, as well as the means of payment, such as the number of credit and debit cards AfDB (2013). Referring to the work of Sarma (2008), we also identify other dimensions of inclusive finance that are mainly used in the financial inclusion literature. Availability and accessibility of financial services or supply (measured by the number of bank branches and ATMs per 100,000 adults and 1000 km2 and the number of bank accounts as a percentage of the total population). Financial services use or demand (measured by the volume of credit and deposits in banks as a percentage of GDP and the number of debit and credit cards per 100,000 adults). Mobile banking (measured by the number of mobile money accounts, and the value of mobile and internet banking transactions as a percentage of GDP).

Thus, the financial inclusion variable in this study will essentially take the following dimensions: On the one hand, we mobilize indicators such as the number of bank branches per 100,000 adults, ATMs per 100,000 adults, the value of deposits, and the volume of loans broken down by banks (Financial Access Survey database). O On the other hand, the number of MFIs, the number of active borrowers in an MFI, the volume of deposits, and the value of loans are broken down by these microfinance institutions (Mix Market database).

The objective is to present the effects of Remittances on financial inclusion through two main financial actors in sub-Saharan Africa. These are commercial banks and microfinance institutions. These two agents are the main actors in the financial inclusion process in these countries supported by mobile banking providers, essentially telecommunication companies.

Commercial banks are essentially the financial institutions that embody the formal financial system of a country. They are the primary providers of deposit, savings, and credit services of a specific value to a population category.

Microfinance is aimed at low-income populations and those excluded from the banking system. It is essentially the provision of low-value financial services such as savings, loans, insurance services, and financial education. Microfinance is growing and becoming a significant component of most financial systems, particularly in SSA countries. In the work of McKinnon and Shaw (1973) on finance for development, microfinance is considered an important tool for a country's economic development. Access to financial services is essential to encourage

entrepreneurship among low-income populations to ensure financial independence and raise their income above the poverty line. MFIs provide finance to the poor by granting loans without collateral but rather based on trust and proximity, as these clients do not usually have assets. Most MFIs operate at the local level and use a relationship-based lending system to obtain information about their clients and build client loyalty (Schreiner, 2002). In sub-Saharan Africa in particular, MFIs are increasingly present and operate mainly in rural areas that are difficult to access and where banks are not particularly present.

Our empirical analysis of the impact of remittances on financial inclusion is also based on the literature analyzing the determinants of the use of financial services. Theoretically, Zeller (1995) shows that access to credit and savings increases household utility by smoothing consumption. He also shows that the demand for savings and credit is a function of household income, hence the interest in remittances as an additional household income and one of the benefits of African migration. Empirically, authors such as Pal (2002); Barslund and Tarp (2008) in studying the factors that stimulate demand for formal and informal financial services, highlight the role of education level and household size as key determinants of demand for financial services. Hence the introduction of control variables in the model.

While the demand for financial services is influenced by household income, the GDP growth rate, which is an indicator of the economic situation of a country, can also be correlated with the financial system. In this case, it may have a positive effect on the level of financial inclusion. In addition, income levels could cause migration, as some individuals leave their home countries in search of a better life for themselves and their families. Thus, GDP per capita may also be correlated with remittances. For the education variable, it is likely to be positively related to the use of financial services. We consider that the level of education can promote the understanding of the usefulness of savings and credit instruments. Thereby also facilitating the use of these services. The size of the population is likely to have an impact on financial inclusion. The demand for financial services can be an increasing function of population size. Gupta et al. (2009), highlight trade openness and population size as drivers of migration. Therefore, these variables are likely to impact the level of remittances and the demand for financial services.

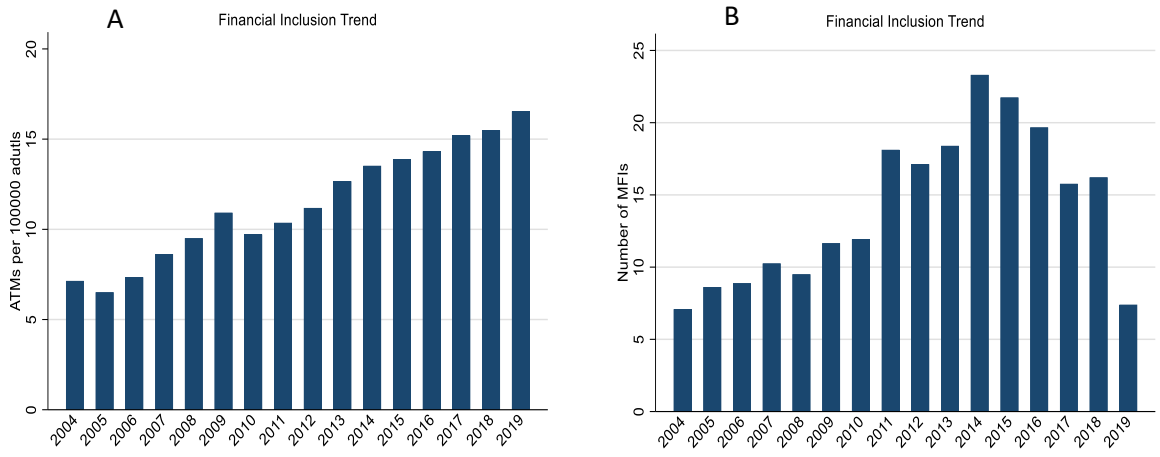
1.3.2. Stylized Facts and Some Descriptives Statistics

The section presents some facts, the correlation between remittances and some financial inclusion indicators, as well as descriptive statistics. Financial inclusion is captured by supply and demand indicators for financial services at the bank and MFIs level.

Although data is scarce for most African countries, the OECD Report (2017), reveals that, in most countries, households receiving remittances are more likely to have a bank account. According to Figure.A. 1.1 in the appendices, this trend is also observed in some African countries such as Côte d'Ivoire. Indeed, except for Burkina Faso, where there is no significant difference, households with a bank account receive larger amounts of remittances on average. In addition, looking at external financial inflows, remittances represent more than 5% of GDP for most of 60 developing countries (WDI, 2022). The Figure.A. 1.2, in appendices, shows that these funds outstrip ODA and FDI to SSA at times and remain more stable over time than other external sources of financing. Globally, in terms of the dynamics of financial inclusion in SSA, there are several initiatives which show an evolution over the last few decades. The latest Global Findex Database Report (2021) indicates that this upward trend is driven in particular by mobile banking services. Indeed, on average, in the region, 49% of adults own a bank account by 2021, a rate that has more than doubled since 2011. However, there are significant disparities in the region, ranging from 6% in South Sudan to 91% in Mauritius. But, compared with a world average of 76%, and 71% for developing countries, the overall rate is fairly low. But, with the arrival of mobile banking services, the rate of adults who own an account in 2021 is 85%. The rate includes commercial bank accounts and mobile banking accounts. The higher value of these iafinancial inclusion indicators can be viewed as a greater degree of financial penetration, (Demirgüç-Kunt et al., 2022).

Moreover, in our sample, we also observe an upward trend in some of the financial inclusion variables. Focusing on the ATMs per 100000 adults, Figure 1.1 A. shows an upward trend over the period, with a slight downturn on average between 2010 and 2011. The number of ATMs in these sub-Saharan African countries has risen from 8 per 100,000 adults in 2004 to 18 in 2019. The slight downturn could be explained by the contagion effect of the financial crisis on the banking sector. According to the African Development Bank Report (2009), Africa's low level of bank penetration has relatively protected African economies from the direct effects of the financial crisis. Africa was thus sheltered from the impact of the 2007 subprime crisis and the banking crisis of the summer of 2008, enabling it to avoid the harmful and devastating effects of a systemic financial crisis that shook international financial markets.

Figure 1.1. Financial Inclusion Over Time



Sources: MIX, FAS

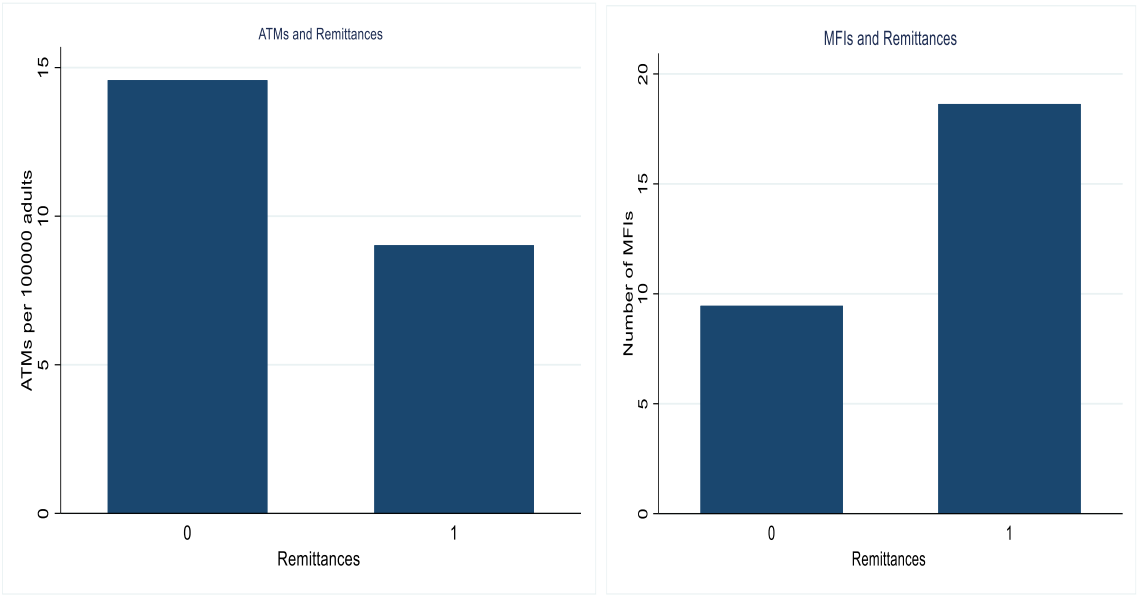
Looking at the financial inclusion indicator captured by the number of MFIs, Figure 1.1.B, shows a disparate evolution over time. In fact, until 2014, the number of MFIs increased, before declining thereafter. It should be noted that this variable is defined by the number of microfinance head offices, not branches or agencies. Although microfinance has gained prominence as one of the useful tools to improve the welfare of the poor, the industry is also faced with many challenges, (Chikalipah, 2017). The drop in numbers can be explained in part as follows. On the one hand, this period corresponds to the start of mobile banking adoption in various SSA countries[9]. The entry into the economy of this additional provider of financial services can eventually limit the deployment of MFIs. On the other hand, the microfinance sector, after experiencing a boom, is encountering difficulties in pursuing its dual objective, (Sinclair, 2012; Thrikawala et al., 2013). D'Espallier et al. (2017), argue that in the development of MFIs, some have evolved in their legal status to become bank MFIs, while others have become multiple agencies rather than head offices. In addition, the institutional environment of different countries can also explain this dynamic, as underlined by, (Chikalipah, 2017).

Regarding the relationship between financial inclusion and remittances, Figure 1.2. and Figure 1.3. show some relation correlation between the inclusive finance indicator for banks and remittances on the one hand, and between MFIs and remittances on the other. To do this, we consider two types of remittances-receiving countries, depending on their remittances-to-GDP ratio. We considered a sample of countries with remittance rates below the median (1.71%GDP) over the period and one above. The remittances variable becomes binary, taking the value 1 if

[9] See for more details on the adoption date and the dynamic of mobile banking (Sawadogo and Wandaogo, 2021; Demirgüç-Kunt et al., 2022)

on average the countries receive more than 1.71% of GDP and 0 otherwise. We observed that the higher level of remittances is positively correlated with the number of MFIs and negatively correlated with the number of ATMs.

Figure 1.2. Banks penetration and Remittances *Figure 1.3. MFIs penetration and Remittances*



Sources: MIX, FAS

Furthermore, we also observe this correlation in the table below, (see below table A.1.2). In general, we find that the inflow of remittances is positively correlated with the supply of and demand for financial services. The negative correlation with bank demographic penetration can be explained by the fact that the profiles of remittance recipients and MFIs clients are more probably similar than bank clients. However, the correlation between the different financial inclusion indicators can be explained by the multidimensionality of the concept of inclusive finance itself. As a result, financial inclusion can not be captured through a single indicator. Typically, in rural and peripheral urban or semi-urban areas, MFIs will play a determining role in draining the effects of remittances on the use of and access to financial services, while in urban areas it will be more commercial banks. This correlation refers more to a phenomenon of complementarity rather than substitution.

Finally, we present in appendices (Figure A.1.3 and Figure A.1.4), the distribution between financial inclusion indicators and different population categories. We note that the number of MFIs evolves negatively as the population moves from rural to urban areas. Banks ATMs, on the other hand, evolve in the opposite direction to MFIs, depending on whether the population is rural or urban.

Concerning the statistics, over the period considered (Table 1.1 of descriptive statistics), the average level of remittances is 3.249% of GDP, reaching nearly 20% in some countries such as Senegal, Togo, Gambia, Liberia, and Cabo-Verde. The level of bank penetration, characterized by the geographic and demographic penetration of banks, has evolved. This suggests that for every 100,000 adults, there are on average seven bank branches. Nevertheless, this level of banking is still low compared to other regions of the world. Moreover, banks are subject to prudential and regulatory restrictions and cannot include all population categories in these countries. This explains the need to involve other providers such as MFIs and mobile banking agencies. At the level of MFIs, on average, we count 14 MFIs for a maximum of 102 institutions. It should be noted that these statistics only concern the head offices or headquarters companies and not the agencies and branches, which are generally deployed throughout the country. In terms of indicators of demand for financial services from banks, on average, they have granted loans representing almost 19.75% of GDP. MFIs granted loans representing 3.031% of GDP, with outstanding deposits with these institutions representing on average 0.536% of GDP compared to 32.50% in commercial banks. However, the dynamics of financial inclusion indicators remain characterized by high individual and temporal variability. The values obtained for the other control variables remain well within the average trends suggested by most studies (Beck et al. 2000; Gupta et al., 2009; Bahadir and Valev, 2015; Coulibaly, 2015; Ajefu and Ogebe, 2019).

Table 1.1. Descriptives Statistics

Variables	N	Mean	Std.Dev.	Min	Max
Bank_branch_100000_adults	426	7.030	10.21	0.137	55.07
ATM_100000_adults	380	11.683	17.514	0	89.993
Value_Deposits_banks/GDP	406	32.50	31.20	2.544	169.3
Loan_banks /GDP	484	19.753	18.920	0.935	106.260
Number of MFIs	373	14.03	15.23	1	102
Actives_borrowers_MFIs/POP	339	23.726	91.429	0	1096.90
Loan MFIs/GDP[10]	357	3.031	25.45	0	387.1
Value_Deposits_MFIs/GDP	260	0.536	6.899	0	111.3
Remittances/GDP	509	3.249	3.835	0	21.81
GDP_per_capita	503	4485.541	5274.214	751.664	27521.17
Inflation	484	7.417	8.030	-8.975	63.295
Trade_opness/GDP	479	72.329	47.228	16.141	347.997
Total Population	512	2.29e+07	3.25e+07	82475	2.01e+08
Primary school enrollment or Education	407	102.493	22.860	42.138	149.307
Control_of_corruption	480	-0.646	0.606	-1.559	0.970
Political_stability	480	-0.549	0.840	-2.665	1.038

Sources: WDI, MIX-MARKET, FAS. Definition of variables in appendices.

1.3.3. Econometric Model Specification

To estimate the impact of remittances on financial inclusion, we use a methodology inspired by the work of Aggarwal et al. (2011). Thus, the regression equation takes the following form:

$$\boldsymbol{FII_{it} = A + \alpha FII_{it-1} + \beta Rem_{.it} + \delta Z_{it} + \mu_i + \mu_t + \varepsilon_{it}}$$

Where FII_{it} is a financial inclusion indicator (in this analysis, we mobilize eight financial inclusion indicators), $Remi_{it}$ is the share of migrant remittances in GDP received in country i at time t, Z_{it} the matrix of control variables such as school enrolment, total population, trade over GDP, GDP per capita, μ_i the individual country's fixed effects, μ_t time fixed effect and ε_{it} the error term. The choice of using several indicators reflects the multidimensional nature of the notion of financial inclusion, and the lack of consensus in the literature on which indicator is the most appropriate, (Sarma, 2008; Demirgüç-Kunt et al., 2011; Ambrosius and Cucuecha, 2016; Naceur et al., 2020). On the other hand, we would also like to address the research question according to the provider of the financial services.

To estimate the dynamic panel model, we use the generalized method of moments (GMM) system proposed by Blundell and Bond (1998). The rationale for choosing the dynamic model is that the level of financial inclusion at the t period may depend on its level at the previous period. The current year's process may be affected by the previous process. If financial intermediaries have implemented mechanisms to promote financial inclusion in the last period, this will likely affect financial inclusion in the next period. It may take some time for the

[10] Since the data on microfinance transaction volumes were in local currencies, we had to convert them to U.S. dollars to standardize.

practices established to affect people's financial practices. Moreover, financial exclusion is a phenomenon that has a certain persistence over time to reach a total or optimal level of inclusion and cover all segments of the population. Hence there is a need to consider its dynamics in the regression equation. Thus, a static panel would have the limitation of not considering the inertia of the financial inclusion process. Remittances are also a non-exogenous variable (Argawal et al., 2006). At the same time, the relationship between remittances and financial inclusion may not be one of cause and effect. It can be argued that an inclusive financial system hasa positive effect on remittances flowing through formal channels. In addition, the fact that remittances resulting from emigration are potentially correlated with the economic conditions of the origin country, increases the additional bias of reverse causality. In this case, the effect would be from the financial system to emigration, which translates into remittances, and not from emigration to the financial inclusion, (Gupta et al., 2009; Tu Chuc et al., 2021). Thus, this reverse causality, factors affecting both remittances, financial inclusion and the other control variables, and measurement error may be potential sources of endogeneity. Moreover, introducing a lag of the dependent variable as an explanatory variable creates a correlation between the error term and the lag of the financial inclusion variable.

Given the need to resolve reverse causality bias, unobserved country heterogeneity, measurement error, endogenous variables issues, and dynamic endogeneity bias, estimating the equation by a classical linear Ordinary Least Squares (OLS) estimator would lead to inconsistent and biased results (Wooldridge, 2002). As underlined in Roodman (2009), resorting to OLS regression in dynamic specification results in a positive correlation between the lagged dependent variable and the error term, biasing its coefficient estimate upward. In this case, the appropriate estimator for dynamic panel data models appears to be the popular Generalized Method of Moments. Consequently, this estimator will not only correct the possible endogeneity of our variable of interest but also correct the endogeneity of all the other variables that may arise from measurement errors using lagged values of covariates as instruments (one to two lags). The GMM estimator is designed for dynamic specifications with a time dimension that is short enough and smaller than the individual dimension. The GMM estimators for dynamic panels were developed by Arellano and Bond (1991) and improved by Arellano and Bover (1995) and then by Blundell and Bond (1998). However, our analysis specifically relied on the system-GMM proposed by Blundell and Bond (1998) with the two-

step estimator [11]. These approaches make it possible to control also for country heterogeneity. The estimator uses internal instruments in the model (lagged values of variables suspected of endogeneity) to counter weak instruments and difficulties in handling several endogenous variables. The first-difference GMM estimator consists of associating the first difference of the equation to be estimated with each period, to eliminate country-specific effects, and then instrumenting our explanatory variables in the first-difference equation with their level values lagged by one period. In sum, the GMM system estimator combines first-difference equations with level equations in which their first differences instrument the variables.

However, the validity of the GMM estimation relies on the main assumption that instruments are exogenous (Roodman, 2009). Therefore, we resort to Hansen's test for over-identifying restrictions to check the validity of the instruments. Another condition that validates the GMM estimator is the absence of second-order serial correlation in the residuals in difference. Accordingly, the Arellano-Bond's test is used to check that condition. We also apply Roodman's criterion by limiting the number of instruments to no more than the number of individuals, and the number of lags is limited to a maximum of one to two. Moreover, we use the Windmeijer (2005) finite-sample correction to avoid downward-biased standard errors and reduce the possibility of spurious precision.

[11] In this paper, our preferred estimator is the system-GMM. It has been highlighted that the lagged values of variables in level as it is done with the difference-GMM estimator are sometimes imperfect instruments for variables in first differences (Aggarwal et al., 2011; Lompo, 2024)

1.4. Empirical Results

1.4.1. Baseline Results

Table 1.2. reports the system GMM-based estimates of the impact of international remittances on financial inclusion in Sub-Saharan countries. The means implemented in developing countries to reintegrate excluded populations into the financial sphere may be different from those in developed countries. In developing countries, financial inclusion is mainly achieved by establishing financial institutions and adapting financial services such as microfinance, postal operators, fintech, and mobile banking. To this, the column [1]-[4] demonstrates the impact of remittances on banking services and penetration, and that of the MFIs is reported in the column [5]-[8].[12]

Resorting to the number of ATMs per 100,000 adults as a proxy for the demographic penetration of commercial banks, our empirical results revealed a positive impact of remittances on financial inclusion. This result corroborates those of Demirgüç-Kunt et al. (2011), who also demonstrate that remittances are likely to affect commercial banks' demographic and geographic penetration. The coefficient associated with remittances in this first specification is positive and significant at the 10% level. A one percentage point increase in the share of remittances in GDP leads to a 1.8% increase in bank penetration through ATMs. The same is true for the specification that considers the number of bank branches per 100,000 adults as a proxy for the demographic penetration of commercial banks. Then, the availability of banking services does not necessarily reflect their accessibility. Furthermore, access to financial services is not synonymous with the use of financial services. Further testing was done to view the effect of remittances on indicators of access and usage of these services. The results show a positive impact of remittances on credit offered by banks and the value of deposits collected. A one percentage point increase in the share of remittances in GDP leads to a 0.152 percentage point in the value of bank credits offered to the private sector. However, these results remain statistically significant only at the 10% threshold for the indicator of access to bank credit and not significant for the value of deposits collected. Nevertheless, it is in line with a particular part of the literature. Unlike Ajefu and Ogebe (2019); Aga and Peria (2014), who showed that the receipt of remittances increases the likelihood of households applying for and accessing bank savings and credit services in Nigeria. Gautam (2019) questions the ability of remittances

[12] All financial inclusion indicators have been logged except for deposits and credits indicators

to boost financial inclusion in developing countries in general by using banking variables alone as an indicator of financial inclusion. Coulibaly (2015), comes to similar conclusions and shows no evidence to support the idea that remittances promote access to bank credit in SSA countries. But Aggarwal et al. (2011), on 109 developing countries from 1975 to 2007, found that remittances impact positively credit and deposits. As the literature remains mixed on the ability of remittances to promote financial inclusion in developing countries, we introduce other indicators of financial inclusion. The aim is to question the relevance of positioning banking variables only as the principal financial inclusion indicators as it has been done in previous studies and make a new contribution. In doing so, we introduce new indicators such as MFIs activity.

For these specifications, we also find a positive impact of remittances on the aggregate level of financial inclusion. In particular, the value of the coefficients associated with the interest variable becomes stronger in all specifications with a significant level of 1% overall, in contrast to what we obtained for commercial bank indicators. A one percentage point increase in the share of remittances in GDP leads to a 5.6% increase in MFIs penetration through the number of MFIs. The increase of the share of remittances in GDP leads to also a 6-percentage points increase in access to credit. It also leads to an increase in the value of deposits in MFIs by about 13 percentage points. Particularly we find that migrant remittances also increase the number of active borrowers in MFIs by 16.4%. This positive and significant impact that we observe can result from the similarity between the profiles of the MFIs' clients (generally poor clients with no capital for the guarantees) and most of the remittances recipients (Orozco and Hamilton, 2005; Ambrosius, 2012; Ambrosius and Cuecuecha, 2016). In addition, MFIs are present in rural and urban areas that are difficult for commercial banks to access. As a result, they are likely to attract remittance recipients who are excluded from the banking system. This makes the services offered by these institutions more accessible to this category of the population. Hence, the positive and significant impact on access and usage indicators such as the value of deposits, the number of active borrowers, and the volume of loans disbursed by MFIs. Remittance recipients who maintain regular deposit accounts with these MFIs become eligible for loans because this regularity is likely to reduce information asymmetry problems between lenders and borrowers. Concerning the demographic and geographic penetration of MFIs, the response to this demand induced by the influx of remittances will allow these institutions to deploy their activity in other territories and to other populations, given that the literature considers that these financial inclusion indicators also will enable us to assess the performance

and viability of MFIs (Hartaska, 2005). All our results are consistent with the literature (Anzoategai et al., 2014; Aggarwal et al., 2011). Particularly those of Ambrosius and Cuecuecha (2016), who demonstrate a positive impact of remittances on loan demand through informal channels and the opening of deposit accounts in non-bank financial institutions.

We find an overall positive effect of education level, population size, and trade openness on financial inclusion indicators for the control variables. Although the coefficients associated with the different variables are not all statistically significant on the eight specifications, these results are perfectly in line with the existing literature on the determinants of the level of financial inclusion in a country (Beck et al. 2005; Gupta et al. 2009). Concerning the GDP per capita variable, it also appears to be a determinant of financial inclusion level. However, its non-significant negative impact on the number of MFIs (column 5) could be explained by the fact that GDP per capita is a proxy for a country's economic situation, and its increase over time may affect the deployment of MFI activities. And let's consider that economic growth can be accompanied by an increase in per capita income. It could be that this growth can change the needs of economic agents and, consequently, turn to other financial providers. Moreover, authors such as Dossou (2003) and Korem (2007), consider no significant correlation between MFIs activity and economic growth. For these authors, GDP per capita is insufficient to characterize the level of economic development. Therefore, this approach suggests other indicators of economic development on which it proposes to establish the link with the expansion of microfinance institutions. Because, beyond their function as financial intermediaries, many microfinance institutions play a social intermediation role by grouping people, building self-confidence, providing financial training, and managing skills within a group. It would be limiting to restrict the analysis of the relationship between remittances and financial inclusion by MFIs to GDP per capita alone.

Table 1.2. Baseline Results: Impact of Remittances on Financial Inclusion Indicators

Dep.Var: Financial Inclusion Indicators (FII)	Log,ATMs/100000ad [1]	Log.Branch_Bank/100000ad [2]	Value_Deposits_Bank/GDP [3]	Loans_banks/GDP [4]	Log. Number_MFIs [5]	Log. Actives_Borrowers_MFIs/POP [6]	Loans_MFIs/GDP [7]	Value_Deposits_MFIs/GDP [8]
Dep.Variable (lagged)	0.790***	0.670***	0.878***	0.858***	0.795***	0.612***	0.820***	0.406***
	(0.013)	(0.090)	(0.099)	(0.066)	(0.022)	(0.099)	(0.022	(0.039)
Remittances/GDP	0.018*	0.008	0.019	0.152*	0.056***	0.164***	0.060***	0.130**
	(0.010)	(0.014)	(0.019)	(0.083)	(0.009)	(0.048)	(0.007)	(0.058)
GDP/capita(Log)	0.323***	0.320**	0.070	1.222	-0.101	0.172	0.001	0.352
	(0.057)	(0.130)	(0.067)	(1.452)	(0.138)	(0.139)	(0.143)	(1.192)
Trade/GDP	0.001	0.006*	0.000	-0.024	-0.002	0.004*	-0.000	-0.005
	(0.001)	(0.004)	(0.000)	(0.018)	(0.002)	(0.002)	(0.001)	(0.015)
Population (Log)	0.083*	0.233	0.001	0.696	-0.103	0.046	0.147*	0.086
	(0.043)	(0.163)	(0.014)	(0.920)	(0.167)	(0.119)	(0.079)	(1.022)
Education	0.005***	0.007***	0.001	0.004	-0.007	0.002	0.008	0.020
	(0.002)	(0.003)	(0.001)	(0.012)	(0.007)	(0.008)	(0.006)	(0.017)
Constant	-4.180***	-6.984*	-0.329	-17.597	3.675	1.400	-3.874**	-8.212
	(1.204)	(3.913)	(0.547)	(19.069)	(2.352)	(2.619)	(1.531)	(8.188)
Observations	256	294	287	342	263	261	289	206
Groups	26	27	26	29	25	27	25	25
Instruments	17	10	11	15	19	11	22	17
Arellano–Bond (AR 1, p-value)	0.007	0.021	0.003	0.006	0.002	0.001	0.023	0.007
Arellano–Bond (AR 2, p-value)	0.612	0.198	0.334	0.182	0.272	0.232	0.232	0.236
Hansen (p-value)	0.241	0.326	0.900	0.460	0.217	0.529	0.675	0.437

Notes: ***Significant at 1%, **Significant at 5%, *Significant at 10%.(1) Robust (asymptotic) standard deviation in brackets based on Windmeijer (2005) correction in the finite sample, Variability in the number of observations per specification denotes the presence of missing variables when moving from one financial inclusion indicator to another. The population is considered exogenous and the others as endogenous with 2 lag. (2) Hansen is the overidentifying restrictions test for GMM estimators and AR(2) is the second-order correlation test for error terms (p-values or significance levels are reported). (3) In all specifications, the null hypothesis for lack of first-order (AR(1)) serial correlation in the first-differenced error terms is rejected, while not rejected for the second-order (AR(2)). (4) In addition, the robust (to heteroskedasticity and autocorrelation) Hansen's p-value validates the over-identification restrictions. Variables can be safely used as instruments. (5) All of these statistical tests validate the econometric method, and the lagged variables can be safely used as instruments. This applies to all regressions in the paper`.

1.4.2. Robustness Checks and Heterogeneity Analysis

In this part, first, we performed additional estimations to check the sensitivity of the coefficient associated with the variable of interest (remittances to GDP). Then, we undertake a heterogeneity analysis of the effect of remittances on financial inclusion according to the population type (urban or rural). Finally, we perform the baseline results, by empirically testing the validity of the transmission channels that we discussed in the conceptual framework. All these exercises are reported in the appendices.

First, we test the sensitivity of the results of the baseline specification to additional potential determinants of financial inclusion, including the level of inflation, financial openness, and the institutional quality index. See the result in the Table 1.3. (data comes from the World Bank databases and the Chinn-Ito index). We could have introduced these variables directly into the basic regressions but given that we are mobilizing different financial inclusion indicators that are on average still poorly informed in the countries of the sample, adding the said variables, which also include missing observations, would considerably reduce the number of total observations. However, these variables are considered in the literature as possible determinants

of financial inclusion (Gupta et al., 2009; Giuliano and Ruiz-Arranz, 2009; Inoue and Hamori, 2016). Some studies have also emphasized the role of non-economic factors in financial inclusion among developing countries (Detragiache et al, 2005; Berdiev et al, 2013). They can be considered to have a stronger capacity to positively influence the business environment, lead to a lower perception of risk in the country and induce a shift in the orientation of investment transfers. They take on values from -2.5 to +2.5, with a higher level indicating better governance efforts. We test this by including the control of corruption and Political Stability as additional control variables. The results indicate that even when the significant effect of the institutional quality index on financial inclusion in Sub-Saharan Africa is considered, remittances still have a positive and significant impact on financial inclusion indicators particularly on those promoted by MFIs. It means that if there are more qualified institutions, the remittances can promote an inclusive financial system, though these variable's limited-time series availability restricts our observations less than those reported in the table.1.2 concerning the baseline results. Concerning the inflation rate, the results also show that inflation has a positive or negative impact on financial inclusion but that the coefficient on remittances remains positive. One explanation could be that, on one side, inflation can be a brake on credit demand since it sometimes guides investors' decisions. Thus, there may be a negative effect of this variable on some indicators of financial services, such as credit, by both banks and MFIs. On the other side, the effect of remittances on financial inclusion remains positive, probably because remittances can be sometimes countercyclical. Therefore, during periods of high inflation, migrants will be inclined to send more money to their families, and this increase may generate a need for financial services, such as opening a savings account. Furthermore, Katona (1975) argues that inflation increases agents' uncertainty, leading to increased savings. These results are like baseline findings and are also in line with previous studies (Giuliano and Ruiz-Arranz, 2009; Ambrosius and Cuecuecha, 2016; Tu Chuc and al., 2020).

Table 1.3. Robustness Checks: Adding more Control variables

Financial Inclusion Indicators (FII)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Dep.Var. (lagged)	0.786***	0.981***	0.866***	0.968***	0.781***	0.821***	0.772***	0.731***
	(0.028)	(0.038)	(0.091)	(0.039)	(0.059)	(0.028)	(0.035)	(0.029)
Remittances/GDP	0.001	-0.053*	0.003	-0.027	0.037***	0.062***	0.865***	0.125***
	(0.008)	(0.030)	(0.012)	(0.093)	(0.011)	(0.009)	(0.030)	(0.020)
GDP per capita (Log)	0.331***	-0.372**	0.008	-0.623	0.246	0.222***	0.087***	0.071
	(0.063)	(0.182)	(0.068)	(0.657)	(0.421)	(0.039)	(0.012)	(0.113)
Tade	0.006***	-0.001	0.001	-0.058***	0.001	0.007	0.004	-0.061***
	(0.001)	(0.004)	(0.001)	(0.021)	(0.002)	(0.007)	(0.005)	(0.011)
Population (Log)	0.244***	0.326	0.023	-1.339***	-0.332	0.043	0.561**	-1.627***
	(0.043)	(0.305)	(0.031)	(0.434)	(0.245)	(0.277)	(0.275)	(0.430)
Education	0.003	0.015**	0.000	-0.001	-0.002	-0.001	0.017**	-0.002
	(0.002)	(0.006)	(0.001)	(0.015)	(0.004)	(0.007)	(0.008)	(0.013)
Inflation	-0.002	0.034***	0.005	0.006	0.036**	-0.040	-0.050**	0.013
	(0.006)	(0.005)	(0.012)	(0.019)	(0.016)	(0.075)	(0.021)	(0.018)
Kaopen index	0.156	1.892***	0.003	-0.821	0.372	-0.281**	-0.108	-0.526***
	(0.114)	(0.587)	(0.026)	(0.947)	(0.254)	(0.129)	(0.076)	(0.126)
Control of Corruption	0.226***	0.376***	0.049	0.529	0.034	-0.945*	-1.071	0.085
	(0.052)	(0.111)	(0.077)	(1.453)	(0.103)	(0.562)	(0.740)	(0.354)
Political Stability	0.009	0.026	0.001	0.081	0.104***	0.119	0.306	0.524*
	(0.038)	(0.141)	(0.020)	(0.326)	(0.033)	(0.458)	(0.211)	(0.271)
Constant	-6.278***	-2.244	-0.416	31.057***	2.964*	0.324	-10.385***	17.249**
	(0.991)	(5.114)	(0.622)	(11.255)	(1.604)	(5.674)	(3.749)	(6.795)
Observations	235	257	242	388	321	255	281	202
Groups	22	24	23	27	26	22	24	21
Instruments	18	22	13	13	19	18	14	12
AR1 (p-value)	0.045	0.000	0.008	0.085	0.001	0.020	0.006	0.029
AR2 (p-value)	0.615	0.393	0.336	0.164	0.235	0.494	0.110	0.256
Hansen (p-value)	0.344	0.246	0.725	0.466	0.156	0.187	0.292	0.526

The population and institutional variables are considered exogenous and the others as endogenous with 2 lags Robust standard deviations in brackets *** p<0.01, ** p<0.05, * p<0.1.

Second, we have excluded first the top five countries that received more remittances over the period under consideration (Senegal, Togo, Gambia, Liberia, Cabo-Verde). These countries are also ranked among the top remittance-receiving countries in the world by the World Bank. Moreover, in our sample, we find that the share of remittances in the GDP of these countries is on average more than 10% of GDP. This is nevertheless a significant share. The idea is to verify that these are not the ones that drive the results. Further, we differentiate between countries with initially high levels of financial inclusion and others by also excluding them from the sample to check whether the effect of remittances remains the same or not. This involves excluding Kenya, Senegal, and South Africa. The results are reported in Table A.1.3. and A.1.4. in appendices, show that the coefficients associated with remittances are positive and still strong and significant at 1% for MFIs (columns [5], [6], and [8]) and some indicators of bank penetration (columns [1], [2]and [4]). Therefore, our baseline findings remain valid even when removing potential outliers.

Finally, considering the microeconomic literature analyzing the effects of remittances on financial inclusion[13], the results of which partly suggest that remittances would enable more households excluded from the classical banking system, and those living in rural areas, to be finally included in the financial system, we undertake additional regressions (see in table A.1.5.). At macro level, the approach was to create an interaction between the rural population and the remittances variable. This variable is then introduced as an additional control variable. The results show that the coefficient associated with the interaction variable is positive and significant for the banking sector indicators. We note a low significance for MFIs. However, this may support the hypothesis that remittances can enable more of the rural population to access different financial services. This could be seen as follows: an increasingly high rate of rurality, as measured by the share of the population living in rural areas, would exacerbate the effect of remittances on financial inclusion.

1.4.3. Remittances, FDI and ODA: What could be the impact on Financial Inclusion?

Since remittances are not the only external financial sources, the purpose of this section is to present the respective effects of remittances and other external financial flows on financial inclusion, on the one hand, and the conditional effects of remittances and these flows on inclusive finance, on the other. All those results are reported in appendices (from Table 1.6. to A.1.8.) Before presenting the effects of remittances, ODA and FDI on financial inclusion in the same model, statistical tests show that there is no multicollinearity and sufficiently strong correlation between these different variables. However, aware of the non-exogenous nature of these variables, as well as the various other endogeneity biases, the GMM system estimator is also used to contain these issues.

Firstly, compared to remittances, the other external sources appear to have less effect in terms of the magnitude and statistical significance on financial inclusion in the sample. ODA, on average, hurt bank indicators. FDI in contrast has on average a positive impact on the number of commercial banks and a negative impact on the value of deposits in banks. On MFIs, the effect is heterogeneous depending on the indicators. These external sources appeared to may not have a significant impact on our estimates, potentially because, the measures of financial inclusion are purely bank and MFIs variables, and these flows may be primarily channeled through capital markets rather than being directly intermediated by local banks and MFIs.

[13] See (Taylor et al., 2008; Orozco, 2008; Aga and Peria, 2011; Ambrosius et al., 2014; Ambrosius and Cucuecha, 2016)

Moreover, these results are consistent with (Chinn and Ito, 2002, 2006; and Gupta et al., 2009; Aggarwal et al., 2006, 2011) who find that those indicators do not seem to be affected by these flows in developing countries. However, we found that the coefficient associated with remittances remains positive and significant in the presence of those flows. This suggests that migration potentially plays an important role in improving the level of financial inclusion in SSA.

Secondly, concerning the conditional effects we wanted to test between remittances and these flows, the approach used consisted of creating an interaction variable between remittances and the latter. This variable is then introduced into the regressions. By doing so, additional regressions showed that the ODA had a non-homogeneous effect on the impact of remittances on financial inclusion, depending on the provider. The results suggest that, in the banking sector, ODA have an overall, positive effect on the impact of remittances on financial inclusion. On the other hand, at the MFIs level, we observe a reducing effect of ODA on the impact of remittances on financial inclusion. In contrast to the ODA, the results show no significant effect of FDI overall in the impact of remittances on financial inclusion, even considering the service provider. Nevertheless, a significant result appears in the estimation of the conditional effect of remittances with FDI on credit granted by the banking sector. This suggests that an increase in FDI decreases the effect of remittances on credit granted by the banking sector.

1.5. Conclusion

As the importance of African international migration has grown, substantial studies have flourished examining migration's impact on various aspects of Africa's development. One issue that has received little attention is the macroeconomic effect of these migration dynamics on financial inclusion through remittances from migrants to their origin countries. This issue is important given the growing evidence that financial inclusion has many beneficial effects in developing economies.

In this study, we empirically examined the impact of remittances on the aggregate level of financial inclusion in Sub-Saharan African countries. We have highlighted the effect of remittances on financial inclusion depending on the service provider. Relying on the system-GMM estimator of Blundell and Bond (1998) to address the potential endogenous issues and based on panel data, the study finds that remittances have a positive and significant effect on financial inclusion in Sub-Saharan countries. Remittances have a positive impact on the demographic penetration of financial institutions on the one hand and the access and use of financial services by economic agents on the other hand. In contrast to the previous literature, which focuses only on the banking system, we also consider other financial institutions in Sub-Saharan Africa, such as microfinance institutions. By making this distinction, the results show that remittances have a more significant effect on the financial services offered by these MFIs than on those of commercial banks. These results may be attributable to a possible mismatch between the demand for financial services among remittance recipients from low-income households and the supply from banks. Thus, remittances appear to be a possible determinant of an inclusive and sustainable economic system as they will allow MFIs to be more efficient and complement the work of banks in the financial inclusion process in Africa. The financial viability and social performance of microfinance institutions depend on the deposits and loans they collect and the number of clients they serve so remittances can play a beneficial role.

As a result and given that Sub-Saharan African governments are focused on improving financial inclusion in their country and maximizing the benefits of international migration, this study can be interesting for policymakers. Our study concurs with previous findings and calls for improved, more inclusive access to financial services in terms of policy recommendations. Because of the pressing financing need to finance structural investments in sub-Saharan countries and improve people's lives, our study can guide countries that have implemented or are in the process of implementing financial inclusion policies. As the promotion of a financial system adapted to African needs is necessary, remittances appear to be one determinant of

financial inclusion. However, the mismatch between the financial services provided by banks and the requirements of remittance recipients leads us to suggest that it would be more than beneficial to promote institutions that are better able to provide financial services to remittance-receiving households to African households in general. Linking remittances to additional financial services can generate social or economic changes within or outside households. Because remittances are additional income, they can ease the financing constraints of these recipients, allowing them to finance productive investments. Similarly, a large and adequate financial system through financial intermediation will facilitate the financing of high-impact economic and social projects, which Africa needs, especially in the current context of the coronavirus (Covid-19) pandemic when it is more than necessary to build strong and resilient economies. Better access to basic services such as current accounts, credit, savings products, and insurance would allow the poor to increase their income and become more resilient. In sum, we say that African migration should be seen as a potential determinant for financial inclusion. It would be beneficial to put in place a financial system that promotes and encourages (in terms of cost and legality) remittances from African migrants.

Concerning potential future research, there are indeed some avenues for research. For a complete macroeconomic analysis of the effects of remittances on financial inclusion in Sub-Saharan Africa, it would be interesting to analyze the impact of remittances on the use of mobile banking services and to see if this would improve living conditions. Mobile banking is a kind of digital financial service that sub-Saharan countries are increasingly turning to today, as it allows any individual without exclusion to make financial transactions with just a cell phone number. Except in some countries such as Kenya, where a smartphone is required to access a wider range of mobile banking services.[14] Typically, Sub-Saharan Africa is at the forefront of mobile banking, with one-fifth of the adult population having a mobile money account, (Global Findex Database Report, 2017). The region's experience also shows that these accounts open the possibility of accessing more sophisticated digital services, such as loans and insurance, prepaid solar energy subscriptions, or even tax payments. Thus, relying only on traditional financial services may not capture the global state of financial inclusion and the role of migration as a determinant. We emphasize this point, but the scarcity of data does not allow us to include this indicator of financial inclusion for our macroeconomic study over the sample

[14] In Kenya, the success of M-PESA has revolutionized the financial system. It is a microfinance system for money transfer and payment by cellphone and smartphone, launched in 2007 by Vodafone for Safaricom and Vodacom.

period. It should also be noted that in some Sub-Saharan African countries, mobile banking is still in its infancy. So, we leave this research question for future works.

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1.6.1. Appendices of the chapter 1

Table A.1.1. Sources and Definitions of Data

Variables	**Definition**	**Sources**
ATMs /100,000 adults	Automated teller machines (ATMs) (per 100,000 adults)	IMF, FAS 2019 Dataset
Bank branches/ 100,000 adults	Number of commercial bank branches per 100,000 adults	
Value_deposits_Banks/GDP	Outstanding deposits with commercial banks reported to GDP	
Number_MFIs	Number of microfinance institutions	Mix Market 2019 Dataset
Value_deposits_MFIs/GDP	Outstanding deposits with microfinance institutions (% of GDP)	
Actives_Borrowers_MFIs/POP	Number of active borrowers with microfinance institutions (% of population)	
Loans_MFIs/GDP	Gross loan portfolio (% of GDP)	
Loans_banks/GDP	Domestic credit to private sector by banks (% of GDP)	World Bank's World Development Indicators (WDI, 2019)
Remittances	Personal remittances received (% of GDP)	
GDP_per_capita	Real GDP per capita	
Population	Total population	
Trade openness	The sum of total imports and exports (% of GDP)	
Inflation	Inflation, average consumer prices	
School enrollment/Education	Primary school enrolment	
Control_of_Corruption	Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	World Bank's WorldWide, 2019 Dataset
Political_Stability	Political Stability and Absence of Violence/Terrorism	

Table A. 1.2. Correlation table

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	Sources
Remittances [1]	1									WDI
Branch_Bank/100000ad [2]	0.0690	1								FAS
ATMs/100000ad [3]	-0.0582	0.818***	1							FAS
Value_Deposits_Bank/GDP [4]	0.105**	0.598***	0.624***	1						FAS
Loans_banks/GDP [5]	0.0487	0.490***	0.732***	0.814***	1					WDI
Number_MFIs [6]	0.112**	0.0724	-0.0444	0.153**	0.116**	1				Mix market
loan_MFIs/GDP [7]	-0.0395	0.0319	0.0400	-0.00561	-0.0281	0.117**	1			Mix market
Deposit_MFIs/GDP [8]	0.0314	-0.0617	-0.0792	0.0865	-0.0461	0.150**	0.126**	1		Mix market
Actives_Borrowers_MFIs/POP [9]	0.0782	0.581***	0.380***	0.134**	-0.000195	-0.158**	-0.0363	0.186**	1	Mix market

***p<0.01, significant at 1%, **p<0.05, significant at 5%, *p<0.10, significant at 10%.

Table A.1.3. Robustness check: Exclusion of outliers

Dependent variables: FII	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Dep. variable (lagged)	0.794***	0.753***	0.922***	0.932***	0.849***	0.566***	0.850***	0.652***
	(0.017)	(0.025)	(0.122)	(0.020)	(0.017)	(0.085)	(0.022)	(0.042)
Remittances/GDP	0.045***	0.069***	0.032	0.009	0.034*	0.253***	0.010	0.157***
	(0.015)	(0.020)	(0.026)	(0.077)	(0.019)	(0.080)	(0.029)	(0.035)
GDP_Per_Capita (Log)	0.286***	0.176***	0.050	1.045	-0.096***	0.310	-0.353	1.002*
	(0.073)	(0.050)	(0.070)	(0.670)	(0.034)	(0.195)	(0.219)	(0.565)
Trade	0.001*	0.089	-0.000	0.012	-0.001	0.000	0.012**	-0.022**
	(0.001)	(0.078)	(0.001)	(0.008)	(0.002)	(0.004)	(0.005)	(0.009)
Population (Log)	0.068	-0.023	-0.008	0.252	0.037**	-0.032	0.445**	-0.869***
	(0.056)	(0.025)	(0.016)	(0.363)	(0.019)	(0.104)	(0.183)	(0.305)
Education	0.008***	0.003***	0.000	0.041***	0.001	0.001	0.001	-0.002
	(0.002)	(0.001)	(0.001)	(0.014)	(0.001)	(0.007)	(0.004)	(0.006)
Constant	-3.995**	-1.428	-0.112	-16.106*	0.340	2.388	-5.862***	6.902***
	(1.681)	(1.067)	(0.484)	(9.083)	(0.270)	(2.899)	(2.104)	(1.924)
Observations	207	231	231	281	230	170	144	122
Groups	21	22	22	24	22	20	17	18
Arellano–Bond (AR 1, p-value)	0.033	0.047	0.011	0.051	0.004	0.065	0.023	0.094
Arellano–Bond (AR 2, p-value)	0.245	0.238	0.364	0.340	0.406	0.428	0.169	0.252
Hansen (p-value)	0.384	0.384	0.860	0.276	0.355	0.654	0.819	0.330
Nb. of instruments	17	18	11	20	19	11	12	17

***Significant at 1%, **Significant at 5%, *Significant at 10

Table A. 1.4. Robustness check: Exclusion of outliers

Dependent variables: FII	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Dép.Variable (Lagged)	0.808***	0.816***	0.919***	0.939***	0.826***	0.535***	0.736***	0.602***
	(0.013)	(0.016)	(0.047)	(0.023)	(0.020)	(0.099)	(0.044)	(0.085)
Remittances/GDP	0.016**	0.012***	0.016	0.099***	0.027***	0.199***	0.071*	0.175***
	(0.006)	(0.005)	(0.014)	(0.023)	(0.010)	(0.033)	(0.037)	(0.028)
GDP per capita (Log)	0.354***	0.086	0.032	0.687	-0.395***	-0.365	0.365	0.363
	(0.052)	(0.057)	(0.027)	(0.713)	(0.092)	(0.422)	(1.031)	(1.222)
Trad/GDP	-0.022	0.133**	0.000	-0.025***	0.042	0.004*	-0.004	-0.030**
	(0.039)	(0.053)	(0.000)	(0.004)	(0.082)	(0.002)	(0.010)	(0.014)
Population (Log)	0.015	0.007	0.005	-0.401**	0.181***	0.078	-1.604	-0.356
	(0.022)	(0.025)	(0.020)	(0.197)	(0.057)	(0.244)	(1.033)	(0.761)
Education	0.005***	0.005***	0.000	-0.009	0.001	0.006	0.047*	0.007
	(0.002)	(0.001)	(0.000)	(0.019)	(0.001)	(0.014)	(0.027)	(0.008)
Constant	-3.157***	-1.577**	-0.151	4.579	0.033	5.165	18.530*	2.600
	(0.849)	(0.786)	(0.335)	(5.277)	(0.943)	(3.199)	(10.931)	(5.811)
Observations	182	214	207	262	214	144	199	115
Groups	20	21	20	24	21	18	20	17
Arellano–Bond (AR 1, p-value)	0.03	0.015	0.014	0.039	0.004	0.036	0.043	0.032
Arellano–Bond (AR 2, p-value)	0.575	0.236	0.284	0.337	0.310	0.642	0.196	0.331
Hansen (p-value)	0.328	0.269	0.589	0.453	0.549	0.784	0.369	0.482
Instruments	17	18	11	20	19	12	12	14

***Significant at 1%, **Significant at 5%, *Significant at 10%.

Table A. 1.5. Impact of Remittances on Financial Inclusion: Rulal population conditional effect

Dependent variables: FII	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Dep.var.lag.	0.766***	0.757**	0.959***	0.996***	0.987***	0.848***	0.781***	0.521***
	(0.011)	(0.025)	(0.020)	(0.010)	(0.095)	(0.053)	(0.036)	(0.051)
Rem.	-0.004	-0.306**	-0.114*	-0.957**	0.154***	0.529***	0.168***	0.186**
	(0.008)	(0.054)	(0.050)	(0.222)	(0.036)	(0.201)	(0.028)	(0.053)
Rural population	-0.010*	-0.114**	-0.007**	-0.060**	0.050*	-0.007	0.097**	0.149**
	(0.005)	(0.023)	(0.002)	(0.012)	(0.028)	(0.004)	(0.024)	(0.051)
Interaction	0.030**	0.021***	0.008**	0.052***	0.343**	-0.034**	-0.168*	0.424**
	(0.014)	(0.004)	(0.003)	(0.015)	(0.101)	(0.013)	(0.082)	(0.225)
Controls.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	229	287	259	313	249	212	234	127
Groups	24	26	24	28	24	23	23	20
AR1	0.026	0.140	0.003	0.092	0.012	0.074	0.030	0.084
AR2	0.444	0.181	0.323	0.198	0.885	0.968	0.107	0.130
Hansen	0.541	0.689	0.658	0.637	0.164	0.635	0.131	0.808
Instruments	20	20	23	26	21	28	20	24

***Significant at 1%, **Significant at 5%, *Significant at 10%.

Table A.1.6. Impact of Remittances, ODA and FDI on Financial Inclusion

Dependent variables : FII	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Dep. Variables (lagged)	0.806***	0.910***	0.931***	1.007***	0.885***	0.809***	0.602***	0.717***
	(0.024)	(0.017)	(0.029)	(0.026)	(0.095)	(0.074)	(0.055)	(0.076)
Remittances/GDP	0.015**	-0.053*	0.025	0.144**	0.037***	0.185***	0.135***	0.179***
	(0.007)	(0.030)	(0.029)	(0.073)	(0.011)	(0.042)	(0.041)	(0.057)
ODA	-0.006	0.001	-0.003	-0.099**	-0.014	-0.006	0.050*	-0.006
	(0.005)	(0.025)	(0.005)	(0.044)	(0.020)	(0.009)	(0.029)	(0.024)
FDI	0.001	0.008*	-0.003**	-0.003	-0.004	-0.012**	0.012	0.023**
	(0.001)	(0.005)	(0.001)	(0.019)	(0.008)	(0.005)	(0.008)	(0.010)
Constant	-6.278***	-2.244	-0.416	31.057***	2.964*	0.324	-10.385***	17.249**
	(0.991)	(5.114)	(0.622)	(11.255)	(1.604)	(5.674)	(3.749)	(6.795)
Controls	No	No	No	No	No	No	No	No
Observations	218	255	248	305	321	281	255	213
Groups	23	24	23	27	24	25	22	19
Instruments	17	19	13	19	13	13	14	12
AR1 (p-value)	0.045	0.000	0.008	0.085	0.002	0.017	0.024	0.087
AR2 (p-value)	0.615	0.393	0.336	0.164	0.126	0.469	0.319	0.239
Hansen (p-value)	0.344	0.246	0.725	0.466	0.691	0.826	0.927	0.360

***Significant at 1%, **Significant at 5%, *Significant at 10

Table A.1.7. Impact of Remittances on Financial Inclusion: ODA conditional effect

Dependent variables : FII	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Dep.Var. Lag	0.766***	0.780***	0.966***	0.999***	0.819***	0.827***	0.735***	0.433**
	(0.020)	(0.021)	(0.020)	(0.055)	(0.032)	(0.049)	(0.036)	(0.059)
Rem./GDP	0.007	-0.011*	-0.009	-0.289***	0.069***	0.162***	0.106***	0.402***
	(0.006)	(0.005)	(0.008)	(0.459)	(0.025)	(0.052)	(0.033)	(0.049)
ODA/GDP	0.004	-0.001	-0.020**	-0.417**	-0.002	0.018*	0.045**	0.001
	(0.003)	(0.001)	(0.007)	(0.133)	(0.012)	(0.008)	(0.017)	(0.055)
Interaction	0.073***	0.081***	0.002***	0.052***	-0.001	-0.007***	-0.004**	-0.017***
	(0.027)	(0.026)	(0.001)	(0.016)	(0.001)	(0.002)	(0.002)	(0.005)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	247	285	278	332	263	211	248	138
Groups	25	26	25	29	25	23	24	21
AR1	0.014	0.103	0.001	0.073	0.002	0.048	0.025	0.080
AR2	0.677	0.179	0.332	0.220	0.251	0.718	0.167	0.174
Hansen	0.442	0.355	0.428	0.576	0.402	0.111	0.281	0.376
Instruments	21	24	20	16	23	17	17	19

***Significant at 1%, **Significant at 5%, *Significant at 10

Table A.1.8. Impact of Remittances on Financial Inclusion : FDI conditional effect

Dependent variables : FII	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Lag.Dep.Var	0.787***	0.847***	0.966***	0.878***	0.762***	0.464***	0.784***	0.446***
	(0.014)	(0.100)	(0.020)	(0.031)	(0.058)	(0.210)	(0.031)	(0.080)
Rem./GDP	0.025**	-0.047*	0.003	0.170**	0.075***	0.240***	0.171***	0.132**
	(0.006)	(0.025)	(0.007)	(0.034)	(0.018)	(0.097)	(0.061)	(0.067)
FDI/GDP	-0.000	-0.002	-0.004*	0.033**	-0.014	0.092	0.170*	-0.150*
	(0.003)	(0.004)	(0.002)	(0.008)	(0.036)	(0.125)	(0.088)	(0.074)
Interaction	-0.000	0.182	0.000	-0.003**	0.000	-0.004	-0.007	0.004
	(0.000)	(0.121)	(0.000)	(0.000)	(0.002)	(0.006)	(0.005)	(0.004)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	248	283	279	333	262	211	247	137
Groups	25	26	25	29	25	23	24	21
AR1	0.014	0.075	0.002	0.086	0.004	0.071	0.027	0.061
AR2	0.583	0.205	0.322	0.188	0.383	0.435	0.375	0.393
Hansen	0.325	0.147	0.360	0.636	0.270	0.389	0.298	0.901
Instrument	23	10	20	21.	19	11	21	19

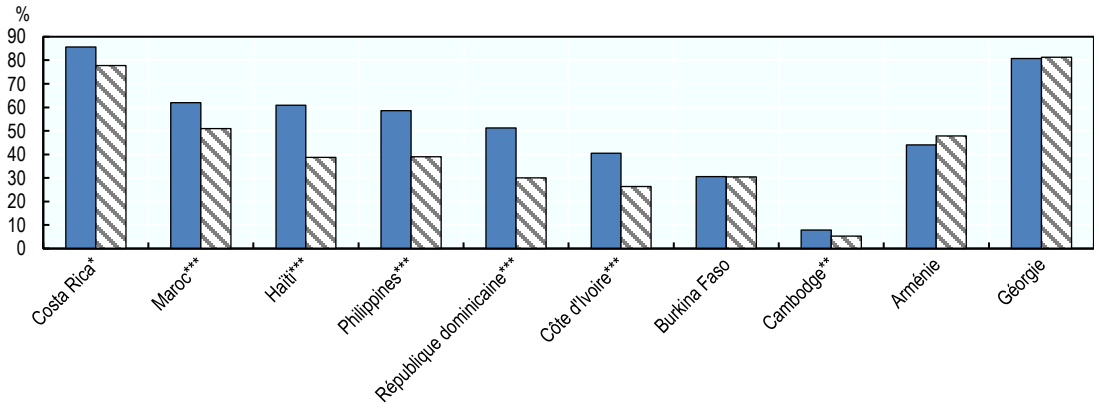
***Significant at 1%, **Significant at 5%, *Significant at 10%

Table A.1.9. Transmissions Channels Validity check

Scenario 1				
	[Banks]	[Deposits]	[MFIs]	[Deposits]
Dep. var (lagged)	0.909***	0.811***	0.924***	1.007***
	(0.041)	(0.039)	(0.064)	(0.026)
Gdp_per_capita	0.719*	0.099**	0.471***	0.708***
	(0.390)	(0.046)	(0.166)	(0.236)
Investment	0.993**	0.004	0.010	0.580**
	(0.441)	(0.005)	(0.011)	(0.236)
GNI_coef.	-0.439	-0.004**	-0.520***	-0.007
	(0.515)	(0.002)	(0.154)	(0.010)
Observations	279	272	305	235
Groups	26	25	25	20
Instruments	14	19	13	18
AR1 (p-value)	0.062	0.003	0.001	0.100
AR2 (p-value)	0.342	0.199	0.116	0.291
Hansen (p-value)	0.247	0.984	0.007	0.628
Scenario 2				
	GDP_per_capita	Investissement	Gni_coef.	
Dep. var (lagged)	0.971***	0.798***	0.870***	
	(0.012)	(0.022)	(0.037)	
Remittances/GDP	0.990***	0.043	-0.010**	
	(0.776)	(0.091)	(0.004)	
Observations	450	406	405	
Groups	30	28	28	
Instruments	14	19	11	
AR1 (p-value)	0.009	0.029	0.092	
AR2 (p-value)	0.672	0.207	0.331	
Hansen (p-value)	0.975	0.117	0.521	

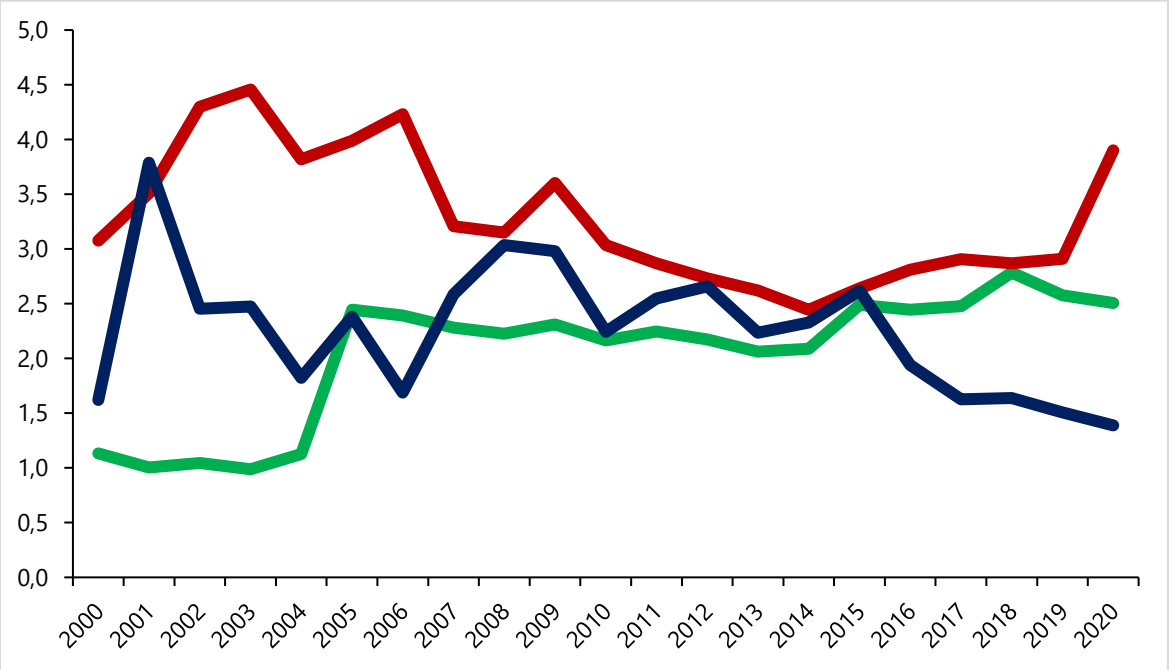
***Significant at 1%, **Significant at 5%, *Significant at 10%. Following (Apeti and Edoh, 2023; Bambe, 2023), this table reports the empirical test of transmission channels highlighted in the conceptual framework. First, we estimate the impact of GDP per capita, Domestic credit to the private sector to measure investment and the GNI coefficient on FII. Second, we then estimate the impact of remittances on those three channels. The results allow us to validate empirically the transmission channels.

Figure.A. 1.1. Share of households with a bank account (%), according to whether they receive remittances



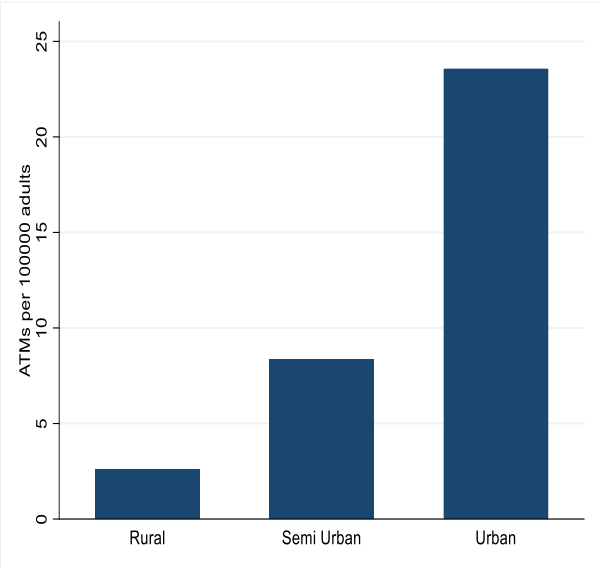
Note: Statistical significance, calculated using the chi-square test, is indicated as follows: ***: 99 %, **: 95 %, *: 90 %.
All remittances are considered whether from ex-members of the household or migrants who were never members.
Source: OECD (2017). Household receiving remittances. Households who do not receive.

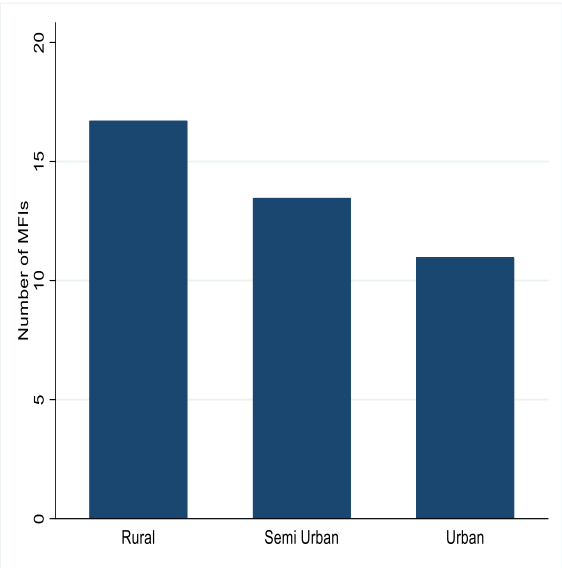
Figure.A. 1.2. Evolution of remittances, ODA and. FDI into SSA countries over GDP



Notes: Remittances, ODA, FDI

Figure.A. 1.3. Bank penetration and Remittances by area Figure.A. 1.4. MFIs penetration and Remittances by zone





2. Chapter 2 : Migration and Economic Growth in the African countries: 2000-2020

Une version de ce chapitre a été publiée dans la revue *Applied Economics.* Volume 56, Issue 41 *https://doi.org/10.1080/00036846.2023.2227415* [15]. Elle est co-ecrite avec ma directrice de thèse, Ekrame Boubtane et Koffi Sodokin.

[15] Déclaration des contributions des auteurs : Denera Atanguegnima : Collecte et traitement des données, formalisation, méthodologie et analyse économétrique, rédaction. Ekrame Boubtane : Conceptualisation et supervision. Koffi Sodokin : Traitement des données, formalisation, méthodologie et analyse économétrique, rédaction et révision.

2.1. Introduction

The cross-border movement of people remains an ongoing process worldwide and is an important element of global integration. International migration is generally a response to gaps, conflicts, and disparities related to the constraints faced by individuals in their home countries who perceive that better conditions and opportunities exist elsewhere. It is therefore a movement of people between countries or even regions of the world. Thus, immigration and emigration refer to migration into and out of a given region or country, respectively. Like other regions of the world, Africa is also known for its history of migration within and beyond this vast continent. In this regard, the recent 2018 Afrobarometer survey conducted in 35 African countries, suggests that on average, one-third of respondents have considered migrating out of their countries of birth, but only 20% of respondents said they wanted to go to Europe. Furthermore, in 2017, it is noted that 53% of African international migrants resided on the continent with South Africa and Cote d'Ivoire as their top destinations (UNDESA, 2017). The observation that emerges is that most migratory movements take place between the countries of the continent. However, migration in Africa is not only Africans who migrate out of an African country to another country on the continent or beyond the continent, but it is also people from other regions of the world who migrate to African countries. When these migrants move from one country to another, they bring with them a range of skills, knowledge, and perspectives that can impact the economy. International migration would then have multiple economic implications for the countries concerned. Consequently, this migration dynamic observed on the African continent would not be without effects for the development of its economies. Thus, researchers have been interested in the question of the impact of migration on economic growth for example. Dos Santos and Postel-Vinay (2003) show that in a developing economy, when there is free movement of people, immigrants may rationally decide to return to their country of origin after having accumulated a certain amount of knowledge and skills abroad, while others prefer to stay permanently in the host economy. Thus, the free movement of people can have an expansionary effect on both the host and origin developing economies.

Specifically, at the level of countries of origin, the positive effects of migration highlighted in the literature in the African context generally translate into remittances from migrants through the financial development that they promote, the reduction of inequality and poverty, and the stimulation of private investment (Giuliano and Ruiz-Arranz, 2009, Mim and Mabrouk, 2014; Coulibaly, 2015; Sodokin, 2021). In addition, emigration would contribute to the improvement of

political institutions (Spilimbergo, 2009; Docquier et al., 2016; Coulibaly et al., 2018), to the promotion of foreign direct investment, to the improvement of total factor productivity. Or knowledge transfers by the diaspora, which can compensate the brain drain that the literature highlights as one of the negative effects of emigration on economic growth, just as the increase of corruption (Beine et al., 2008; Ortega and Peri, 2014). At the level of receiving countries, the primary channels through which immigration affects the host economy are demographic. On the one hand, new flows of foreigner's fuel population growth, and on the other hand, these immigrants bring with them human capital (skills and abilities) that complements the initial stock of human capital or stimulates human capital formation in the host economy to contribute to economic growth (Dolado et al., 1994; Boubtane et al., 2016). In addition, immigration can also contribute to physical capital accumulation and improve total factor productivity (Ortega and Peri, 2014; Docquier et al., 2010; Bove and Elia, 2016).

However, in this vast body of work dealing with the contribution of immigration on the one hand and emigration on the other to economic growth, very few studies to our knowledge assess the impact of net migration of foreigners and natives on economic growth of African economies, considering the human capital of migrants. This is the interest of the present study, which seeks to empirically and theoretically, assess the impact of migration and its human capital, approximated by the level of education of migrants, on total factor productivity in these countries. This question is more important given that the number of international migrants in Africa rose from 15.1 million to 26.6 million, the highest relative increase (76%) among all major regions of the world between 2000 and 2019, (UN-DESA, 2020). Nevertheless, despite these significant numbers and notwithstanding the recognized role of migration in the development of the global development agenda, there is still a lack of knowledge about the macroeconomic impacts of migration and its role in the development of the continent.

Empirical economic analyses that have flourished in recent years have generally focused on remittances as the main economic component of migration for African economies that can impact economic activity (see Gupta et al., 2009; Coulibaly, 2015; Aga and Peria, 2014; Ajefu and Ogebe, 2019). However, the debate is relatively quiet about another area of interest, which is the impact of demographic change induced by migration flows on economic growth depending on whether the country is both a receiving and sending country. Although, the most recent study that addresses

this issue is Coulibaly et al. (2018). A cross- sectional empirical study that assesses the economic impact of opening to migration and trade in African countries. But the authors do not consider the human capital of migrants in their analysis. They assess the impact of the immigration rate on gross domestic product (GDP) per capita without distinguishing the level of education of migrants and without conserving the effect of emigration. The authors find a non-significant impact of migration on economic growth in Africa, unlike trade. Moreover, their analysis focuses on the impact of openness to migration on economic growth only in the year 2000. However, over the last two decades, the characteristics of international migration (immigration and emigration) in Africa have changed considerably, and their impact should be reconsidered.

Therefore, the aim of the study is to analyze theoretically and empirically the impact of international migration on economic growth in Africa over the period 2000-2020, within the conceptual framework of endogenous growth models. This study differs from the existing literature in that it considers the impact of both immigration and emigration, controlled by migrants' level of education and remittances, on total factor productivity (TFP). It seeks to answer the following two questions: What is the impact of demographic changes induced by the arrival of immigrants and the departure of emigrants on the economic growth of African countries? And what would be the impact of the financial component, i.e. remittances? To answer these questions, we theoretically integrate migration into growth models and demonstrate the transmission channels between international migration and economic growth. Empirically, we compile a migration dataset that includes data on immigrant, emigrant and remittance flows from various data sources for a panel of 53 African countries. This enabled us to estimate the impact of migration on total factor productivity with a GMM estimator.

The three main contributions to the economic analysis of this study are as follows: (i) Examining the impact of emigration, international remittances from migrants, and immigration on total factor productivity in Africa, while studying whether emigration has a beneficial effect on African economies. (ii) Integrate the analysis of migration flows (emigration, international remittances from migrants, and immigration) into the endogenous growth model to assess their implications for public policy in Africa. This study is the first to address the impact of emigration, international remittances from migrants, and immigration on African economies using the endogenous growth

model. (iii) It highlights the importance of human capital and continuing education in African economies as key factors for growth and sustainable development.

This study has three major findings. (i) Remittances have less effect in African countries in terms of their impact on the TFP. (ii) the net migration rate has a positive impact on total factor productivity, which could be due to the positive effect of immigrant human capital. This finding suggests that attracting high-quality immigration is beneficial for African countries and that policymakers should focus on policies to attract high-quality immigration. Emigrant human capital has a negative impact on factor productivity, implying a brain drain. This result suggests that targeted public policies on emigration should be considered to address the loss of skilled workers. (iii) Public spending on human capital formation positively impacts TFP, highlighting its importance for economic growth and development and emphasizing the need for endogenous fundamentals in African economies, rather than solely relying on external mechanisms. The rest of the chapter will be structured in two parts: we started by presenting a global review of the littérature. Then, section 1 presents the endogenous growth model conceptual framework, section 2 deals with the empirical methodology, the data, results and discussions. Finally, we present the global conclusion and some recommendations.

2.2. Literature Review

The literature recognizes that demographic changes could also affect macroeconomic variables. One channel through which migration would affect the economy is demographic. Thus, in receiving countries, immigration as a source of population growth would naturally lead to a decrease in per capita output according to the considerations of the Solow growth model. Immigration would therefore be detrimental to these economies. However, when migrants move, they bring with them human capital that is likely to contribute to the accumulation of factors of production in the host country, which is different from the natural growth of the population. Thus, emigration can be considered as a brain drain factor. However, emigrants may decide to return to their countries of origin or contribute to remittances and technology transfers. The impact of migration on economic growth remains ambiguous. In the literature analyzing the impact of migration on economic growth two theoretical approaches have been most often used: the approach based on exogenous growth models and the one based on endogenous growth models, but the conclusions remain equally mixed in both cases. In the following sections we briefly summarize the main authors among others who have addressed the issue of the impact of migration on economic growth.

2.2.1. Migration in Exogenous growth models

The impact of migration on growth would pass through its effect on the accumulation of factors of production. In this first approach, to our knowledge, Dolado et al. (1994) were the first to introduce net migration into a Solow-Swan growth model augmented by human capital. In their study of 23 OECD countries over the period from 1960 to 1985, the authors show that the negative impact of immigration on per capita output is indeed lower the higher the human capital of immigrants compared to that of natives. Thus, the negative impact on output generated by population growth is less when it is induced by immigration. This effect is estimated to be less than half that of natural population growth. This study has focused primarily on the direct contribution of immigrants to the human capital of the host country as soon as they arrive. While immigrants can in one way, or another contribute indirectly to the formation of human capital in the host economies through training and the acquisition of new knowledge. Following this work, Santolin et al. (2011) observe a trend of increasing variability in per capita income in Brazil due to migration between 1991-2000.

Recently, Boubtane et al. (2016) also introduce net migration of foreigners and natives into an augmented Solow-Swan model of human capital in their study of 22 OECD countries from 1986 to 2006. Theoretically they show a positive impact of migration on GDP per worker if and only if its contribution to human capital accumulation offsets the capital dilution effect. But, using the SYS-GMM, they provide empirical evidence that immigration has a positive and significant impact on gross domestic product (GDP) per capita through its impact on human capital accumulation, and that a permanent increase of 50 percent in the net migration rate of foreigners would increase GDP per worker by three-tenths of a percentage point per year. They show that the positive impact of migration tends to absorb the capital dilution effect. Moreover, the authors later show that the impact of immigration on economic growth is high even in countries with non-selective migration policies. They also conclude that net migration of natives also has a positive impact on GDP per worker. In the same vein, Kang and Kim (2018) come to similar conclusions however with a few differences ready the authors point out that the positive impact of immigration is greater when individuals migrate from developed to developing countries. In this sense, immigrants from developed countries would bring with them more advanced knowledge in the developing host countries. These conclusions are the results of the SYS-GMM estimates of the dynamics of 90 countries in the world between 1986 and 2000.

In sum, from this approach we see that there are two possible effects of migration on output per worker depending on the assumptions made. On the one hand, a positive net migration (immigration greater than emigration), all else being equal, represents a larger number of people among whom capital must be distributed, which has the effect of decreasing capital per worker. However, on the other hand, if immigrants have higher human capital than natives, ceteris paribus, then the latter will contribute positively to economic growth. And on the other hand, if the balance is negative, we can see a brain drain that can negatively impact the accumulation of human capital in the economy, but the return of natives to their countries of origin can also positively impact GDP per capita.

2.2.2. Migration in Endogenous growth models

Contrary to the studies in the previous approach, other authors have introduced migration into recent growth models, essentially the so-called endogenous growth models. This literature

emphasizes that through innovation, investment, and overall productivity of production factors, for example, migration contributes to the economic growth of countries. To this end, Hunt and Gauthier-Loiselle (2010) evaluate the contribution of qualified immigrants to basic research in the United States of America, and thus to innovation, and show that immigrants file twice as many patents as natives because the latter often specialize in science and engineering. These authors find that a one percentage point increase in the share of university graduates of immigrants in the population increases patents per capita by 6%. Peri (2012) comes to the same conclusions and provides empirical evidence when he studies the long-term impact of immigration on productivity in the United States of America. The author shows that immigrants have promoted efficient specialization in tasks, thus increasing overall factor productivity, and also that immigration has favored the adoption of new, very low technology. He speculates that part of the positive effects of immigration on aggregate factor productivity would be due to efficient specialization of immigrants and natives in manual-intensive and communication- intensive tasks in which each group has a comparative advantage resulting in a gain in aggregate factor efficiency. In contrast, Robertson (2002) also analyzing the impact of demographic shocks in a Uzawa-Lucas model with unskilled labor shows that an influx of relatively low- skilled immigrants leads to lower economic growth. However, Ltaief (2018) shows that regardless of the skill level of immigrants, they contribute to economic growth in OECD countries. Theoretically, Walz (1995), demonstrates that the sign of the effect of immigration on the growth rate of two countries growing according to an endogenous growth model depends on the initial specialization of these countries, and that the effect will be more positive if the migration is selective and favorable towards highly skilled individuals. Bretschger (2001), in the same theoretical framework, analyzes the impact of skilled and unskilled labor on the growth rate of open economies and demonstrates that skilled migration can promote growth by reducing research and development costs, increase factor productivity and increase the market share of certain categories of goods, unlike unskilled immigration. Kemnitz (2001) comes to similar conclusions regarding skilled migration and its impact on economic growth. In the same vein, Lundborg and Segerstrom (2002) include migration in a growth model based on quality scales. These authors find that if immigration responds to differences in labor market endowments, then it will stimulate economic growth. Dos Santos and Postel-Vinay (2003) in their studies on the impact of immigration on developing economies show that when there is a free movement of people, migrants may rationally decide to return to their country of origin after having accumulated

a certain amount of knowledge and skills abroad, while others prefer to stay permanently in the host economy. Thus, this free movement of people can have an expansionary effect on both the host and home developing economies. d'Albis et al. (2019), using a structural autoregressive model on 19 OECD countries, argued for a positive economic and fiscal effect of migration on OECD countries that were suffering from an aging population. They found a positive and significant impact of immigration shocks on GDP per capita over the period 1980-2015. This results from the positive impact of these shocks on the working age population ratio and the employment rate.

While there is literature on the direct and indirect impact of migration on the economic growth of destination and origin countries, the question of the causal relationship is also addressed. This literature views the relationship between migration and economic growth as potentially bidirectional. This is one of the conclusions of Morley's (2006) study, which investigated the nature of the relationship between economic growth and immigration in Canada, the United States and Australia over the period from 1930 to 2002. The author finds evidence of long-term causality between GDPs per capita and immigration, but not the reverse. Chletsos and Roupakias (2012) come to the same conclusions in their study of the relationship between immigration, GDP growth rate and unemployment in Greece between 1980 and 2011. While Boubtane et al. (2013) find a positive bidirectional relationship between GDPs per capita and immigration for 22 OECD countries between 1987 and 2009. In the same vein, AboElsoud et al. (2020) examine the relationship between net migration, unemployment, and GDP per capita in Australia over the period 1980 to 2016. These authors use a vector error correction model and show a positive but bidirectional impact between net migration of foreigners and natives and these two macroeconomic quantities.

In sum, we note that all above studies were conducted in the context of developed countries for the most part and developing countries for some without considering African specificities. Except for the study by Coulibaly et al. (2018), which evaluated the impact of migration and international trade on the GDP per capita of African countries in 2000 using a gravity model. The results show that international migration has no significant impact on economic growth regardless of the partner. Nevertheless, despite the different methodological approaches adopted, there seems to be an emerging majority consensus that migration is not without effect on the economic growth of the countries concerned. Consequently, considering the specificities of African economies, we wonder

about the nature and the channel through which migration would affect the economic growth of these economies, and the magnitude of the effect. This study seeks to provide some answers to this question. To achieve the objective of the study, we will analyze the impact of international migrations on economics growths in those countries focusing on their impact on TFP in the endogenous growth theoretical framework.

The overall theoretical framework of this study is based on the idea that migration, remittances from migrants, immigration human capital, and emigration human capital have an impact on total factor productivity (TFP) in Africa. This framework builds on earlier studies of the importance of human capital in economic growth (Becker, 1962; Trostel et al., 2002; Vandenbussche et al., 2006; Dias and Tebaldi, 2012; Li and Wang, 2018) and the impact of migration on communities of origin (Lucas, 2005; Constant et al., 2013). High-quality immigration contributes to improving TFP in African countries by bringing skills and knowledge, as supported by studies in Europe (Kerr and Kerr, 2011) and the United States (Peri and Sparber, 2009). However, brain drain (Docquier and Marfouk 2006; Beine et al., 2008) can negatively affect TFP due to the loss of skilled workers. Positive externalities of immigrants' human capital on TFP have been observed in Europe (Kerr and Kerr 2011).

Migrant remittances have a positive effect on overall factor productivity (Adams and Page, 2005), and public spending on education also positively impacts TFP (de la Escosura and Roses, 2010; LeeandLee, 2016). Two main channels linking human capital to economic growth are human capital and output (Lucas 1988; Lerner 2002; Scott-Clayton 2013; Li and Wang, 2018) and human capital and total factor productivity (Schultz, 1961; Becker, 1962; Nelson and Phelps, 1966; Aghion and Howitt, 1992; Vandenbussche et al., 2006).

Some studies argue that human capital does not always increase productivity growth because of external shocks (Li et al., 2016). Advanced human capital such as technology, research, and development stimulates innovation, increases output, and reduces marginal costs over time (Nelson and Phelps, 1966; Romer, 1990). Emigration can negatively impact the sustainability of development (Zolberg, 1989). Human capital migration, particularly the emigration of skilled workers, poses a challenge to African countries seeking sustainable economic growth. The Revised Policy Framework for Migration in Africa and Plan of Action (2018-2027) emphasizes the potential impact of well-managed migration in African countries (African Union Commission 2018; IOM, 2020).

2.3. Rationale for the choice of the models, theoretical framework and hypothesis

2.3.1. Rationale for the choice of the model

The impact of increasing returns to scale on reproducible capital has yielded mixed results in various studies. Some studies highlight the significance of human capital in this context (Aghion et al., 2006), while others find it challenging to establish a clear link between increasing returns to scale and reproducible capital due to externalities (Lucas, 1988). Numerous authors, including Becker (1962), Schultz (1961), and Barro and Lee (2013), have connected human capital, encompassing education, training, and health, to economic growth.

Endogenous growth theorists such as Romer (1990) argue that increasing returns depend on the interaction of human capital, physical capital, and technology, a notion supported by empirical evidence from Barro (1991) and Mankiw et al. (1992). Lucas (1988), Romer (1986, 1990), and Young (1995) emphasize the importance of human capital in fostering long-term growth, positive externalities, and technological innovations.

However, contrasting evidence supports exogenous growth theory, with Bloom et al. (1998) focusing on technology adoption and Klenow and Rodriguez-Clare (1997) suggesting that endogenous growth models may overvalue the importance of human capital. Despite these differences, endogenous growth models, such as Lucas (1988), offer a more comprehensive understanding of the role of human capital in economic growth, considering the effects of emigration and immigration on human capital, positive externalities, returns to scale, and interactions between production factors.

2.3.2. Theorical Framework

This study uses the endogenous growth model, incorporating human capital as a growth factor (Romer 1986, 1990; Lucas, 1988). Human capital, including skills, health, and nutrition, plays an essential role in the economy, and has two sectors: consumption goods production and human capital formation. The analysis accounts for migration using the production function, considering human capital externalities (Lucas, 1988) and the backward externalities of emigration in African economies. Consequently, overall output depends on physical capital (machinery, equipment, and

infrastructure), human capital (skills), and the average human capital level in the labor force. The output is written as:

$$Y_t = F(K_t, u_t\, H_t L_t, A_t, H_{at}, V_t) = A_t K_t^{\alpha} [u_t\, H_t L_t]^{1-\alpha} H_{at}^{\beta} V_t^{\xi} \quad [1]$$

Where Y_t is aggregate output; K_t, physical capital; L_t, labor power; H_t, human capital, which has a direct internal effect on labor efficiency; H_{at}, average human capital, which has an external (positive) or diffusion effect on the efficiency of the economy as a whole u_t represents the share of human capital allocated to production activity; A_t, technical progress assimilated to total factor productivity, and V_t, a vector of variables that captures other factors' influences on the production level. Indeed, an economy will have a more robust human capital growth as it devotes a significant part of its workforce to training and consequently accumulating human capital. The growth rate of production is also a function of human capital. To complete the picture, we endogenize the investment rate in human capital. From this model, and by adding an externality of human capital in the production activity, the productivity of each individual is higher, and the level of the human capital of the economy is strong (each one is all the more efficient that the economy is composed of more competent people). In practice, the linear form of human capital in H of accumulation allows an endogenous growth of the economy.

We start with Lucas (1988) and assume that labor accumulation follows the specification $\dot{L} = \theta L_t$, where θ is the growth rate of the working population.

Postulate 1: *Any new cohort entering the labor market comprises individuals with adequate human capital.*

Based on postulate 1 and reformulating the Lucas (1988) model of human capital accumulation per capita, we derive the following specification: $\dot{h} = [\delta(1 - u_t) + \theta]h_t$ où $(1 - u_t)$ denotes the share of human capital devoted to accumulation and δ, a parameter.

Postulate 2: *Any active individual, that is, non-disabled and of working age, who leaves a given economic territory to reside in another, participates in the migration of the active population since they demonstrate skills that allow them to identify and respond to the incentives of the international labor market.*

Denoting by τ the net migration rate of the labor force, we formalize the increase in the labor force as follows: $\dot{L}' = (\theta + \tau)L_t$. This results in the following:

Lemma 1: All things being equal, if $\tau \leq 0$, then $\theta + \tau \leq \theta$ and therefore $\dot{L}' \leq \dot{L}$: a net outflow of labor reduces the accumulation of resident labor. If, on the other hand, $\tau > 0$, then $\theta + \tau > \theta$ and in this case $\dot{L}' > \dot{L}$: a strictly net inflow of the external labor force increases the resident labor force.

Hypothesis 1. The net migration rate positively impacts total factor productivity depending on the quality of immigrants' human capital.

At the same time, concerning human capital accumulation per capita, considering the potential influence of the net migration rate, we have the following specification: $\dot{h}' = [\delta(1 - u_t) + \theta + \tau]h_t$. This results in the following:

Lemma 2: All else being equal, if $\tau \leq 0$, then $\theta + \tau \leq \theta$ and therefore $\dot{h}' < \dot{h}$: a net outflow of the resident labor force reduces human capital accumulation per resident head. If, on the other hand, $\tau > 0$, then $\theta + \tau > \theta$ and in this case $\dot{h}' > \dot{h}$: a strictly net inflow of the external labor force increases the accumulation of human capital per resident head.

Because of lemmas 1 and 2 and insofar as $L_t^e = u_t\, H_t L_t = \int_0^\infty u_t\, h_t L_t dh_t$ (see Lucas 1988), we infer the following:

Corollary 1: A net outflow of the labor force (emigration) from the resident labor force ($\tau \leq 0$) quantitatively reduces, all other things being equal, the stock of the resident efficient active population (L_t^e) as well as the per capita human capital stock. Conversely, a strictly net inflow of the external labor force ($\tau > 0$) strictly increases the level of the resident active population quantitatively.

Given that $H_{at} = \frac{\int_0^\infty h_t L_t(h_t) dh_t}{\int_0^\infty L_t(h_t) dh_t}$ (see Lucas, 1988), we deduce from Lemma 1 and 2 below:

Corollary 2: A net migration of the labor force ($\tau \leq 0$) quantitatively reduces, all else being equal, the resident average human capital (H_{at}) by concomitantly reducing the level of the labor force and the stock of human capital per capita. Conversely, a strictly net entry of the external labor force ($\tau > 0$) strictly increases the resident average human capital quantitatively.

Ultimately, based on Corollaries 1 and 2 as well as economic growth theories (Solow 1956; Solow 1957; Cass, 1965; Koopmans, 1965; Lucas, 1988; Romer, 1990; Barro, 1996), we arrive at the following result. A net outflow of the labor force $(\tau \leq 0)$ quantitatively reduces, all else being equal, concomitantly the stock of the resident efficient labor force (L_t^e) and the resident average human capital (H_{at}) and consequently aggregate domestic output (Y_t). Conversely, a strictly net inflow of the external labor force (net immigration) $(\tau > 0)$ strictly increases the stock of the resident efficient labor force concomitantly (L_t^e) and the resident average human capital (H_{at}) and consequently, the aggregate domestic output (Y_t).

To assess the impact of migration on total factor productivity, we build upon equation [1] and establish the following relationship, drawing from the works of Benhabib and Spiegel (1994), Herzer (2017), Ahmed and Bhatti (2020), Solow (1956), and Solow (1957):

$$A_t = \frac{Y_t}{K_t^{\alpha}[u_t H_t L_t]^{1-\alpha} H_{at}^{\beta} V_t^{\xi}} \quad [2]$$

A_t is a measure of the efficiency with which an economy uses its inputs, such as capital and labor to produce output. Following the paradigm of endogenous growth models (Romer 1986; Lucas 1988; Barro 1990; Howitt and Aghion, 1998) and incorporating the results of our argument, we formalize the following relationship:

$$A_t = A_0 \Gamma(\widetilde{H}_t, X_t) \quad [3]$$

Where A_0 represents the initial level of productivity; $\Gamma(\cdot)$, a function admitting variable returns to scale; $\widetilde{H}_t$, the internal and external effects of human capital, as well as the effects of factors that may influence them, such as the rate of net labor migration; and X_t, other determinants of overall factor efficiency.

To provide a theoretical anchor to the empirical results, we proceed to the decomposition of $\widetilde{H}_t$. Equation [3], therefore, takes the following form:

$$A_t = A_0 \Gamma(H_t^{dom}, H_t^{em}, H_t^{im}, Ginv_t^H, Pinv_t^H; X_t) \quad [4]$$

Where H_t^{dom} represents domestic human capital; $Ginv_t^H$, public spending on national education, public health, and social welfare; $Pinv_t^H$, private funds allocated to domestic human capital

accumulation, such as remittances; H_t^{em}, emigrant human capital and H_t^{im}, immigrant human capital.

The emigration of skilled labor constitutes a dilution of the domestic human capital stock. Therefore, we have: $\frac{\partial A_t}{\partial H_t^{em}} < 0$; and, since immigration increases, all else being equal, the stock of domestic human capital, we have : $\frac{\partial A_t}{\partial H_t^{im}} > 0$. Since the growth rate of skilled labor increases the efficiency of domestic labor and, in turn, productive efficiency, we have, depending on labor migration behavior : $\frac{\partial A_t}{\partial H_t^{dom}} \leq 0$ if $\frac{\partial H_t^{em}}{\partial t} \leq \frac{\partial H_t^{im}}{\partial t}$ and $\frac{\partial A_t}{\partial H_t^{dom}} > 0$ if $\frac{\partial H_t^{em}}{\partial t} > \frac{\partial H_t^{im}}{\partial t}$ all other things being equal.

Hypothesis 2: Emigrants' human capital has negative adverse externalities on total factor productivity in Africa.

Hypothesis 3. Immigrants' human capital has positive externalities on total factor productivity in Africa.

To the extent that public funds (Romer 1990) and migrant remittances allocated to education, nutrition, health, and various forms of mutual aid or social coverage contribute to human capital accumulation, it follows that $\frac{\partial A_t}{\partial Ginv_t^H} > 0$ and $\frac{\partial A_t}{\partial Pinv_t^H} > 0$.

Hypothesis 4. Remittances positively affect aggregate factor productivity.

Hypothesis 5. Public spending on education positively affects total factor productivity.

2.4. Empirical Analysis

2.4.1. Data and Sources

This section presents the main sources of the data used and how some of the variables in the study were generated. The data on international migrant stocks come from the United Nations Department of Economics and Social Affairs (UN, DESA) Population Division (2020), *International Migrant Stock 2020*. These are five-yearly data on the stock of emigrants, immigrants, and net migration (the difference between immigrants and emigrants regardless of nationality) for each African country at a given date T between 2000 and 2020. The period for which the data are mostly available for the variable of interest. The data on the level of education of migrants comes first from the Docquier et al. (2010) and are described in more detail there. They measure the number of working-age migrants by their level of education. These data were then complemented by data from the International Labour Organization Statistics-International Labour Migration Statistics (ILOSTAT-ILMS), OECD database (DIOC). The need to compile data from various sources lies in the fact that the original sources of these migration data by education level are the decennial population censuses and periodic surveys conducted in African countries at a given but variable date during the period 2000 to 2020, which are then communicated to these international agencies. Moreover, the main difficulty with these measures of migration is the lack of continuous observations to detect the origin and destination of migrants and their level of education, mainly in Africa. In addition, entry and exit controls (especially land) in most of these countries are still difficult to measure. Therefore, to conduct a panel analysis, we used these different sources to harmonize observations at the country level and at corresponding dates for each country. We have therefore constructed a five-year database that provides us with estimates of the stock of immigrants and emigrants for 54 African countries, broken down by the level of education attained by these migrants over the period from 2000 to 2020. Using these available estimates, we calculated emigration, and immigration flows for the purposes of regressions in the empirical analysis. The other macroeconomic variables used in the following come from the World Development Indcators (WDI) and Pen World Table (PWT). The description is presented in the appendices.

- **Definition of migration measures**

Two measures of migration were used in this study.

The first measure concerns the volume of the migrant population, which provides information on the stock of migrants residing in each country who are called immigrants and the stock of individuals who have left their country of birth to reside in another country. They are called emigrants in the eyes of their country of origin. The purpose of this measure is to evaluate how the migrant population impacts the economic growth of the countries concerned. Thus, as defined in the World Bank Data (2015), "the stock of international migrants is the number of people born in a country other than the one in which they live, it also includes refugees" According to the World Bank definition, the data used to estimate the stock of international migrants in each period are obtained mainly from population censuses. Estimates of migrants are derived from data on the foreign-born population (persons residing in a country but born abroad). When data on the foreign-born population are not available, data on the foreign population (i.e., persons who are citizens of a country other than the one in which they reside) are used as estimates. For emigrant stocks, estimates are derived from the population of persons who left their country of birth for another country to establish residence. For the purposes of this study, these are people who were born in an African country and left that country to reside in another African country or in the rest of the world. In this study, we also seek to know to what extent the human capital of migrants affects economic growth. The human capital of migrants is approximated by their level of education, and we distinguish three modalities. It refers to the highest level of education attained as defined by UNESCO's International Standard Classification of Education (ISCE, 1997). In the case of this analysis, we have the share of migrants who have attained a primary level of education, then those who have completed secondary school and finally those who have completed tertiary school. These data are collected on the ILOSTAT website and completed by the database constructed by Docquier et al. (2010).

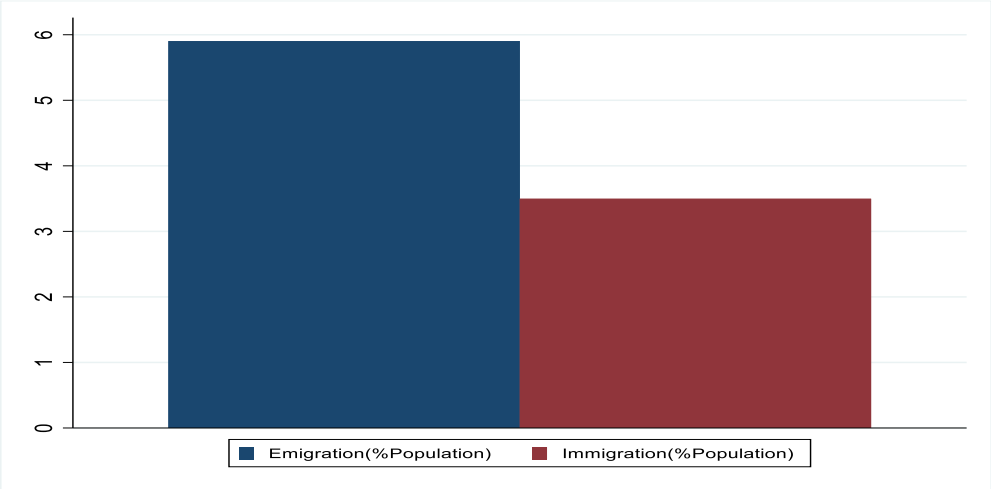
The second measure relates to migrant remittances. This shift from the stock of the migrant population to the financial component tends to capture the effect of financial flows from migration also on economic growth. The use of remittances in this study as an alternative measure of migration is based on the idea that changes in the levels of immigration or emigration in each country will potentially be reflected in the amount of remittances received or paid as sources of capital investment, which can potentially impact economic growth. This measure of migration has also been the subject of several studies in the literature on migration and economic development

(Edwards and Ureta, 2003; Combes and Ebéké, 2011; Clemens and Mckenzie, 2014; Coulibaly, 2015; Dinkelman and Mariotti, 2016). Hence the interest in combining it with the first measure.

2.4.2. Stylized facts and Descriptives Statistics

Examining the migration landscape in Africa, the Global Migration Report (IOM, 2020) revealed noteworthy trends and patterns that have emerged over the years. The Global Migration Report reveals that between 2000 and 2019, international migrants in Africa increased from 15.1 million to 26.6 million, marking the largest relative growth (76%) compared to other regions. Africa has experienced significant intra-continental migration, with emigrants representing 6% of the total population and immigrants accounting for 4% (Figure 2.1). Most immigrants come from Africa, and the main migration corridors are located within the continent, with some from Europe and the Gulf states (IOM, 2020).

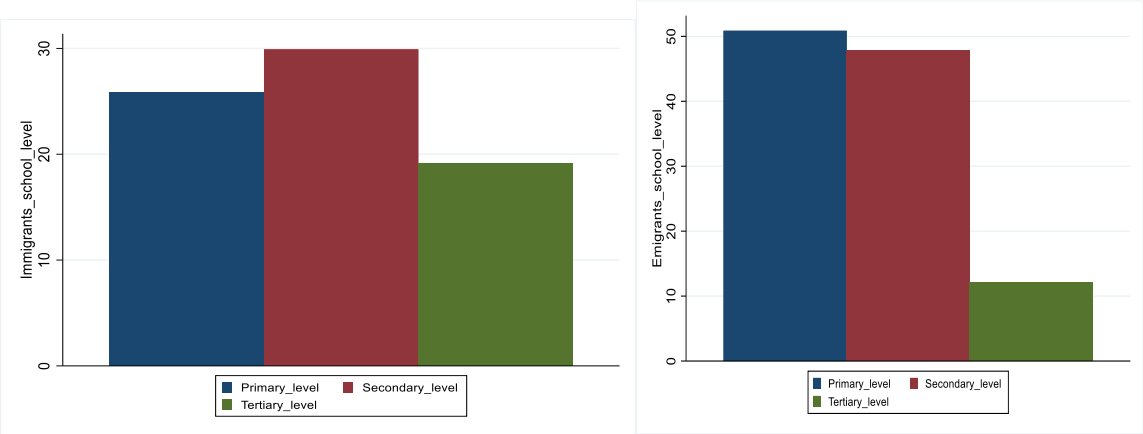
Figure 2.1. The percentage share of the international migrant stock in the total population of African countries, an average over the period



Sources: United Nations, Department of Economic and Social Affairs, Population Division. (2020)

On average, during the examined period, over 20% of immigrants in African host countries had at least a primary education, while over 50% of African immigrants had the same education level. There are more people leaving countries with a primary education than entering them. A similar trend was observed in secondary education (30% vs. nearly 40%). However, at the tertiary level, nearly 20% of immigrants have this education compared to 15% of emigrants, indicating that more people with tertiary education enter host countries than leave them (Figure 2.2).

Figure 2.2. Share of immigrants and emigrants in the total stock of migrants by education level (%)



Sources: Author's calculations based on International Labour Organization. (2021); Docquier et al. (2010); Database on Immigrants in OECD Countries (DIOC).

Table 2.1. highlights the significant heterogeneity in the data evolution among African countries. Key observations include the average decrease in total factor productivity and variations across countries, the increase in remittances as a percentage of GDP by 0.411 units with a wide range, and the decrease in government expenditure as a percentage of GDP by 0.103 units. The human capital of emigrants and immigrants increased with variations across the continent, and there were large differences in migration rates, average human capital, and domestic credit among African countries. On average, physical capital stock decreased by 81,619.82 units, while the average rate of depreciation of capital stock experienced a slight increase. Finally, foreign direct investment and inflation rates increased, indicating large differences among African countries and diverse economic situations.

Table 2.1. Descriptives Statistics

Variables	Mean	Sd	Min	Max	Sources
ΔTotal Factor Productivity	-.023127	.2092207	-.6037641	.6649613	PWT
ΔRemmitances/GDP	.4114167	8.003635	-32.26926	49.59253	WDI
ΔGovernment Expenditure/GDP	-.103442	3.120558	-7.04643	8.558479	WDI
ΔEmigrant Human Capital	.0212242	2.206681	-13.69581	13.54249	Authors
ΔImigrant Human Capital	.1408393	9.185129	-53.88626	53.90928	Authors
ΔNet migration Rate	.0426249	53.6873	-434.8242	435.6047	Authors[16]
ΔAverage Human Capital	.0032489	.6709131	-1.471616	1.381358	PWT
ΔDomestic Credit/GDP	-2.719222	27.26465	-111.3515	81.59983	WDI
ΔPhysical Capital Stock at constant price	-81619.82	747999.5	-2935666	2828675	PWT
ΔAverage depreciation Rate of The Capital Stock	.0002367	.0184954	-.0670708	.0526813	PWT
ΔForeign Direct Investment	.0895117	12.13903	-100.9707	102.9117	WDI
ΔInflation	1.480196	81.28192	-527.526	553.9779	WDI
N	261				

2.4.3. Regression methodology

2.4.3.1. Regression equation

By postulating a linear specification of the relationship expressed by Equation [4], we derive the following expression:

$$A_{it} = A_{i0} + \Theta' \widetilde{H}_{it} + \Phi' X_{it} \quad [5]$$

By deriving TFP, A_{it}, with respect to time, we have:

$$\Delta A_{it} = \Theta' \Delta \widetilde{H}_{it} + \Phi' \Delta X_{it} \quad [6]$$

Based on equations (5) and (6) and by posing $\Delta A_{it} = \Delta TFP_{it}$ and decomposing the vectors $\widetilde{H}_{it}$ and X_{it} into their empirical components, we arrive at the following empirical specification (Benhabib and Spiegel, 1994; Madsen 2014; Kim, 2015).

$$\boldsymbol{\Delta TFP_{it} = \alpha_i + \tau_1 \Delta Rem_{it} + \tau_2 \Delta H_{it}^{em} + \tau_3 \Delta H_{it}^{im} + \tau_4 \Delta H_{ait} + \tau_5 \Delta tr_{it} + \tau_6 \Delta K_{it} + \tau_7 \Delta Ginv_{it} + \Xi' \Delta Z_{it} + \mu_t + \varepsilon_{it}} \quad \textbf{[7]}$$

With H^{im} the human capital that immigrants bring them to African countries, H^{em} the human capital that African emigrants take with them to foreign countries H_{ta} is the average level of human capital in African countries, t_r is the net migration rate K_t is the accumulation of physical capital, $Ginv$ which is an investment in human capital formation (government spending on education) and

[16] See in appendices B. for more details on the calculation

migrant remittances $\mathrm{Re}m$ (is the migrant's remittances received, considered as an individual investment in human capital). V is the set of control variables, μ_t is the country-specific effect and ε_t is an error term.

H^{im} is the percentage share of those with secondary education among immigrants. H^{em} is the percentage share of those with secondary education among emigrants.

2.4.3.2. Estimation Strategy

- **The Baseline panel data analysis**

Based on equation (7), and to ensure that our results are not the result of an unexpected effect of the instruments, we used the ordinary least squares method at each specification level. However, the OLS estimate is inconsistent because lagged Y_{it-1} and time-invariant country-specific effects η_i are correlated. To correct this problem, we take the first difference for all variables of the model. The first difference removes the individual effects. To confirm the appropriateness of this method, we performed the Hausman test. The Hausman test can be used to compare two methods, fixed effect (FE) and random effects (RE). The null hypothesis of this test is that individual effects are not correlated with the other model regressors. The null hypothesis is rejected if they are correlated; therefore, the RE model is unsuitable. The RE and OLS estimates are reported along with the FE's for comparison. We then checked whether our different models were subject to FE or RE, using the Hausman test. The estimates at the level of all specifications revealed that the models are RE (we fail to reject the null hypothesis in all our specifications and conclude that our models are random-effect models). To assume that they μ_t are uncorrelated with the other covariates, we fit the random-effects model using the variance-components (EC2SLS) or error-components estimator (Baltagi and Chang, 2000).

- **Instrumental variable analysis using heteroskedasticity-based instruments**

This study employs the IV/GMM method proposed by Lewbel (2012) and Baum and Lewbel (2019) to address measurement errors and endogeneity problems in the regressors. Utilizing the Breusch-Pagan test for heteroskedasticity, the presence of heteroskedasticity is found in all first-stage regressions (chi2 values:21.35, 31.76, 9.49, and 41.52; p=0.0000, 0.0000, 0.0021, and 0.0000, respectively). A two-stage estimator was implemented, and the Hansen-J and C-statistics indicated the validity of the instruments used in the regression. In all specifications, the J-statistic suggests

that overidentifying restrictions are not rejected, and the C-statistic affirms the exogeneity of the instruments. The Kleibergen-Paap rk Wald F statistic values primarily exceed Stock and Yogo's (2005) critical value at 5%. Consequently, the null hypothesis of the Kleibergen–Paap rk Wald LM statistic is rejected, demonstrating the strength and validity of the instruments, and ensuring that the orthogonality condition is not violated.

Table 2.2. Models, Endogenous variables, and instruments used in the following regressions

Models	Endogenous variables	Instruments variables	Test for the first-stage heteroskedasticity	Literature
Model (Table 2.3)	ΔEmigrant Human Capital ΔNet Migration Rate	ΔGovernment Expenditure education /GDP ΔInflation	Chi2 = 21.35 P-value= 0.0000	Fergany, 1982 Mazuera-Arias et al.,2020 Rocha et al., 2022
Model 2 (Table 2.4)	ΔRemittances/GDP ΔGovernment Expenditure education/GDP	ΔNet Migration Rate ΔAverage Human Capital dInflation	Chi2= 31.76 P-value=0.0000	Garip, 2012 Landau (1997) Fergany, 1982 Mazuera-Arias et al.,2020 Rocha et al., 2022
Model 3 (Table 2.5)	ΔImmigrant Human Capital ΔNet Migration Rate	ΔPhysical Capital Stock at a constant price ΔForeign Direct Investment ΔInflation	Chi2= 9.49 P-value= 0.0021	Berry and Soligo,1969 Javorcik et al.,2011 Rocha et al., 2022
Model 4 (Table 2.6)	ΔRemittances/GDP*ΔGovernment Expenditure education/GDP	ΔEmigrant Human Capital ΔNet Migration Rate dInflation	Chi2= 41.52 P-value= 0.0000	Garip, 2012 Landau,1997 Fergany, 1982 Mazuera-Arias et al.,2020 Rocha et al., 2022

2.5. Results and Discussions

Table 2.3; Table 2.4; Table 2.5 and Table 2.6; present estimations of the human capital of emigrants and immigrants on TFP using different methods based on Table 2.2 models, with IV/GMM as the least biased estimator.

Table 2.3 shows that a 1% increase in emigrants' human capital leads to a 0.160% decrease in TFP (Hypothesis *2*), supporting the "brain drain" theory (Bhagwati and Hamada, 1974; Docquier and Rapoport, 2012). However, some studies have highlighted potential positive effects (Beine et al., 2008; Rauch and Trindade, 2002). A 1% increase in immigrants' human capital results in a 0.0119% increase in TFP, consistent with the literature showing that immigrant workers contribute to growth and innovation (Peri, 2012; Kerr and Lincoln, 2010) and *hypothesis 3* of the paper. The positive net migration rate's impact on TFP (*Hypothesis 1*) suggests that migration contributes to growth by offsetting the "brain drain" (Dustmann et al., 2016). A 1% increase in the remittance share of GDP leads to a 0.0114% decrease in TFP, which aligns with studies suggesting that remittances might hinder growth by reducing the incentives to work and invest (Chami et al., 2005). This result is inconsistent with *Hypothesis 4* of this paper. Finally, the positive public spending effect implies that investments in areas such as education, health, and infrastructure enhance productivity and growth (Barro, 1990; Devarajan et al., 1996). This result confirms *Hypothesis 5* of this paper.

Table 2.3. Emigrant Human Capital and Total Factor Productivity with OLS, EC2SLS, and IV-GMM[17]

Variables	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔEmigrant Human Capital	-0.123	0.240	-0.123	-0.0771	-0.160*
	(0.265)	(0.773)	(0.334)	(0.660)	(0.0829)
ΔImmigrant Human Capital	0.00921**	0.0142	0.00921*	0.0101	0.0119***
	(0.00411)	(0.0116)	(0.00548)	(0.00669)	(0.00191)
ΔNet Migration Rate	0.000464***	0.000799	0.000464**	0.000499	0.000600***
	(0.000119)	(0.000431)	(0.000222)	(0.000336)	(4.38e-05)
ΔRemittances/GDP	-0.0150***	-0.0114	-0.0150***	-0.0106**	-0.0114***
	(0.00281)	(0.00953)	(0.00322)	(0.00484)	(0.000978)
ΔGovernment Expenditure/GDP	0.0359**	0.00995	0.0359***		
	(0.0121)	(0.0188)	(0.0136)		
ΔAverage Human Capital	-0.0576	-0.366	-0.0576	0.0205	0.00201
	(0.0388)	(0.526)	(0.0455)	(0.0533)	(0.0214)
ΔDomestic Credit/GDP	-0.00216	-0.00883	-0.00216	0.00131	0.000866
	(0.00158)	(0.00454)	(0.00175)	(0.00157)	(0.000636)
ΔPhysical Capital Stock at constant price	6.03e-08	-7.74e-07	6.03e-08	-1.98e-08	1.54e-08
	(5.73e-08)	(4.24e-07)	(6.13e-08)	(6.20e-08)	(2.66e-08)
ΔAverage depreciation Rate of The Capital Stock	5.663*	-0.601	5.663*	1.111	1.510
	(2.837)	(5.841)	(2.891)	(3.185)	(1.598)
ΔForeign Direct Investment	-0.00677	-0.0193	-0.00677	0.00148	0.00142
	(0.00629)	(0.0217)	(0.00893)	(0.0119)	(0.00542)
ΔInflation	0.00970*	0.00543	0.00970**		
	(0.00505)	(0.0120)	(0.00489)		
Constant	0.0320	-0.291	0.0320	0.0171	0.0135
	(0.0263)	(0.164)	(0.0332)	(0.0559)	(0.0104)
Observations	26	26	26	26	26
R-squared	0.862	0.841			0.734

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 2.4, shows that a 1% increase in public spending relative to GDP leads to a 0.0296% increase in TFP, suggesting a positive effect (Barro, 1990; Devarajan et al., 1996). Table 2.4, confirms the negative impact of remittances relative to GDP on TFP (Chami et al., 2005; Senbeta, 2012; Ahamada and Coulibaly, 2013). However, other studies have highlighted the positive effects of poverty reduction and macroeconomic stability (Adams and Page, 2005; Giuliano and Ruiz-Arranz, 2009). In addition, the negative effect of emigrant human capital on TFP supports the "brain drain" theory (Bhagwati and Hamada, 1974; Docquier and Rapoport, 2012), which is also confirmed by the results in Table 2.4 However, some studies have highlighted the potential positive effects of emigration (Beine et al., 2008; Rauch and Trindade, 2002). The positive effect of immigrant human capital on TFP aligns with research on immigrants' contributions to economic growth and innovation (Peri, 2012; Kerr and Lincoln, 2010).

[17] Full details of the results can be found in the appendices in the Table A.3.2. to Table A.3.7. as supplementary files.

Table 2.4. Remittances, Government expenditure, and Total Factor Productivity with OLS, EC2SLS, and IV-GMM

Variables	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔGovernment Expenditure/GDP	0.0359**	0.00995	0.0359***	0.0412***	0.0296***
	(0.0121)	(0.0188)	(0.0136)	(0.0154)	(0.00718)
ΔRemittances/GDP	-0.0150***	-0.0114	-0.0150***	-0.0166***	-0.0151***
	(0.00281)	(0.00953)	(0.00322)	(0.00316)	(0.00148)
ΔEmigrant Human Capital	-0.123	0.240	-0.123		
	(0.265)	(0.773)	(0.334)		
ΔImmigrant Human Capital	0.00921**	0.0142	0.00921*	0.0135**	0.0119***
	(0.00411)	(0.0116)	(0.00548)	(0.00616)	(0.00340)
ΔNet Migration Rate	0.000464***	0.000799	0.000464**		
	(0.000119)	(0.000431)	(0.000222)		
ΔAverage Human Capital	-0.0576	-0.366	-0.0576		
	(0.0388)	(0.526)	(0.0455)		
ΔDomestic Credit/GDP	-0.00216	-0.00883	-0.00216	-0.00247	-0.00164
	(0.00158)	(0.00454)	(0.00175)	(0.00208)	(0.00103)
ΔPhysical Capital Stock at constant price	6.03e-08	-7.74e-07	6.03e-08	9.61e-08	5.20e-08
	(5.73e-08)	(4.24e-07)	(6.13e-08)	(7.28e-08)	(3.44e-08)
ΔAverage depreciation Rate of The Capital Stock	5.663*	-0.601	5.663*	2.576	3.204*
	(2.837)	(5.841)	(2.891)	(2.340)	(1.725)
ΔForeign Direct Investment	-0.00677	-0.0193	-0.00677	-0.00784	-0.0104
	(0.00629)	(0.0217)	(0.00893)	(0.00980)	(0.00712)
ΔInflation	0.00970*	0.00543	0.00970**		
	(0.00505)	(0.0120)	(0.00489)		
Constant	0.0320	-0.291	0.0320	0.0427	0.0343
	(0.0263)	(0.164)	(0.0332)	(0.0287)	(0.0232)
Observations	26	26	26	26	26
R-squared	0.862	0.841			0.748

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 2.5, confirms the positive impact of immigrant human capital on TFP (Peri, 2012; Kerr and Lincoln, 2010; Dolado et al., 1994; Bretschger, 2001; Kemnitz 2001; Hunt and Gauthier-Loiselle, 2010). The emigrants' human capital results still have a negative impact on TFP, aligning with the "brain drain" theory, even if the effect is not statistically significant (Bhagwati and Hamada 1974; Docquier and Rapoport, 2012). The net migration rate has a positive and significant impact on TFP (Ortega and Peri, 2013). The ratio of remittances to GDP negatively affects TFP (Chami et al., 2005). Government expenditure relative to GDP has a positive and statistically significant effect on TFP and is in line with economic theory supporting public investment in areas such as education, health, and infrastructure (Barro, 1990; Devarajan et al., 1996).

Table 2.5. Immigrant human capital and Total Factor Productivity with OLS, EC2SLS, and IV-GMM

Variables	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔImmigrant Human Capital	0.00921**	0.0142	0.00921*	0.0162**	0.0110***
	(0.00411)	(0.0116)	(0.00548)	(0.00744)	(0.00219)
ΔEmigrant Human Capital	-0.123	0.240	-0.123	-0.0964	-0.0397
	(0.265)	(0.773)	(0.334)	(0.374)	(0.112)
ΔNet Migration Rate	0.000464***	0.00079	0.00046**	0.000286	0.00043***
	(0.000119)	(0.00043)	(0.000222)	(0.000390)	(9.96e-05)
ΔRemittances/GDP	-0.0150***	-0.0114	-0.0150***	-0.0177***	-0.0148***
	(0.00281)	(0.00953)	(0.00322)	(0.00591)	(0.00123)
ΔGovernment Expenditure/GDP	0.0359**	0.00995	0.0359***	0.0319**	0.0274***
	(0.0121)	(0.0188)	(0.0136)	(0.0131)	(0.00636)
ΔAverage Human Capital	-0.0576	-0.366	-0.0576	-0.0573	-0.0257*
	(0.0388)	(0.526)	(0.0455)	(0.0827)	(0.0143)
ΔDomestic Credit/GDP	-0.00216	-0.00883	-0.00216	-0.000520	-0.000299
	(0.00158)	(0.00454)	(0.00175)	(0.00170)	(0.000397)
ΔPhysical Capital Stock at constant price	6.03e-08	-7.74e-07	6.03e-08		
	(5.73e-08)	(4.24e-07)	(6.13e-08)		
ΔAverage depreciation Rate of The Capital Stock	5.663*	-0.601	5.663*	0.295	2.468
	(2.837)	(5.841)	(2.891)	(3.802)	(1.771)
ΔForeign Direct Investment	-0.00677	-0.0193	-0.00677		
	(0.00629)	(0.0217)	(0.00893)		
ΔInflation	0.00970*	0.00543	0.00970**		
	(0.00505)	(0.0120)	(0.00489)		
Constant	0.0320	-0.291	0.0320	0.0210	0.0230
	(0.0263)	(0.164)	(0.0332)	(0.0739)	(0.0145)
Observations	26	26	26	26	26
R-squared	0.862	0.841			0.795

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 2.6, presents the results of the estimation of the interaction between remittances and government expenditure on TFP. The IV/GMM coefficient for ΔRemittances/GDP×dGovernment Expenditure/GDP is -0.00178 ($p < 0.05$), indicating a negative and statistically significant effect, suggesting that the effectiveness of government spending is diminished in contexts where remittances are significant (Chami et al., 2005). The IV/GMM coefficient for ΔGovernment Expenditure/GDP is 0.0304 ($p < 0.01$), showing a positive and statistically significant effect, in line with economic models supporting public investments in areas like education, health, and infrastructure (Barro, 1990; Devarajan et al., 1996). The IV/GMM result for ΔImmigrant Human Capital reinforcing the idea that immigration of skilled workers can contribute to economic growth and innovation in host countries (Peri, 2012; Kerr and Lincoln, 2010).

Table 2.6. Interaction variable (Remittances and Government expenditure) and Total Factor Productivity with OLS, EC2SLS, and IV-GMM

Variables	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔRemittances/GDP*dGovernment Expenditure/GDP	-0.00172	-0.00372	-0.00172	-0.00190	-0.00178**
	(0.00141)	(0.00812)	(0.00137)	(0.00135)	(0.000695)
ΔGovernment Expenditure/GDP	0.0384***	0.0102	0.0384***	0.0318**	0.0304***
	(0.0114)	(0.0210)	(0.0135)	(0.0128)	(0.00602)
ΔEmigrant Human Capital	0.0259	-0.611	0.0259		
	(0.310)	(2.047)	(0.348)		
ΔImmigrant Human Capital	0.00953***	0.0297	0.00953*	0.0108*	0.0101**
	(0.00314)	(0.0362)	(0.00538)	(0.00581)	(0.00359)
ΔNet Migration Rate	0.000448***	0.00137	0.000448**		
	(0.000128)	(0.00134)	(0.000218)		
ΔRemittances/GDP	-0.00659	0.00248	-0.00659	-0.00615	-0.00565
	(0.00849)	(0.0321)	(0.00739)	(0.00691)	(0.00358)
ΔAverage Human Capital	-0.0632	0.439	-0.0632		
	(0.0398)	(1.851)	(0.0448)		
ΔDomestic Credit/GDP	-0.00145	-0.00828	-0.00145	-0.000435	-8.54e-05
	(0.00145)	(0.00521)	(0.00180)	(0.00189)	(0.000893)
ΔPhysical Capital Stock at constant price	7.66e-08	-1.42e-06	7.66e-08	7.07e-08	7.57e-08**
	(4.82e-08)	(1.49e-06)	(6.15e-08)	(6.49e-08)	(3.28e-08)
ΔAverage depreciation Rate of The Capital Stock	3.299	0.967	3.299	0.998	0.275
	(3.903)	(7.363)	(3.404)	(2.639)	(2.116)
ΔForeign Direct Investment	-0.00364	-0.0415	-0.00364	-0.000460	-0.00617
	(0.00534)	(0.0541)	(0.00910)	(0.00961)	(0.00730)
ΔInflation	0.00593	0.0167	0.00593		
	(0.00523)	(0.0279)	(0.00566)		
Constant	0.0358	-0.545	0.0358	0.0498	0.0458*
	(0.0260)	(0.583)	(0.0327)	(0.0309)	(0.0243)
Observations	26	26	26	26	26
R-squared	0.877	0.852			0.783

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

In sum, the results also reveal that the Average human capital variable is not statistically significant in any model, and that the negative effect on TFP could be due to skill mismatches, labor market rigidities, and institutional barriers (Acemoglu and Autor, 2011 ; Quintini, 2011 ; Montt, 2017 ; Adalet McGowan and Andrews, 2015 ; Vandeplas and Thum-Thysen, 2019 ; McGuinness and Pouliakas, 2017). The trade-off between quantity and quality of education may play a role (Hanushek and Woessmann, 2008). The unclear impact of changes in average human capital on TFP may be due to factors such as the importance of human capital quality in productivity growth (Hanushek and Woessmann, 2008), and the complex relationships between human capital and productivity influenced by factors not captured in the models, such as institutions (Acemoglu, 2009). Reconciling the results requires considering different mechanisms: immigrants may positively impact TFP due to the diversity effect (Alesina and La Ferrara, 2005), while skilled worker migration could negatively impact TFP because of the "brain drain" (Docquier and Rapoport, 2012). The insignificant effect of average human capital on TFP suggests that productivity growth relies more on the quality and diversity of skills than on the average quantity (Hanushek and Woessmann, 2008).

2.5.1. Implications for public policy

This study highlights the need to attract high-skilled immigrants, minimize brain drain, and support human capital development in African countries. Several global initiatives and policies have been adopted as examples. Point-based immigration systems in Canada and Australia prioritize high-skilled immigrants, thereby increasing innovation and productivity (Hou et al., 2018; ProkopenkoandHou, 2018; LuandHou, 2020; Hou et al., 2020). India and Ireland use dual citizenship and diaspora engagement to encourage investment and knowledge transfers (Gamlen, 2014). Germany and the United States attract international students through scholarships and exchange programs (JonkersandCruz-Castro, 2013), while the United Kingdom offers start-up visas for entrepreneurs (Nathan, 2015). Finland and South Korea invest in education, vocational training, and lifelong learning to support human capital development and innovation (Schleicher 2018).

African governments can adopt similar measures to positively affect TFP and growth. These measures include encouraging brain circulation, attracting and retaining skilled immigrants, enhancing domestic human capital development, and promoting regional co-operation. Streamlining visas and work permits, offering competitive salaries, and ensuring a safe and stable environment are crucial for foreign workers. Additionally, investing in education and skill development, implementing mobility treaties, harmonizing qualifications, and recognizing skills will facilitate human capital circulation among African countries, thereby contributing to sustainable development.

2.6. Conclusion

This study examines the relationship between migrant remittances, emigrant human capital, immigrant human capital, and total factor productivity, which is the channel of growth we have favored in African countries. The issue addressed in this study has recently been the subject of debate among economists, academics, and policymakers. The main idea of our empirical results is that remittances cannot promote development in African countries in terms of their impact on total factor productivity. Therefore, the question remains whether policymakers can establish a fundamental public policy based on migrant remittances in the same way as foreign direct investment inflows. Our results also show that the human capital of emigrants has a negative impact on factor productivity and suggest that more precise public policies on emigration should be considered concerning brain drains. Our results show that the net migration rate positively impacts total factor productivity. This can be explained by the positive effects of immigrants' human capital. We deduce that immigration to African countries results in quality immigration. These results should lead policymakers toward quality immigration attraction policies. Finally, our results clearly show that government spending on human capital formation positively affects factor productivity. This result brings us back to the fundamentals of endogenous growth, suggesting that human capital formation is a crucial input for economic growth and development. This perspective suggests that the endogenous fundamentals of African economies are necessary for sustainable growth and development, more than hopes based on the mechanisms at play without ignoring their roles.

The study's timeframe (2000-2020) may not account for more recent changes in migration patterns and policies. Additionally, the research's focus on the African continent as a whole might overlook the specificities of individual countries, regions, and industries. Finally, the study does not explore the potential reasons behind the negative impact of remittances on total factor productivity. Future research could (i) investigate the reasons for the negative effect of remittances on total factor productivity and explore potential policy interventions. (ii) Examine the impact of immigration, emigration, and remittances on individual African countries or regions and analyze how different contexts affect these relationships. (iii) Explore the potential of policy interventions such as education and skill development programs to mitigate the negative effects of brain productivity. (iv) Assess the impact of recent changes in migration policies and global events (e.g., the COVID-19 pandemic) on the relationship between immigration, emigration, remittances, and total factor productivity. In addition, future research could, also, involve categorizing migrants and classifying

them into different groups based on relevant characteristics that may affect their contribution to the TFP. These characteristics might include skill level (low-, medium-, and high-skilled), industry/sector, country of origin, or duration of stay in the host country. Finally, while the negative effect of average human capital on may seem counterintuitive, it can be reconciled with other results by considering the complexities in the relationship between human capital and productivity, such as skill mismatches, labor market rigidities, and trade-offs between the quantity and quality of education. The results also suggest that although average human capital does not have a significant impact on TFP, specific dynamics related to immigration and emigration have differential impacts. To better understand these relationships, it may be helpful to further explore the underlying mechanisms, such as the quality and diversity of human capital, skill mismatches, labor market rigidities, and trade-offs between quantity and quality of education, and how they interact with other economic and institutional factors in Africa.

2.7. References

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2.8. Appendices of the chapter 2

2.8.1.1. Appendices A.

Table A.2.1. Sources and Definitions of Data

Variables	Definition	Sources
Immigration (Imm_rate)	The ratio of the number of new immigrants to the number of total population in the host country (%)	Construct by authors using UN, DESA Population Division, International Migration stock, 2020; Docquier et al. 2010; DIOC dataset ; and ILOSTAT-International Labour Migration Statistics (ILMS), [18]
Emigration (Em_rate)	The ratio of the number of new emigrants to the number of total population of the host country (%)	
Im_hu_capital (Immigrants human capital)	It is the percentage share of those with secondary educations among recent immigrants averaged over the 200-2020 period	
Em_hu_capital (Emigrants human capital)	It is the percentage share of those with secondary educations among recent emigrants averaged over the 200-2020 period	
Remittances	Personal remittances received (% of GDP)	World Bank's World Development Indicators (WDI, 2019), PWT
Domestic Credit	The ratio of investment to GDP	
Population	The average of population growth rate (%)	
Human Capital	Schooling education enrollment	

2.8.1.2. Appendices B.

The supplementary information is divided into two sections. The first section deals with the method for calculating the net migration rate, while the second section provides detailed tables of the main results presented in the article.

I. Calculation method for the net migration rate

Two methods can be used to assess the net migration rate: Hamilton and Henderson (1944), and Dolado et al. (1994).

The first is that of Dolado et al. (1994), who study the effect of immigration on the economic growth of the host country, considering human capital. They measured the net migration rate. In Dolado et al. (1994), 's article, the net migration rate is defined as follows: Net Migration Rate = (Immigrants - Emigrants) / Population

[18] See up in the references the table for the sources of data on migrants human capital

Where:

Immigrants represent the inflow of immigration into the country, Emigrants represent the outflow of emigration from the country, and the population is the total size of the host country's population. In contrast, Hamilton and Henderson (1944) measured the net migration rate using the survival method, which is a method for estimating net migration from demographic data (Thornthwaite, 1934; Whelpton, 1928).

From this perspective, the net migration rate is calculated using the survival method developed by Hamilton and Henderson (1944), which estimates net migration from demographic data. This method has also been reported by Boubtane et al. (2016)

To calculate the net migration rate using this method, we proceeded in four steps.

We consider the total population of our sample by country lagged by five periods.

We then calculated the population at the end of the period as follows: initial population plus immigrants minus emigrants plus births minus deaths.

We then calculated the mid-period population, calculated as the difference between the end-of-period population and the initial total population divided by 2.

From there, we derive the net migration rate as the difference between immigrants and emigrants divided by the mid-period population. The result was multiplied by 1000 to express the rate per thousand (‰).

The difference between the two methods is that it should be noted that the formula proposed by Dolado et al. 2014 implies a ratio between net migration flows and the total population, rather than the mid-year population used in the survival method of Hamilton and Henderson (1944). Moreover, Dolado et al. do not express their net migration rate per thousand (‰), unlike Hamilton and Henderson (1944).

For accuracy, we can argue some points in favor of Hamilton and Henderson’s (1944) method, which motivated our choice of this method.

First, the mid-year population: The Hamilton and Henderson method considers the variation in the population during the year by using the mid-year population. This can provide a more accurate approach for estimating the net migration rate, as it considers population changes due to mobility, births, and deaths during the period considered.

Second, the rate per thousand (‰): Hamilton and Henderson's (1944) method expresses the net migration rate per thousand (‰). This can facilitate the understanding and comparison of the net migration rates between different regions or periods.

Indeed, the introduction of the mid-year population and the use of the rate per thousand (‰) can provide a better understanding of the magnitude of migration flows in a given region.

II. Tables

This supplementary document primarily contains the detailed results (A2.1 to A2.5) found in the main document. The least biased results are those grouped in column 5 of each table and are based on Lewbel's (2012) estimator. The Lewbel estimator, developed by Arthur Lewbel in 2012, is an estimation method for regression models with instrumental variables. It is a technique that addresses the problem of endogeneity, i.e., the situation where explanatory variables are correlated with the errors in the model. The main innovation of the Lewbel estimator lies in the creation of valid instruments from observed variables without the need for additional information. It uses "heteroskedasticity moments" to construct instruments that are then used in a two-stage least squares (2SLS) regression approach. The Lewbel estimator can be particularly useful in cases in which it is difficult to find appropriate external instruments for endogenous variables (Baum et al. 2012, Lewbel 2016). This method has been widely adopted and applied in various empirical studies in econometrics, notably for analyzing supply and demand issues, the effects of public policies, and the evaluation of the impact of social programs. In summary, Lewbel's (2012; 2016) estimator is an estimation method for regression models with instrumental variables that allows for the creation of valid instruments from observed variables by exploiting the heteroskedasticity present in the data.

This document also includes the Correlation Matrix Table (Table A2.6) and the data sample country table (Table A2.7).

Table A.2.2: Emigrant Human Capital and Total Factor Productivity with OLS, EC2SLS, and IV-GMM

VARIABLES	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔEmigrant Human Capital	-0.123	0.240	-0.123	-0.0771	-0.160*
	(0.265)	(0.773)	(0.334)	(0.660)	(0.0829)
ΔImmigrant Human Capital	0.00921**	0.0142	0.00921*	0.0101	0.0119***
	(0.00411)	(0.0116)	(0.00548)	(0.00669)	(0.00191)
ΔNet Migration Rate	0.000464***	0.000799	0.000464**	0.000499	0.000600***
	(0.000119)	(0.000431)	(0.000222)	(0.000336)	(4.38e-05)
ΔRemittances/GDP	-0.0150***	-0.0114	-0.0150***	-0.0106**	-0.0114***
	(0.00281)	(0.00953)	(0.00322)	(0.00484)	(0.000978)
ΔGovernment Expenditure/GDP	0.0359**	0.00995	0.0359***		
	(0.0121)	(0.0188)	(0.0136)		
ΔAverage Human Capital	-0.0576	-0.366	-0.0576	0.0205	0.00201
	(0.0388)	(0.526)	(0.0455)	(0.0533)	(0.0214)
ΔDomestic Credit/GDP	-0.00216	-0.00883	-0.00216	0.00131	0.000866
	(0.00158)	(0.00454)	(0.00175)	(0.00157)	(0.000636)
ΔPhysical Capital Stock at constant price	6.03e-08	-7.74e-07	6.03e-08	-1.98e-08	1.54e-08
	(5.73e-08)	(4.24e-07)	(6.13e-08)	(6.20e-08)	(2.66e-08)
ΔAverage depreciation Rate of The Capital Stock	5.663*	-0.601	5.663*	1.111	1.510
	(2.837)	(5.841)	(2.891)	(3.185)	(1.598)
ΔForeign Direct Investment	-0.00677	-0.0193	-0.00677	0.00148	0.00142
	(0.00629)	(0.0217)	(0.00893)	(0.0119)	(0.00542)
ΔInflation	0.00970*	0.00543	0.00970**		
	(0.00505)	(0.0120)	(0.00489)		
Constant	0.0320	-0.291	0.0320	0.0171	0.0135
	(0.0263)	(0.164)	(0.0332)	(0.0559)	(0.0104)
Observations	26	26	26	26	26
R-squared	0.862	0.841			0.734
Hausman			9.46		
P-value			0.3960		
Weak identification test (Kleibergen-Paap rk Wald F statistic):				81.550	
C statistic (exogeneity/orthogonality of suspect instruments)				1.901	
Chi-sq(1) P-val				0.3865	
Hansen J statistic (overidentification test of all instruments					12.165
Chi-sq(12) P-val					0.5930
Hansen J statistic (eqn. excluding suspect orthog. Conditions)					10.264
Chi-sq(10) P-val					0.5928
Underidentification test (Kleibergen-Paap rk LM statistic):					16.138
Chi-sq(2) P-val					0.3729

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A.2.3: International Migrant Cash transfer, Government expenditure, and Total Factor Productivity with OLS, EC2SLS, and IV-GMM

VARIABLES	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔGovernment Expenditure/GDP	0.0359**	0.00995	0.0359***	0.0412***	0.0296***
	(0.0121)	(0.0188)	(0.0136)	(0.0154)	(0.00718)
ΔRemittances/GDP	-0.0150***	-0.0114	-0.0150***	-0.0166***	-0.0151***
	(0.00281)	(0.00953)	(0.00322)	(0.00316)	(0.00148)
ΔEmigrant Human Capital	-0.123	0.240	-0.123		
	(0.265)	(0.773)	(0.334)		
ΔImmigrant Human Capital	0.00921**	0.0142	0.00921*	0.0135**	0.0119***
	(0.00411)	(0.0116)	(0.00548)	(0.00616)	(0.00340)
ΔNet Migration Rate	0.000464***	0.000799	0.000464**		
	(0.000119)	(0.000431)	(0.000222)		
ΔAverage Human Capital	-0.0576	-0.366	-0.0576		
	(0.0388)	(0.526)	(0.0455)		
ΔDomestic Credit/GDP	-0.00216	-0.00883	-0.00216	-0.00247	-0.00164
	(0.00158)	(0.00454)	(0.00175)	(0.00208)	(0.00103)
ΔPhysical Capital Stock at constant price	6.03e-08	-7.74e-07	6.03e-08	9.61e-08	5.20e-08
	(5.73e-08)	(4.24e-07)	(6.13e-08)	(7.28e-08)	(3.44e-08)
ΔAverage depreciation Rate of The Capital Stock	5.663*	-0.601	5.663*	2.576	3.204*
	(2.837)	(5.841)	(2.891)	(2.340)	(1.725)
ΔForeign Direct Investment	-0.00677	-0.0193	-0.00677	-0.00784	-0.0104
	(0.00629)	(0.0217)	(0.00893)	(0.00980)	(0.00712)
ΔInflation	0.00970*	0.00543	0.00970**		
	(0.00505)	(0.0120)	(0.00489)		
Constant	0.0320	-0.291	0.0320	0.0427	0.0343
	(0.0263)	(0.164)	(0.0332)	(0.0287)	(0.0232)
Observations	26	26	26	26	26
R-squared	0.862	0.841			0.748
Hausman			9.46		
P-value			0.3960		
Weak identification test (Kleibergen-Paap rk Wald F statistic) :				69.756	
C statistic (exogeneity/orthogonality of suspect instruments)				5.796	
Chi-sq(1) P-val				0.2149	
Hansen J statistic (overidentification test of all instruments					8.904
Chi-sq(12) P-val					0.4461
Hansen J statistic (eqn. excluding suspect orthog. Conditions)					3.109
Chi-sq(10) P-val					0.6832
Underidentification test (Kleibergen-Paap rk LM statistic) :					15.331
Chi-sq(2) P-val					0.1205

Table A.2.4: Immigrant human capital and Total Factor Productivity with OLS, EC2SLS, and IV-GMM

VARIABLES	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔImmigrant Human Capital	0.00921**	0.0142	0.00921*	0.0162**	0.0110***
	(0.00411)	(0.0116)	(0.00548)	(0.00744)	(0.00219)
ΔEmigrant Human Capital	-0.123	0.240	-0.123	-0.0964	-0.0397
	(0.265)	(0.773)	(0.334)	(0.374)	(0.112)
ΔNet Migration Rate	0.000464***	0.000799	0.000464**	0.000286	0.000433***
	(0.000119)	(0.000431)	(0.000222)	(0.000390)	(9.96e-05)
ΔRemittances/GDP	-0.0150***	-0.0114	-0.0150***	-0.0177***	-0.0148***
	(0.00281)	(0.00953)	(0.00322)	(0.00591)	(0.00123)
ΔGovernment Expenditure/GDP	0.0359**	0.00995	0.0359***	0.0319**	0.0274***
	(0.0121)	(0.0188)	(0.0136)	(0.0131)	(0.00636)
ΔAverage Human Capital	-0.0576	-0.366	-0.0576	-0.0573	-0.0257*
	(0.0388)	(0.526)	(0.0455)	(0.0827)	(0.0143)
ΔDomestic Credit/GDP	-0.00216	-0.00883	-0.00216	-0.000520	-0.000299
	(0.00158)	(0.00454)	(0.00175)	(0.00170)	(0.000397)
ΔPhysical Capital Stock at constant price	6.03e-08	-7.74e-07	6.03e-08		
	(5.73e-08)	(4.24e-07)	(6.13e-08)		
ΔAverage depreciation Rate of The Capital Stock	5.663*	-0.601	5.663*	0.295	2.468
	(2.837)	(5.841)	(2.891)	(3.802)	(1.771)
ΔForeign Direct Investment	-0.00677	-0.0193	-0.00677		
	(0.00629)	(0.0217)	(0.00893)		
ΔInflation	0.00970*	0.00543	0.00970**		
	(0.00505)	(0.0120)	(0.00489)		
Constant	0.0320	-0.291	0.0320	0.0210	0.0230
	(0.0263)	(0.164)	(0.0332)	(0.0739)	(0.0145)
Observations	26	26	26	26	26
R-squared	0.862	0.841			0.795
Hausman			9.46		
P-Value			0.3960		
Weak identification test (Kleibergen-Paap rk Wald F statistic) :				159.408	
C statistic (exogeneity/orthogonality of suspect instruments)				2.030	
Chi-sq(1) P-val				0.5663	
Hansen J statistic (overidentification test of all instruments) :					11.421
Chi-sq(12) P-val					0.5756
Hansen J statistic (eqn. excluding suspect orthog. conditions)					9.391
Chi-sq(10) P-val					0.4955
Underidentification test (Kleibergen-Paap rk LM statistic) :					12.656
Chi-sq(2) P-val					0.5537

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A.2.5: Interaction variable (Remittances and Government expenditure) and Total Factor Productivity with OLS, EC2SLS, and IV-GMM

VARIABLES	(1) OLS	(2) FE	(3) RE	(4) EC2SLS	(5) IV/GMM
ΔRemittances/GDP*dGovernment Expenditure/GDP	-0.00172	-0.00372	-0.00172	-0.00190	-0.00178**
	(0.00141)	(0.00812)	(0.00137)	(0.00135)	(0.000695)
ΔGovernment Expenditure/GDP	0.0384***	0.0102	0.0384***	0.0318**	0.0304***
	(0.0114)	(0.0210)	(0.0135)	(0.0128)	(0.00602)
ΔEmigrant Human Capital	0.0259	-0.611	0.0259		
	(0.310)	(2.047)	(0.348)		
ΔImmigrant Human Capital	0.00953***	0.0297	0.00953*	0.0108*	0.0101**
	(0.00314)	(0.0362)	(0.00538)	(0.00581)	(0.00359)
ΔNet Migration Rate	0.000448***	0.00137	0.000448**		
	(0.000128)	(0.00134)	(0.000218)		
ΔRemittances/GDP	-0.00659	0.00248	-0.00659	-0.00615	-0.00565
	(0.00849)	(0.0321)	(0.00739)	(0.00691)	(0.00358)
ΔAverage Human Capital	-0.0632	0.439	-0.0632		
	(0.0398)	(1.851)	(0.0448)		
ΔDomestic Credit/GDP	-0.00145	-0.00828	-0.00145	-0.000435	-8.54e-05
	(0.00145)	(0.00521)	(0.00180)	(0.00189)	(0.000893)
ΔPhysical Capital Stock at constant price	7.66e-08	-1.42e-06	7.66e-08	7.07e-08	7.57e-08**
	(4.82e-08)	(1.49e-06)	(6.15e-08)	(6.49e-08)	(3.28e-08)
ΔAverage depreciation Rate of The Capital Stock	3.299	0.967	3.299	0.998	0.275
	(3.903)	(7.363)	(3.404)	(2.639)	(2.116)
ΔForeign Direct Investment	-0.00364	-0.0415	-0.00364	-0.000460	-0.00617
	(0.00534)	(0.0541)	(0.00910)	(0.00961)	(0.00730)
ΔInflation	0.00593	0.0167	0.00593		
	(0.00523)	(0.0279)	(0.00566)		
Constant	0.0358	-0.545	0.0358	0.0498	0.0458*
	(0.0260)	(0.583)	(0.0327)	(0.0309)	(0.0243)
Observations	26	26	26	26	26
R-squared	0.877	0.852			0.783
Hausman			9.17		
P-value			0.4221		
Weak identification test (Kleibergen-Paap rk Wald F statistic) :				6.713	
C statistic (exogeneity/orthogonality of suspect instruments)				2.893	
Chi-sq(1) P-val				0.5759	
Hansen J statistic (overidentification test of all instruments					9.789
Chi-sq(12) P-val					0.4592
Hansen J statistic (eqn. excluding suspect orthog. Conditions)					6.896
Chi-sq(10) P-val					0.3306
Underidentification test (Kleibergen-Paap rk LM statistic) :					13.119
Chi-sq(2) P-val					0.2856

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.10

Table A.2.6 : Correlation Matrix

Variables	ΔTotal Factor Productivity	ΔRemmitances/GDP	ΔGovernment Expenditure/GDP	ΔEmigrant Human Capital	ΔImmigrant Human Capital	ΔNet migration Rate	ΔAverage Human Capital	ΔDomestic Credit/GDP	ΔPhysical Capital Stcok at constant price	ΔAverage depreciation Rate of the Capital Stock	ΔForeign Direct Investment	ΔInflation
ΔTotal Factor Productivity	1.000											
ΔRemmitances/GDP	-0.636	1.000										
	(0.000)											
ΔGovernment Expenditure/GDP	0.235	0.351	1.000									
	(0.247)	(0.079)										
ΔEmigrant Human Capital	0.560	-0.591	0.042	1.000								
	(0.003)	(0.001)	(0.840)									
ΔImmigrant Human Capital	0.176	0.318	0.347	-0.031	1.000							
	(0.389)	(0.113)	(0.082)	(0.879)								
ΔNet migration Rate	0.566	-0.201	0.266	0.213	0.111	1.000						
	(0.003)	(0.325)	(0.189)	(0.296)	(0.589)							
ΔAverage Human Capital	0.220	0.029	0.518	0.456	0.095	0.151	1.000					
	(0.281)	(0.887)	(0.007)	(0.019)	(0.644)	(0.462)						
ΔDomestic Credit/GDP	0.579	-0.253	0.448	0.616	0.323	0.396	0.363	1.000				
	(0.002)	(0.212)	(0.022)	(0.001)	(0.107)	(0.045)	(0.068)					
ΔPhysical Capital Stcok at constant price	0.342	-0.141	0.105	0.581	0.178	0.224	0.248	0.788	1.000			
	(0.088)	(0.493)	(0.611)	(0.002)	(0.384)	(0.272)	(0.221)	(0.000)				
ΔAverage depreciation Rate of The Capital Stock	0.328	0.099	0.396	0.407	0.368	0.350	0.618	0.548	0.442	1.000		
	(0.102)	(0.632)	(0.045)	(0.039)	(0.064)	(0.079)	(0.001)	(0.004)	(0.024)			
ΔForeign Direct Investment	-0.203	0.281	0.046	0.005	0.157	-0.099	0.075	-0.269	-0.069	0.074	1.000	
	(0.320)	(0.165)	(0.823)	(0.982)	(0.445)	(0.630)	(0.717)	(0.185)	(0.738)	(0.720)		
ΔInflation	0.339	-0.221	0.015	0.417	0.083	-0.034	0.134	0.279	0.362	-0.112	0.038	1.000
	(0.090)	(0.277)	(0.941)	(0.034)	(0.687)	(0.871)	(0.513)	(0.167)	(0.069)	(0.587)	(0.854)	

Table A.2.7: List of Countries

Countries	
Angola	Senegal
Algeria	Seychelles
Benin	Sierra Leone
Botswana	Somalia
Burkina Faso	South Africa
Burundi	South Sudan
Cameroon	Sudan
Cape Verde	Swaziland
Central African Republic	Tanzania
Chad	Togo
Comoros	Tunisia
Congo	Uganda
Cote d'Ivoire	Zambia
Democratic Republic of the Congo	Zimbabwe
Djibouti	
Egypt	
Equatorial Guinea	
Eritrea	
Ethiopia	
Gabon	
Gambia	
Ghana	
Guinea	
Guinea-Bissau	
Kenya	
Lesotho	
Liberia	
Libya	
Madagascar	
Malawi	
Mali	
Mauritania	
Mauritius	
Morocco	
Mozambique	
Namibia	
Niger	
Nigeria	
Rwanda	

3. Chapter 3 : Immigration in Africa and Labor Market : Lessons from Togo

3.1. Introduction

While people migrate for many reasons, the search for a decent income and stable employment is also at the heart of their decisions. Indeed, most migrants leave an environment marked by job insecurity, damage caused by natural disasters, and insecurity to find a better life prospect with a stable, guaranteed job. Cross-border movements of people, therefore, remain an ongoing process throughout the world and are an essential element of global integration. Africa is also known for its migration history within and beyond the continent. In this regard, the latest Afrobarometer[19] survey of 2018 conducted in 35 african countries suggests that, on average, a third of respondents have considered emigrating; 20% of respondents said they wanted to immigrate to Europe versus 80% who said they wanted to immigrate to another country on the continent.

Furthermore, in 2020, 53% of african immigrants live in the continent, with South Africa and Côte d'Ivoire as their top destinations (UN-DESA, 2020). The relationship between migration and the continent's development has attracted growing interest in various economic and socio-political debates in recent decades. This reflects the continuing dynamics of migration and the interest shown in migration as a potential lever for development. For instance, the 2030 Agenda for Sustainable Development recognizes migration as a sustainable development driver for both the migrants themselves and the countries concerned. Because on the one hand, immigration can bring benefits in the form of skills, a stronger workforce, investment, and cultural diversity to host economies. Emigrants, too, contribute to improving the lives of communities in their home countries through the transfer of financial resources and skills. Consequently, fricans international migration has various socio-economic implications for migrants and the continent's economies.

Given these potential implications, the main objective of this study is to examine the effects of international immigration on native labor market outcomes in african destination countries. Indeed, the effects of immigration on labor market variables in developed destination countries[20] have been the subject of several research studies. However, these effects are less studied in the case of developing countries as destination countries, hence the interest of the present study. Concretely, we analyze this question by focusing on the direct effects of immigration on the wages,

[19] Afrobarometer is a non-partisan pan-African research institute that conducts public opinion surveys on democracy, governance, the economy, and society in over 30 African countries.
[20] Grossman (1982); Card (2001; Borjas (2003); Winter-Ebmer and Zweimuller (2000); Bond et al. (2011) ;Ottaviano and Peri (2012) ; Basso and Peri (2015); Monras (2020).

employment, and current job research time of competing native workers in Togo. By doing so, the study aims to contribute to the literature analyzing the effects of immigration on the labor market in developing countries as destination countries (Gindling, 2009; Ozden and Wagner, 2014; World Bank Group, 2018; Biavaschi et al., 2018; Sparreboom et al., 2020; Viseth, 2020) by estimating the effect of immigration on native labor market outcomes in Togo.

Indeed, our contributions to this literature are at two levels. Firstly, we use Togo's labor force survey ERI-ESI (2018)[21], which remains the first and most recent labor force survey available. It is a representative survey of the working-age population, giving rise to 15171[22] individual observations[23]. The survey covers the whole of Togo. It is based on a sample of individuals aged between 15 and 64, using available data on their employment situation in 2017. As it is not limited to the capital, it is naturally representative of the whole of the country[24]. Two-stage stratified random sampling was used. The primary unit is the cluster. This cluster comprises the enumeration zones defined during the census mapping work as part of the fourth General Census of Population and Housing (RGPH 4) in 2010 and sized during the ERI-ESI mapping operations. The survey is an initiative of the West African Economic and Monetary Union to improve labor market statistics in various countries. It uses two main instruments: an individual/household questionnaire and a community questionnaire. To our knowledge, the present study is intended to be the first in the case of Togo.

Secondly, the contribution also lies in the methodological approach adopted. Since the paper relies on the skill cell approach, Aydemir and Borjas (2011) argue that this approach is likely sensitive to how skill groups are defined. In particular, a small sample size per skill cell tends to attenuate the impact of immigration due to sampling error in measuring the displacement of immigrant supply. To address this potential attenuation bias, we follow two strategies. Firstly, to estimate the effects of immigration on native labor market variables such as employment rate, average wage, and job search time, we have estimated a first primary model in which we exploit the variation in the proportion of migrants in each skill group. Groups are defined according to level of education and work experience, which is a common definition in the literature. Next, we conducted heterogeneity and robustness analysis. The heterogeneity concerns gender issues. We estimated the

[21] Enquête Régionale Intégrée sur l'Emploi et le Secteur Informel (Integrated Regional Survey on Employment and the Informal Sector) is the most recent and most representative of the population labor force survey.
[22] It represents 3319429 persons or 50% of the total population of Togo.
[23] Each individual is assigned a representativeness weight, which we have taken into account in the econometric analyses.
[24] According to the general population and housing census, 2017 the working population is nearly 3319429 or 50% of the total population.

impact of immigration on native-born men's outcomes only, as usualy done in much of the literature[25]. Finally, by estimating a second model distinct from the first, we exploit variations between native and immigrant workers in skill groups defined according to their sector of activity and work experience. The definition of these skill groups is a complementary approach that allows us to define the groups differently, taking into account the skills of individuals not based on their level of education but rather on their work experience and sectors of activity. By grouping workers by sector and experience rather than by education, we propose an alternative definition of skill groups. This makes it possible to take into account the specific features of developing countries, where a large proportion of the workforce has few diplomas but does possess professional skills. This enriches the existing literature on immigration and the labor market in african countries as destination countries, in which skill groups are defined solely in terms of education and experience. In addition, the addition of the native job search time variable provides further information on the effects that immigration may have on labor market variables in the destination country in relation to unemployment issues.

As a result, the econometric analysis adopts the skill group approach inspired by Borjas (2003). In our view, this methodology is the most suitable for studying how native-born labor market outcomes may react to an increase in the number of comparatively skilled immigrants. The analysis uses two-stage Ordinary Least Squares (2SLS) as an estimator, which considers endogeneity biases concerning the non-exogenous nature of the immigration variable. Consequently, our baseline econometric results show that a one percentage point increase in the share of immigrant workers leads to a non-significant decrease in the employment rate of natives, a significant 8.6% drop in their average wages, and a non-significant increase in their job research time. However, our robustness analyses reveal some significant effects when workers are distinguished by gender and sector of activity. Thus, immigration has a significant negative impact on the wages of native-born men (5.9%). When workers are grouped by experience and sector rather than by education, greater negative and significant effects on employment and wages appear. The rest of the paper is structured as follows: the first part describes the transmission channels between immigration and the labor market outcomes of destination countries and reviews the literature on studies estimating the effects of immigration. The second part presents the empirical analysis, followed by a

[25] See Borjas (2003); Biavaschi et al. (2018); and Viseth (2020), who exclude women from the basic analysis on the grounds that men and women in the labor market present particularly distinct characteristics that must be taken into account in the estimates to limit bias.

discussion of the econometric results and their positioning in relation to the literature on developing countries.

3.2. Literature Review and Transmission Channels

3.2.1. Transmission Channels

Theoretically, according to Friedberg and Hunt (1995), the effect of immigration on native-born labor market outcomes will depend mainly on the model used and the assumptions made for the analysis. The effects differ according to whether we consider a closed or open economy and according to the assumptions made about the skills of natives and immigrants. Typically, in a simple standard model, the effects of immigration on labor market variables have been analyzed under the assumption of a closed economy with a fixed capital stock, homogeneous labor, and constant returns to scale. In such a model, the arrival of immigrants, as a source of demographic growth, will increase labor supply and, consequently, lower wage levels but increase total employment and long-term output. At the same time, it will reduce native employment in the short term due to its capital dilution effect. Such a model predicts that a labor supply shock, such as an increase in the number of immigrant workers, leads to a decrease in the marginal return of factors that are close substitutes and an increase in the marginal return of factors that are close complements (Bodvarsson and Van den Berg, 2013).

The starting point for analyzing the transmission channels of the impact of immigration on labor market outcomes in the destination country is inspired in particular by Viseth (2020). This study takes account of certain specific features of African economies, such as the predominance of the informal sector, with a weak presence of unions resulting in low bargaining power[26]. Moreover, the study considers both complementarity and substitutability between native and immigrant workers. Therefore, within this conceptual framework, we will explain the various transmission channels in the following lines. The impact of immigration on labor market variables will be mediated by the degree of substitutability and complementarity between native-born and immigrant workers. The debate on substitutability between immigrant and native workers is one of the main

[26] See Ohnsorge and Yu (2022) for the characteristics of African economies, where wages are rigid in the formal sector and flexible in the informal sector.

topics discussed in the economic literature on international migration and its impact on the labor market (Ottaviano and Peri, 2012; Bodvarsson and Van den Berg, 2013).

So, on the one hand, in a basic supply-and-demand model, immigration can boost total employment in the host economy because immigrants and natives would not be perfectly substitutable in the labor market. They may be endowed with complementary skills that the labor market would need. So, when immigrants offer their labor force if it is complementary, then we may see an increase in total employment. Because, in response to this new, complementary supply of labor, the demand for labor will also adjust. Immigration will, therefore, positively impact total employment in both the formal and informal sectors. In this context, the underlying assumptions are complementarity between immigrant and native workers; the different labor markets are closed, the capital factor is assumed to be fixed, there is market segmentation into formal and informal sectors that employ both native and immigrant labor, and wages are flexible (Viseth, 2020). However, it must be stressed that even in periods of underemployment, some jobs remain vacant in specific fields (e.g., maintenance, personal services, construction, agriculture), and companies are struggling to recruit. So, while immigrants can ease the pressure on the labor market in these areas, which may or may not be neglected by native-born workers, this will not reduce total employment or the employment of native-born workers.

What's more, in an economy, the employment stock is not necessarily fixed; it can vary according to business cycles and the diversification of economic activities. So, the influx of migrants with complementary knowledge can be helpful in meeting an economy's needs. This is the case of the economies of Rwanda, Kenya, South Africa, Côte d'Ivoire, and Togo, which, as they diversify, attract immigrants in sectors such as information technology, services, finance, industry, and digital technology to meet specific labor market needs[27]. The contribution to innovation is also an additional channel for the impact of immigration. What's more, immigrants in the host economy not only help create value but can also contribute directly to job creation. One particularity of migrants is that they engage in entrepreneurial activities, creating new jobs that can also increase total employment for natives and immigrants alike (Ortega and Peri, 2014; Nathan, 2014; Azoulay et al., 2022). Conversely, if immigrants are perfect substitutes for natives, the increase in labor

[27] See the International Organization for Migration (IOM, 2020) report on "The State of World Migration 2020".

supply induced by immigration, all other things being equal, may decrease native wages and, in turn, native employment.

On the other hand, in addition to a basic supply-demand framework, in an institutional context where we now assume the existence of a minimum wage in an economy, rigid wages will hardly be sensitive to adjustments in labor supply and demand due to immigration. Consequently, the arrival of immigrants can lead to a fall in native-born employment by increasing the unemployment rate of the latter in sectors employing more immigrant workers, especially under the hypothesis of perfect substitutability between immigrant and native workers and rigid wages. In other words, given that wages are rigid but that immigration has led to an increase in the labor supply, native-born workers could lose their jobs if they are perfect substitutes for immigrants and if the demand for labor has not increased overall. Work also becomes less attractive for them. Voluntarily or not, natives may find themselves unemployed. In a context of intentional barriers, the literature (notably Rivera-Batiz, 1981; WinterEbmer and Zimmermann, 1999; Angrist and Kugler, 2003) has established a negative effect of immigration on native wages and employment if native and immigrant workers are substitutes and wages are rigid. Viseth (2020), in a context of segmented formal and informal labor markets, demonstrates that if immigrants and natives are substitutes, immigration will hurt total employment and wages, particularly in the formal sector. The impact of immigration on native labor market conditions may be direct if immigrants are employed at the expense of natives. Secondly, there may be an indirect negative effect of immigration on the employment rate of native workers through their displacement from the formal to the informal labor market. Finally, another indirect negative impact of immigration on native employment may result from the relocation of natives from high-immigration regions to low-immigration regions. In this sense, natives who are employed at the time of immigration are more likely to leave than those who are already unemployed; consequently, the departures of these native workers reduce native employment rates. Furthermore, immigration could induce native workers to leave the country and move abroad, so the departure of native workers also reduces native employment rates (Biavaschi et al., 2018).

All in all, the impact of immigration on native labor market variables is determined by the degree of substitutability or complementarity between natives and immigrants, the institutional framework, the adjustment capacities of the host economy, and the increase in demand for native

workers as immigrants reduce production costs and output expands. Thus, the empirical estimation of effects highlighted in the theoretical literature has given rise to a vast amount of empirical literature, especially in the context of developed destination countries, which we present in the next section.

3.2.2. Review of Literature

A review of the empirical literature on the impact of immigration on labor market variables in destination countries shows the use of various methodological approaches with equally mixed results (Grossman, 1982; Altonji and Card, 1991; Card, 2001; Borjas, 2003; Borjas and Katz, 2007; Monras, 2020). The aim is to consider the various biases in estimating a causal effect from immigration to labor market variables. Firstly, this literature points out that even if correlations are observed between immigration and destination country labor market variables, it is complex to empirically estimate robust causal effects and conclude that these correlations reflect an impact of immigration on destination country labor market variables. Another difficulty is to isolate and estimate the impact of immigration on the labor market in relation to other factors that would impact both immigration and the labor market variables under study. We might consider that it is instead the labor market conditions of the host country that attract immigration, thus making the immigration variable itself endogenous.

Moreover, the settlement of immigrants can also impact labor market variables, reversing the causality of immigration to labor market conditions. In addition, natives may also respond to immigration by moving geographically, thus generating additional biases (Borjas, 2003). To estimate a robust causal relationship between immigration and labor market conditions in the host country, these potential biases must be considered. Consequently, the challenge for researchers in this literature is to consider these different biases, which has led to the use of different methodological approaches. However, implementing these approaches continues to be debated in the literature.

On the one hand, one methodological approach consists of estimating the impact of immigration on the regional labor market, known as the geographic zone approach. This approach assumes that the various regional labor markets are relatively autonomous and sufficiently isolated. The impact of the share of immigrant workers in regional populations is thus estimated on the employment and wages of native workers in the said regions, with the different regions considered observation units.

Another methodological approach uses natural experiments to estimate the impact of immigrants on labor market variables in the host country. The authors observe situations in which immigrants have migrated massively to a location for a short period and for totally exogenous reasons. Finally, a methodology has also been developed using structural labor market models, which estimate the impact of immigration on the national labor market based on interactions between native and immigrant workers with different levels of education and work experience. In this case, the different skills resulting from the combination of education and work experience are considered the units of observation. The following sections summarize studies that have adopted these various approaches.

3.2.2.1. Geographical area approach

Among the works adopting the methodology based on a geographical area approach, we note Grossman (1982). Using a translog production function with metropolitan area data from the 1970 US census, the author found no significant impact of immigration on native labor market variables. In theproduction function, which considers native and immigrant workers as distinct production factors, the author performs a cross-sectional analysis and uses the "Seemingly unrelated regression equation" to estimate the impact of the proportion of immigrants in different regional labor markets on native employment and wages. Following the same methodological approach, Borjas (1983, 1987) uses a generalized Leontief-type production function and arrives at the same conclusions. Altonji and Card (1991), for their part, without making any assumptions about the type of production function, estimate the impact that variations in the proportion of immigrants in the regional population can have on the wages and employment of natives in several metropolitan regions. Their results for cross-sectional and first-difference estimates suggest that immigration has no significant impact on wages or employment of natives with the ordinary least-squares estimator and instrumental variables for first-difference estimates. Instrumentation consists of using the share of immigrants by region for the previous period to explain the variation in the stock of immigrants over the study period. The authors explain that immigrants tend to move more toward regions with a high concentration of immigrants. In the same vein, Grenier (1992) carried out an analysis in Canada. The author estimates the impact of the proportion of immigrants by region on the wages of low-skilled native workers and young people in these different regions. His results also show that immigration has no significant impact on native wages. Parallel to this study,

Akbari and DeVoretz (1992) analyze the same type as Grossman (1982). However, even when estimating a translog production function, the authors use industry rather than region as the observation unit. That is the distribution of immigrants and natives in 125 industries in different regions of Canada for 1980. They conclude that immigration has no significant impact on native-born labor market variables. Card (2001), in a study analyzing the impact of immigration on native employment in the United States, provides empirical evidence that a one-percentage-point increase in the immigrant share leads to a 1-percentage-point decrease in native employment. It also shows that immigration has not led to the relocation of natives to other regions. Using the immigrant rate in a given region in the period preceding the study period as an instrument, he hypothesizes that network effects can be sources of motivation for future immigration. He shows that the influx of immigrants had no impact on the geographical relocation of natives. Angrist and Kugler (2003) come to similar conclusions for European Union countries. However, Winter-Ebmer and Zweimuller (2000) find no significant impact of immigration on the probability of unemployment for natives in Austria. However, according to the authors, this does not mean that immigration has had no impact on native employment. It simply means that native workers already in employment were not affected by the influx of immigrants. In other words, the authors show that immigration has a negative impact on native job-seekers, who find it harder to find a new job. When the immigrant rate rises by one percentage point, unemployment duration increases by 5%. Recently, in this approach, Basso and Peri (2015) generally concluded that immigration positively impacts the wages and jobs of natives in the labor market. Despite researchers' efforts to account for various biases in estimating the impact of immigration, the absence of a statistically significant impact between the presence of immigrants and native labor market variables does not necessarily indicate a lack of causality running from immigration to the labor market (Borjas, 2003, 2006). One potential reason is that immigrants' choice of where to settle is not totally exogenous in most situations; they tend to go where the prospects are best for them. Another reason is that the internal migration of natives can also be affected by international immigration. Let's consider all these adjustments and the fact that populations can respond to immigration since they have the right to move between different regions without main restrictions. It may be that immigration affects the labor market, but this effect is diluted because of mobility (Borjas, 2003). Consequently, in this methodological approach, the unit of observation variable also becomes endogenous, which could explain the absence of statistically significant results.

3.2.2.2. Natural experiments approach

In the literature analyzing the impact of immigration on the labor market, authors such as Card (1990) adopt the "natural experiment" methodology. Authors adopting this approach have conducted their analyses based on specific events that have led to totally exogenous waves of immigration to a given region during a given period. The approach consists of imputing a number of immigrants to a given region, while in another similar region, no wave of immigration took place. We then compare labor market conditions in these two regions following the event while controlling the specifications for region-fixed effects that may affect labor market variables. The advantage of this approach lies in the fact that the variable of interest, immigration, is totally exogenous. Typically, Card (1990) adopted this analytical methodology in the context of the wave of Cuban immigrants to the Miami area in 1980 following the exceptional authorization granted by Fidel Castro. The author compares labor market conditions in the Miami area with those in similar regions to those in which Cuban immigrants did not head. In doing so, he finds that labor market conditions in the Miami region deteriorated in the very short term compared to other regions. However, using the difference-in-differences method, the author shows that this deterioration in labor market conditions in the region above was mainly due to the economic situation as a whole and not to the arrival of Cuban immigrants. Finally, he concludes that immigration had no significant impact on the labor market in the Miami area.

Meanwhile, Hunt (1992) also assesses the impact of the repatriation of European nationals to France in 1962. The author points out that although these migrants settled mainly in the south of France and thus increased the labor supply in this region compared to other similar regions of France, he found no empirical evidence that immigration significantly impacted labor market variables in southern France. Friedberg (2002) finds similar conclusions after the arrival of Russian immigrants in Israel between 1989 and 1994. Thus, we find that the results of these studies remain statistically insignificant even when the immigration variable of interest is considered fully exogenous. Moreover, Peri (2016) argues that these migration episodes are rare and do not represent the typical and usual patterns of existing classical migrations, which could also explain this non-significance.

3.2.2.3. Skills groups approach

Another approach has also been developed in the literature. This is the "skill cell" approach, which estimates the impact of immigration on the labor market at the national level. The argument behind this approach is that the mobility of native-born and immigrant workers between different groups is less important than that between various regions of the same country. This approach is based on two main assumptions. On the one hand, it assumes that workers within a labor market skill group defined by the interaction of a given education level and a range of professional experience are perfectly substitutable. In other words, a university graduate can easily be replaced by someone with similar experience. Conversely, his substitutability is more limited with workers of different profiles. On the other hand, the mobility of native workers between skill groups is assumed to be more rigid and costly than their geographic reallocation within the country. Thus, a graduate will find it difficult to become a skilled worker without a diploma, even if he or she moves from his or her region, just as a skilled worker without a diploma can change region without changing occupation as radically. Based on these two assumptions, variations in the share of immigrant workers within each skill group can be used to identify the causal impact of immigration on the employment and wages of native workers in the corresponding groups. Indeed, suppose the influx of migrants worsens the conditions of native-born workers. In that case, we should observe a negative impact between migratory variation and the evolution of wages or employment rates of native-born workers within the affected skill groups (Borjas, 2003). This new methodological approach makes it possible to better account for dilution biases due to the potential movement of workers between regions, which would not be considered in previous methodological approaches (Borjas, 2003). The idea behind this is that, in the geographic zone approach, there would be an additional bias stemming from the fact that the distribution of immigrants by region is not necessarily random and that, what's more, native-born workers may decide to move to another region as a result of immigration. Estimating the impact of immigration on labor market conditions would, therefore, be even more biased. Borjas' (2003) landmark article on the subject underlines this point. The author draws on decennial census data from the United States of America, disaggregated by level of experience and education. He defines 32 skill groups as a combination of education level and years of experience. The author divided the sample of native workers into skill groups according to their level of education and years of experience. In his study, he points out that the distribution of immigrants by skill groups is significantly different from that of natives.

He assume that immigrant workers in a given group are substitutes for natives in that same group. Thus, by estimating the impact of the proportion of immigrant workers by skill group on the wages of natives in the same groups, he finds a negative and significant impact on the latter's wages. This impact is estimated at 0.3% of the logarithm of the average native wage, assuming a fixed return on capital. This approach asks how immigrants with a given skill affect the labor market variables of native workers with that same skill. Since this work, abundant literature has also developed, adopting this skill-group approach and highlighting the negative and positive effects of immigration on the labor market. These include Bonin (2005), Germany, who found a negative impact; Aydemir and Borjas(2007), who found a negative impact in Canada; and Steinhardt (2011), who also found a negative impact in Germany. In contrast, Ortega and Verdugo (2014) found a positive impact in France. Breunig et al. (2017) find no impact for Australia. Maani and Tse (2017) for New Zealand found an insignificant positive impact on wages. Monras (2020), the United States of America finds a negative and insignificant impact of immigration on native wages.

This diversity of approaches and the still mixed conclusions reflect a methodological and structural debate that persists in the literature on the estimates, the sign of the effects of immigration on native wages (Borjas, 2003, 2016; Card, 2005, 2012; Card and DiNardo, 2000; Peri and Sparber, 2011; Card and Peri, 2016; Jaeger et al., 2018). At the same time, a particular debate also persists on estimating the effects of immigration on native wages by exploiting variations within skill groups according to the national labor market-level approach. Indeed, the literature, in this case, emphasizes that the magnitude and sign of the impact of immigration vary greatly according to the characteristics in the definition of the groups, the assumptions, the estimation tools, and the data used (Dustmann et al., 2013; Bodvarsson and Van den Berg, 2013; Dustmann et al., 2016; Card and Peri, 2016; Monras, 2020). As such, Ottaviano and Peri (2008, 2012), building on Borjas (2003), Borjas and Katz (2007), adopt a general equilibrium approach that allows for endogenous adjustments of the capital stock to immigration as well as imperfect substitutability of native and immigrant workers within skill cells. They also point out that how skill groups are defined can have an impact on the results of the analysis. This is because the authors show, through different definitions of skill groups, that alternative definitions can lead to different conclusions about the effects of immigration on native labor market variables. In their study, the authors first estimate the elasticity of substitution between immigrants and natives in the groups before estimating the partial and total effect of immigration on native wages. Overall, their results show positive effects

of immigration on the wages of native workers in the long term. The authors also highlight imperfect substitution between immigrant and native workers within groups. In addition, D'Amuri et al. (2010) estimate the impact of immigration on natives using a skill group approach (education and experience). They find no significant impact on wages or employment of natives in Germany. They also estimate an elasticity of substitution between immigrant and native workers and provide empirical evidence of imperfect substitution between them.

Similarly, in their analysis, Bodvarsson and Van den Berg (2013) note that if native and immigrant workers are not perfect substitutes, results based on a model that ex-ante assumes perfect substitutability are likely to be further biased. However, determining the extent to which native and immigrant workers are perfectly substitutable is an empirical question that remains the subject of ongoing debate. Nevertheless, there is a consensus in the literature that the potential negative effects of immigration on the labor market outcomes of natives are concentrated in specific categories of the population, such as those with low levels of education and earlier immigrant cohorts (Kerr and Kerr, 2011).

In this vast corpus of existing studies adopting different methodological approaches, very few studies analyze the impact of immigration on the labor market of developing countries as host countries in general and African countries in particular. It is this knowledge gap that our analysis seeks to fill. Notably, in this context of trade liberalization, regional and sub-regional integration put in place by the African Continental Free Trade Area (AfCFTA) project and the African Union's free movement protocol (African Union, 2018) drawn up in 2013 and adopted at the January 2018 summit; which further confirms the willingness of African economies to support the free movement of goods and people within the continent for better integration.

3.3. Empirical Analysis : the case of Togo's labor market

The main objective of this second part is to estimate the effect of immigration on the labor market of West African host countries, mainly ECOWAS states, by applying it to the case of Togo. But, before that, we present in the following lines the migration context in the West African sub-region.

3.3.1. Stylized facts : Migration context in the countries of ECOWAS

In 2020, in West Africa, 89% of immigrant orginary of a member country live in another country in the sub-region, and nearly 30% are immigrant workers (UN-DESA, 2020). Under the aegis of the Economic Community of West African States (ECOWAS), West Africa stands out on the African continent for its achievements in creating a space for the free movement of people and goods[28]. Established in 1975, ECOWAS covers 5.1 million square kilometers and comprises 15 West African member states (Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo). According to its founding treaty signed on May 28, 1975, ECOWAS's mission is "to promote regional integration...". (ECOWAS 1975: art. 2.1) through "the removal, between member states, of obstacles to the free movement of persons, services and capital" (ECOWAS 1975: art. 2.2 d). To ensure the implementation of the free movement of persons, six protocols were signed between 1979 and 1990 and annexed to the ECOWAS founding treaty. They aim to establish, within 15 years, the stages leading to the right of entry and the abolition of entry visas for stays of less than 90 days, followed by the right of residence and the right of establishment (ECOWAS 1979: art. 2). Under the terms of the founding treaty; these protocols were to be incorporated into the national legislation of all member states, thereby constituting the sole framework for regulating international migration within these countries. In 2008 the common approach reoriented the organization's migration objectives (ECOWAS, 2008). In addition to multilateral agreements, there are bilateral agreements between member states, notably on conditions of employment, movement of persons, social security and payments, Devillard et al. (2016). According to the IOM, less than 50% of ECOWAS countries have an internal immigration policy[29].

[28] According to the International Organisation for Migration, West Africa is the continent's second-largest region for immigration, after South Africa.
[29] Read *"A Survey on Migration Policies in West Africa*. ICMPD, International Centre for Migration Policy Development."

Figures in the appendices illustrate the context of migration in the various ECOWAS countries. The majority of people in the region move between different countries. Intra-regional migration flows are more important than migration flows from West African countries to other parts of the world. This migration is part of the regional integration process. Immigration to destinations outside the sub-region accounts for 11%, compared with 89% for intra-regional immigration (UN-DESA, 2020). Another emerging observation is that immigration to various countries in the sub-region is also driven by work-related reasons. In recent decades, Côte d'Ivoire, Gambia, Togo, and Burkina Faso have become important destination countries, welcoming a more significant number of immigrants, mainly to work (see Figure.A. 3.1 and Figure.A. 3.3 in the appendices). Immigrants account for 3% of the total population in various countries. On average, from 2000 to 2020, the stock of immigrant workers in the total immigrant population is 60% for the countries considered (Figure.A.3.4 in the appendix). The main corridors are: Burkina-Faso to Côte d'Ivoire, Côte d'Ivoire to Burkina-Faso, Mali to Côte d'Ivoire, Benin to Nigeria, Ghana to Nigeria, Senegal to Gambia, and Togo to Nigeria (UN, DESA, 2020). Typically, in Togo, immigrants come mainly from Benin and vice versa (Figure.A. 3.5 and Figure.A. 3.6). In Burkina-Faso, most immigrants are from Côte d'Ivoire and Mali (Figure.A. 3.8 in the appendix). The same applies to immigrants living in Côte d'Ivoire (Figure.A. 3.7 in appendix). In the sub-region, from 2000 to 2020, the female immigrant population represented an average of 47%, with significant disparities according to the countries of origin (Figure.A. 3.2 and Figure.A. 3.3). Typically, over 60% of female immigrants in Togo are from Benin (Figure.A. 3.5 in the appendix). And in Benin, we find an average of nearly 80% of female immigrants from Togo (Figure.A. 3.6 in the appendix).

3.3.2. Data and Sources

The empirical analysis mainly uses data from Togo's labor force survey known as l'Enquête Régionale Intégrée sur l'Emploi et le Secteur Informel (ERI-ESI, 2018). The ERI-ESI labor force survey is the first and most recent employment survey. It is a representative survey of the working-age population, giving rise to 15171[30] individual observations[31]. The survey covers the whole of Togo (the six regions are included) and is based on a sample of individuals aged between 15 and 64, using available data on their employment situation in 2017. As it is not limited to the capital, it

[30] It represents 3319429 persons or 50% of the total population of Togo.
[31] Each individual is assigned a representativeness weight, which we have considered in the econometric analyses.

is naturally representative of the whole of Togo[32]. Two-stage stratified random sampling was used. The primary unit is the cluster. This cluster is made up of the enumeration zones defined during the census mapping work carried out as part of the fourth General Census of Population and Housing (RGPH 4) in 2010 and sized during the ERI-ESI mapping operations. For Togo, the survey is carried out by the Institut National de la Statistique et des Etudes Economiques et Démographiques (INSEED), from whom we obtained access to the data. However, it should be noted that this is a regional initiative aimed at improving labor market statistics in the various member countries of the West African Economic and Monetary Union (UEMOA), a West African sub-regional institution. The survey was carried out with technical support from the Observatoire Economique et Statistique d'Afrique Subsaharienne (AFRISTAT) and financial backing from the UEMOA Commission as part of the Programme Statistique Régional (PSR) 2015-2020. The survey uses two main instruments: an individual/household questionnaire and a community questionnaire. The survey was conducted in two stages. The first stage collected information on overall employment (formal and informal) and the socio-demographic characteristics of individuals. This made it possible to identify the informal production units (companies) that would be the subject of the second stage. According to INSEED, these two stages produced the final database. This employment survey is one of the most comprehensive in Togo, providing information on jobs, companies, and salaries according to nationality and place of birth.

3.3.3. Presentation of the dataset and Characteristics of the togolese labor market

Variables characterizing the labor market are measured at the individual level (ERI-ESI, 2018). All details are presented in appendix Table A.3.2. Firstly, considering the overall sample without distinguishing between natives and immigrants, the statistics (Table A.3.2) show two groups of individuals. One group is active, and the other is inactive, representing 39.21% of the sample versus 60.79% for the former. Among the whole sample, 58.74% are employed and 2.05% are unemployed. But among the active population samples, 96.63% are employed and 3.37% are not. Among the employed population we distinguish between informal and formal employment. The rate of informal employment is 94.27% versus 5.73% for formal employment. Regarding gender,

[32] According to the general population and housing census, the working population is nearly 3319429, or 50% of the total population.

women represent 54.85% of the total sample, against 45.15% for men. Among the employed population, employed women represent 52.92% versus 47.08% for men (Table A.3.2). These women are more likely to be in informal employment than men. On average, the informal employment rate for women is 55.30%, compared to 44.70% for men. However, regarding job insecurity, women occupy less precarious jobs than men (30.43% for women versus 69.57%). The inactivity rate for women is 56.47% versus 43.53%. In terms of the level of education, on average, jobs are held by 60.22% of individuals with no school-leaving certificate and 39.78% with a diploma, such as a primary, secondary, or tertiary qualification. The survey reveals that the duration of the job search time is relatively high in Togo. The results show that the average duration of unemployment, expressed in months, is 56.4 for first-time jobseekers, 20.4 months for those who have held a job once, and 46.8 months for all those questioned.

Secondly, regarding immigration, in the absence of information on the country of birth, any person not holding togolese nationality is considered an immigrant. In particular, analysis of the database reveals that immigrants originate from countries bordering Togo and Niger. Typically, the majority of immigrants come from countries such as Benin, Ghana, Niger and Burkina-Faso. We note that intra-african immigration is more pronounced. Over 80% of immigrants to Togo come from other ECOWAS countries. The rate of active immigrants is 57.52%, compared to 60.91% for natives. The rate of inactive immigrants is 42.49% versus 39.09% for natives. Immigrants hold just as many informal jobs as natives. 96% of immigrants hold informal jobs, compared with 94.21% for natives (Table A.3.2). Regarding branches of activity, we note that the percentage of jobs held by immigrants is 19% in the primary sector, compared to 39.47% for native workers. In industry, the percentage is 16.33% for immigrant workers versus 18.75% for natives. In trade, the rate is 44% for immigrants and 18.26% for natives. In the service sector, the percentage is 20.67% for immigrants versus 23.52% for natives. Regarding qualification based on the diploma obtained, immigrants are relatively less qualified than natives. 67.86% of working immigrants have no school qualifications, compared to 58.72% for natives.

Finally, about the unemployed, the average unemployment rate for immigrants is 1.13%, compared to 2.08% for natives. However, the survey shows that, between natives and immigrants, immigrants are more inclined to revise their salary expectations downwards if unemployment persists. In fact, to the question 'Are you prepared to revise your salary expectations if the period of unemployment

persists?' we note that 66.67% of unemployed immigrants answer 'yes', against 59.74% of natives who answer 'yes'. Immigrants are more likely to engage in self-employment than natives (Table A.3.2).

For econometric estimation, four main variables to be explained are retained in the following: actives, employment, wages, and current job search time. They are presented in Table 3.1. Active variable is a binary variable (1 for active and 0 otherwise), which allows us to consider whether the individual is active or inactive in the labor market. Next, we have the employment and unemployment variables. Employment is also a binary variable, with a value of 1 if the respondent declares employment and 0 otherwise. The unemployment variable characterizes whether the individual is declared unemployed. It is also a binary variable, taking 1 if unemployed and 0 otherwise. The survey uses the International Labour Organization (ILO) definition of unemployment and employment[33]. Finally, we have the current job search time and wage variables. The current job search time variable is the average number of months spent looking for the job. In contrast, the wage variable is measured by the average monthly salary the individual surveyed declares in togolese monetary units (the franc CFA). It includes income from work as an employee or as a self-employed entrepreneur.

Table 3.1. Descriptives statistics for individual variables

Variables	Obs	Mean	Std. Dev.	Min	Max
Inactives	15171	0.392	0.488	0	1
Actives	15171	0.607	0.488	0	1
Average monthly wage francs CFA	3731	87510.58	244401.65	0	10000000
Immigrants	15171	0.05	0.22	0	1
Gender/Mens	15171	0.46	0.49	0	1
Age	15171	33.621	12.77	16	64
Education	15171	1.535	1.16	0	3
Region	15171	3.63	1.64	0	6
Workers	15171	0.587	0.492	0	1
Unemployment	15171	0.020	0.142	0	1
Monthly Job Search Time (JST)	7402	14.27	32.23	0	840
Annual Job Search Time (JST)	7402	1.272	2.67	0	70

Sources: ERI-ESI, 2018

The definition of the variables as described in the questionnaire administered to the respondents can be found in Table A. 3.1 in the appendix.

[33] According to the ILO, employment is a form of work performed for others in exchange for remuneration or profit.

3.4. Estimation Strategy

This section presents the methodological approach, the choice of the estimator used, the regression equation, and the construction of the skill groups.

3.4.1. Methodological approach

To estimate the effect of immigration on native togolese labor market outcomes, Borjas' (2003) skill cell approach is adopted. It is assumed that workers in a given skill group are easily substitutable with each other but more difficult with those in other groups. Under the assumption that, in a skill group where workers are perfectly substitutable if the supply of these workers increases, we should observe a wage response. The author specifies that the logarithm of average wages within a given skill group is a function of the share of immigrant and native workers within the same group. Thus, if the proportion of immigrants increases within a group while other factors remain constant, average wages should fall. This is explained by the increased competition for jobs in this group induced by immigration. Therefore, a negative (positive) sign suggests that natives and migrants within the skill group are substitutable (complementary). At the same time, an absence of impact reflects the segregation of immigrants into distinct occupational niches (Gindling, 2009).

However, this methodological approach has some limitations. Firstly, it does not consider the total impact of immigration on the wages and employment of natives. It only estimates the within-skill group effect of a particular influx of immigrants on the wages and employment of natives in direct competition without considering between-skill group effects. This is a partial effect of immigration (Ottaviano and Peri, 2012). Taking these cross-skill effects into account should reduce the negative impact of immigrants on wages while failing to take these effects into account isolates a partial effect of immigration (Dustmann et al., 2016). Second, although this approach would neutralize geographic relocation biases, the problem remains that migrants with particular skills may respond to specific changes in the demand for workers. This behavior will lead to spurious correlations between wage growth and changes in immigrant penetration of different skill groups. Finally, classifying individuals into skill groups based on their level of education and theoretical experience can lead to limited estimates of the effects of immigration, particularly if immigrants are employed in occupations requiring a lower level of education than they have attained (Chiswick and Miller,

2008; Dustmann et al., 2013). Nevertheless, this approach remains widely used in the literature (Gindling, 2009; Biavaschi et al., 2018; Viseth, 2020).

The estimator previo used is ordinary least squares (OLS)[34]. However, even if the literature also uses it under some assumptions, we are aware of certain limitations in adopting this estimator. In particular, there is the limitation of not considering endogeneity biases that may result from the endogenous nature of the immigration explanatory variable (resulting from bidirectional causalities between immigration and the variable to be explained) but also omitted variable biases and selection biases. Indeed, this estimator does not allow us to fully control for the non-randomization of immigration flows, which also often depend on the labor market conditions studied in the host country (Monras, 2020). But, this issue could be addressed using instrumental variables (Card, 2001; Ozden and Wagner, 2014; Biavaschi et al., 2018; Monras, 2020; Viseth, 2020). Although the literature has highlighted the difficulty of finding appropriate instruments for international migration that are sufficiently exogenous, relevant, and strong enough to provide robust estimates (Cortés and Pau, 2014; Jaeger et al., 2018), the most widely used instrument is the historical settlement of immigrants. As an instrument, this historical settlement can explain the current influx of immigrants into different labor markets. Migration is said to be a self-sustaining process. The argument is that past migration (which would not be directly linked to current labor market variables) facilitates current migration, as a wider network of migrants in the past provides more contacts and references for current migrants Munshi (2003). This instrument would be correlated with the endogenous variable and uncorrelated with the error term. Thus, using the household-individual survey, Questionnaire des Indicateurs de Base de Bien Être (QIBB, 2011) of Togo, we construct an instrument that is the historical settlement of immigrants in the different regions of Togo. This survey also covers the whole of Togo and provides information on people's region of residence (the six regions)[35]and country of birth. The sampling method used is two-stage sampling with first-stage stratification. The first-stage sampling frame comprises the enumeration zones derived from the results of RGPH4 (2010). A first-stage sample of the enumeration zones will be drawn from this frame. By doing so, we can use the two ordinary least squares (2SLS) estimator to estimate the impact of immigration on the labor market outcomes of natives in Togo. Consequently, the results of the 2SLS will be discussed in the remainder of the paper.

[34] As (Gindling, 2009; Edo, 2015; Biavaschi et al., 2018; Spareeboom et al., 2020).
[35] The sample size is 29781 observations, representing 6371005 persons, approximately the total population. See the appendices for more details on the survey.

3.4.2. Regression Equation

Inspired by the work of Biavaschi et al. (2018), the regression equation takes the following form :

$Y_{jkr} = \alpha_0 + \alpha_1 I_{jkr} + E_{jr} + P_{kr} + (E_{jr} * P_{kr}) + \epsilon_{jkr}$, $\forall j = 1, \dots, 4$ $k = 1, \dots, 5$ and $\forall$ r= 1,..,6 (1)

With Y_{jkr} a labor market variable for natives with education level j and experience level k in region *r* ; I_{jkr} Immigration, the share of immigrant workers with education level j and experience level *k* ; E_j a modality of education level and P_k a modality for the number of years of work experience.

From equation (1) we can rewrite the following equation (2), which will be used for the basic econometric regressions in the rest of the paper. The units of study ares skills groups.

$$\boldsymbol{Y_{ir} = \alpha_0 + \alpha_1 I_{ir} + g_i + r_r + \varepsilon_{ir} \ \forall i = \{j,k\} \ et \ \forall r = 1,.,6} \qquad (2)$$

Y_{ir} is a labor market variable for natives of skill group i (20 groups) in region *r* (6 regions). For the purposes of analysis, we retain three main dependent variables. Native employment defined as the employment rate of natives in the native labor force in each skill group. Next, we retain the average wage of native workers for each group in logarithm. Finally, the average time in months spent looking for the current job by native workers in each group.

I_{ir} Is the independent variable of interest that measures immigration. It correspond to the share of immigrant workers in the different skill groups i and in region r. According to Borjas (2003, 2006); this is the independent variable of interest given by the following formula : $\boldsymbol{I_{ir} = \frac{IM_{ir}}{IM_{ir} + N_{ir}} \ \forall i = \{j,k\}}$ **and r = 1, ...,6**

With IM_{ir} the number of immigrant workers in skill group i in region r, N_{ir} the number of native workers of the same skill group in the same region. The expected sign of the coefficient associated with the immigration variable of interest is undefined. It may be a positive or negative sign on wages, employment or unemployment duration of natives depending on the degree of substitutability and complementarity as highlighted by empirical studies (Gindling, 2009; Biavaschi, 2018; Sparreboom et al., 2020; Viseth, 2020). ϵ_{ir} is the error term.

Skill groups are defined on the basis of a combination of education level (E_j) and years of professional experience (P_k). The education variable has four modalities, and the experience variable is defined according to five modalities.

Therefore, to define the different levels of education, we use an individual variable in the survey that considers the level of education according to UNESCO's International Standard Classification of Education[36]. This variable allows us to identify the highest diplomas obtained by the individuals surveyed. Hence, we count four different modalities for the level of education just as defined by Biavaschi et al. (2018). The aim is to be able to take into account individuals who have obtained no diploma but are still employed[37].Thus; firstly, these are individuals who have not obtained any school (or pre-primary) diploma but who could still have entered the labor market at age 15 according to togolese legislation; secondly, those holding the diploma for the primary level; thirdly, those who have obtained the diploma at the end of secondary school; the fourth level of education concerns tertiary diplomas obtained after secondary school, such as bachelor's degrees, master's degrees and more[38], (see the proportion of individuals in appendices Table A. 3.5). From this level of education, the variable that provides information on the theoretical age of entry into the labor market is derived.

Borjas (2003, 2006) and Biavaschi et al. (2018) argue that workers with the same level of education and different levels of experience are not perfectly substitutable in production. For this reason, the years of experience possessed by native and immigrant workers must be considered when estimating the effect of immigration on labor market variables. This is because knowledge is acquired before and after entering the labor market. In line with this literature, we associate different categories of years of work experience with each modality of level of education while considering a specificity linked to women. Specifically, in the present study, following Biavaschi et al. (2018), to define the five categories of years of work experience (P_k), given by the difference between actual age and theoretical age, we use a theoretical work experience proxy. Indeed, although theoretical work experience would have limitations, the data do not allow us to measure actual work experience. Typically, one of the limitations would be that, for example, individuals

[36] The diploma variable is based on the International Standard Classification of Education (ISCED) devised by UNESCO.

[37] About the minimum age for admission to employment, article 150 of the Labor Code states that "subject to the provisions relating to apprenticeships, children of either sex may not be employed in any business or perform any type of work, even on their account, before the age of 15".

[38] See (Borjas, 2003; Biavaschi et al., 2018; and Viseth, 2020) for modalities of the level of education and work experience.

may take longer to obtain their various diplomas or decide not to enter the job market immediately after graduation. They may also experience relatively long periods of unemployment to find a job. This is more common for some higher education graduates in developing countries who struggle to find their first job. There is a limit to the extent to which an individual can be considered to have a given level of experience solely based on the diploma he has obtained.

What's more, this measure is particularly limiting for immigrants too. Indeed, it does not distinguish between experience acquired while working in the destination country and experience acquired in the country of origin (Chiswick and Miller, 2008). Regan and Oaxaca (2009) thus suggest that the variable as defined captures an age effect rather than an actual work experience effect.

However, in their studies on South Africa, Ghana, Rwanda, and Costa Rica, authors such as Gindling (2009); Biavaschi et al. (2018); Sparreboom et al. (2020) have also used this proxy in analyzing the effects of immigration on the labor market. Thus, with reference to this literature, the variable is constructed as a function of the respondent's actual age and the theoretical age at which he enters the labor market. The theoretical age corresponds to the age at which the individual is supposed to enter the labor market, according to his level of education. With four modalities for level of education, we assign 15 years to individuals with pre-primary education[39], 17 years to those with primary education, 19 years to those with secondary education, and 21 years to those with tertiary education[40]. Thus, the variable number of years of professional experience (P_k) is given by the difference between the actual age and the theoretical age of the individual. By doing this, we obtain the corresponding theoretical number of years of experience for each individual. However, we retain a maximum of years of theoretical experience of 40 years as Gindling (2009) and Biavaschi et al. (2018) and thus define the five categories of years of professional experience with eight-year intervals. Borjas (2006) has shown that using alternative intervals to define experience would not qualitatively affect the results. In addition, this choice was motivated by the low life expectancy in developing countries (61 years in Togo) compared to developed countries and by the fact that we had a sufficient sample of natives and immigrants in all skill groups.

For women, we assume that, in addition to periods of maternity, they traditionally take on the main role of raising children within families and household chores. If they choose to work, they will tend

[39] In Togo, there is no pre-primary diploma, so we consider workers with no diploma at all for this category.
[40] See (Borjas, 2003; Biavaschi et al., 2018; Viseth, 2020) for more details on the choice of years.

to spend more time outside the labor market than men[41]. Consequently, in estimates of theoretical years of work experience, an adjustment is needed for women. To this end, Regan and Oaxaca (2009) demonstrate that there is a difference between the number of years of potential and actual experience by gender. Using theoretical work experience calculated similarly for men and women in estimates of the effects of experience on labor market variables would generate further bias. Their study models the bias associated with using theoretical versus actual experience in log wage models, distinguishing between men and women. They, therefore, used the 1979 US National Survey, which contains data on actual work experience, to demonstrate that, for female heads of household aged 18-55, there was an average gap of 5.4 years between theoretical and actual work experience, compared with an average gap of just 1.1 years for male heads of household in the same age bracket. Assuming that this gap is mainly due to female fertility. Brauw and Russell (2014) and Sparreboom et al. (2020) use the fertility rate to estimate this gap for women in the USA, Ghana, Rwanda, and South Africa to adjust for the decline (i.e., four years less) in women's work experience in their analyses of the impact of immigration on labor market variables. As in the Sparreboom et al. (2020) analysis, in the present study, women's theoretical work experience is calculated the same way as men's but adjusted downwards to account for irregularities in women's labor market participation. The adjustment consists of reducing the different age groups by a maximum of 4 years, using the 2017 annual fertility rate as a cumulative weighting to construct the maximum 4-year gap for women aged between 15 and 50, assuming lower fertility after age 50, Brauw and Russell (2014). Specifically, for women aged between 15 and 50, we deduct four years from their professional experience. Consequently, our sample includes both men and women in the workforce[42].

Since we are regressing this baseline equation (2) by 2SLS, the first-stage estimate[43], whose results are reported in Table 3.2a., comes from the following équation :

$$I_{ir} = \alpha_0 + \alpha_1 Instrument_{ir} + \epsilon_{ir}$$

With I_{ir} the suspected endogenous explanatory variable of the baseline model, $Instrument_{ir}$

[41] Borjas (2003) underlines this in his study, so he excludes women from his baseline analysis.
[42] But Bratsberg et al. (2012) and D'Amuri et al. (2010) conducted their analyses on a population of men and women jointly.
[43] Depending on data availability, authors such as (Monras, 2020; Biavavashi et al., 2018) estimate in the first-stage equation both the impact of the past stock of immigrants on current immigrant flows or on the current stock of immigrants. Thus, in the case of Togo, as we have no information on immigrant flows in the 2018 study year, we use only current stocks.

is the past distribution of immigrants in the six regions in 2011. To construct the instrument, following World Bank Group (2018) and Viseth (2020), who also use past survey data and build the historical settlement of immigrants by region to instrument immigration in South Africa, Ghana, and Cameroun, we use the survey QIBB (2011) data source available from INSEED Togo[44].The underlying hypothesis is that there is no direct causality from current native labor market outcomes to past immigrant stock. But past immigration can cause current immigration.

[44] The survey covers the whole of Togo and provides information on people's region of residence and place of birth. The sampling method used is two-stage sampling with first-stage stratification. The first-stage sampling frame comprises the enumeration zones (ZD) derived from the results of RGPH4 (2010). A first-stage sample of DZs will be drawn from this frame.

3.5. Econometric Results and Discussions

3.5.1. Baseline Results

This section presents the econometric results of estimating equation (2). This is the baseline model of the analysis. We regress the impact of immigration on native employment, wages, and job search time. The dependent variable employment is given by the percentage of native workers in the native labor force. Wages are provided by the logarithm of the average monthly wage of natives, and the average duration gives job search time in months of looking for the current job in the logarithm. The results of the instrumental variable estimator regressions are discussed in the remainder of the paper. Statistical tests do not invalidate the use of this estimator. Following the analyses of (Viseth, 2020; World Bank Group, 2018 Monras, 2020 and Biavaschi et al., 2018), the first-stage equation (see Table 3.2) shows that the instrument used is statistically strong and relevant. This is because the coefficient associated with the instrument is statistically different from zero. Past immigration explains current immigration. Then, concerning the validity conditions of the 2SLS (Table 3.2), under the null hypothesis of model under-identification, the p-value associated with the Kleibergen-Paap rk LM statistic allows us to reject this hypothesis, making the 2SLS model well-identified. Similarly, under the null hypothesis of the Sargan-Hansen statistic that the instruments are valid exogenous instruments, i.e., uncorrelated with the error term, the p-value associated with the Hansen allows us not to reject this hypothesis[45]. Regressions with this estimator, therefore, take account of the endogeneity bias resulting from the non-exogenous nature of the immigration explanatory variable.

The results thus presented indicate that, on average, across skill groups in regions, immigration has an insignificant negative impact on native-born labor market variables. Firstly, according to the functional form of the employment equation, given that the dependent and independent variables are expressed in levels, a one-percentage-point increase in the share of immigrant workers leads to an insignificant 0.128-percentage-point decrease in the native employment rate. Secondly, about wages, the dependent variable is expressed in logarithms, while the independent variable remains in levels. Consequently, a one-percentage-point increase in the number of immigrant workers leads to a significant decrease of 8.6% in the average wage of natives at the 5% threshold. Finally, in the

[45] See (Hansen et al., 1996; Kleibergen and Paap, 2006; Baum, 2007) for 2SLS validity conditions.

last column, a one-percentage-point increase in the number of immigrant workers leads to a non-significant 5.8% increase in the job-search duration of natives.

The absence of statistically significant results could, in part, be explained by the significant empirical challenges surrounding the estimation of the causal effect of immigration on labor market variables, the pervasive endogeneity in mobility decisions, selection biases, the data used, and the different margins exploited by the different identification strategies and approaches most commonly used in the literature[46]. Our skills group approach based on education and experience, widely used in the literature, identifies a negative, but partial within-group effect of immigration. It does not capture between-group complementarity effects or general equilibrium adjustments, which may attenuate the estimated impact (Dustmann et al., 2016; Ottaviano and Peri, 2012). However, this statistical non-significance is equally observed in studies focusing on developed countries (Borjas,1994, 2014; Hanson, 2009; D'Amuri et al., 2010; Monras, 2020) as those focusing on developing countries. Typically, we see this in the analyses of Biavaschi et al. (2018) for South Africa, Gindling (2009) for Costa Rica; Viseth (2020) for Ghana, Cameroon, and South Africa; Spareeboom et al. (2020) for Ghana, South Africa, and Rwanda, Ozden and Wagner (2014) for Malaysia. However, in their various studies, these authors found some significant and divergent effects in their heterogeneous analysis. This leads us to deepen our baseline results through robustness exercises, which we present in the next section.

Table 3.2. a/b First-stage regression estimating the impact of immigration on employment, average wages and Job search time

- First-stage regression

Instrumentation regression	Share of immigrants in 2018
Share of immigrants in 2011	0.141***
	(0.047)
Constant	3.128***
	(1.062)
Observations	118
R-squared	0.368

Notes : This table presents the results of estimating the impact of the share of immigrants present in Togo by region in 2011 on immigrants in 2018. Robust standard erros are in brackets. This is the first stage of the 2SLS regressions in the following table 3.2b. The results show the robustness of the instrument used.

[46] See (Winter-Ebmer and Zweimuller, 2000; Gindling, 2009; Ottaviano and Peri, 2012; Dustmann et al., 2016).

- Baseline regression: Impact of immigration on native employment, wages and cuurent job search time (Equation 2)

	Employment	Employment	LogWages	Log.Wages	Log.Job.search time	Log.Job search time
Variables	OLS	2SLS	OLS	2SLS	OLS	2SLS
Immigrati on	-0.170	-0.128	-0.004	-0.086**	0.003	0.058
	(0.274)	(0.157)	(0.022)	(0.040)	(0.025)	(0.047)
Constant	96.84***	99.572***	10.44***	10.948***	2.467***	2.234***
	(2.608)	(1.094)	(0.169)	(0.178)	(0.252)	(0.191)
Observations	119	117	117	116	119	117
R-squared	0.709	0.680	0.523	0.324	0.325	0.271
Hansen (P-Value)		0.134		0.248		0.832
Kleibergen-Paap rk LM statistic (P-Value)		0.025		0.025		0.009

Notes: Robust standard erros bracketed *** p<0.01, ** p<0.05, * p<0.1. Working population men and women The number of observations corresponds to the value given by education, work experience and regions 4*5*6. The instrument used for 2SLS concerns the historical past settlement of immigrants in the regions. In columns 1 and 2, the dependent variable corresponds to the percentage of jobs held by natives in the native labor force. In columns 2 and 3, the dependent variable is given by the logarithm of average monthly wages of employed natives. In columns 4 and 5, the dependent variable corresponds to the logarithm of the average duration of job research in months for natives currently in employment.

3.5.2. Robustness checks

Table 3.3 and Table 3.4; below report the results of the additional regressions. The aim underlying this approach is to estimate the impact of immigration on the labor market variables of men natives only (Table 3.3). Likewise, for robustness, we have defined new skill groups as a combination of work experience and sector of activity, in contrast to the definition of groups according to education and experience in the basic model. Thus, maintaining the 5 experience modalities of the baseline model, we add 4 activity sector modalities: primary, industry, trade, and services. The idea is to cluster natives and immigrants according to their experience and the sector of activity in which they hold jobs and estimate the effects of immigration in these groups rather than compare them by level of education. Categorization by level of education could be limiting, given the percentage of the working population with no qualifications (over 60%).

Moreover, this categorization would be even more limiting for immigrants in particular. If the latter occupy jobs for which they are either more qualified or less qualified in terms of school qualifications, this could underestimate or overestimate the impact of their presence (Dustmann et al., 2016)[47]. By clustering workers by sector and experience rather than education, we propose an alternative definition of skill groups. This allows us to take into account the specificities of

[47] Like Steinhardt (2012); Bratsberg et al. (2012); Ottaviano and Peri (2012), and Monsras (2020), we seek to define groups other than the skills groups of Borjas (2003).

developing countries, where a large proportion of the workforce has few qualifications but possesses professional skills. This leads us to estimate a new regression based on equation 3, presented below, the results of which are shown in Table 3.4.

These robustness exercises show that the impact of immigration on native men's outcomes remains statistically insignificant. We note that a one-percentage-point increase in immigration leads to a non-significant decrease in men's employment while significantly negatively impacting the average wages of native-born men by 5.9%. These results align with the baseline results, in which the sample included both men and women. Furthermore, the estimation of equation 3 yields results similar to the baseline results. This is because, on average, immigration negatively and significantly impacts the jobs and wages of natives in the new skill groups. It reduces native employment by 1.00 percentage points at the 5% significance level and average wages by 7.5% at the 5% level.

To sum up, the points to note about the robustness exercises are as follows: The basic results remain similar to those for the men-only sample. Secondly, by defining other skill groups, the average impact of immigration remains negative as in the baseline specification but becomes increasingly significant. Furthermore, in the later specification, immigration has a positive impact on natives' job search time.

Table 3.3. Impact of immigration on native-born men only (equation 2)

Variables	Employment OLS	Employment 2SLS	LogWages OLS	LogWages 2SLS	Log.Job search time OLS	Log.Job search time 2SLS
Immigration	-0.2181	-0.224	-0.0067	-0.059**	0.0083	0.040
	(0.2690)	(0.139)	(0.0163)	(0.024)	(0.0163)	(0.026)
Constant	88.9838***	92.973***	11.0741***	11.713***	1.9853***	1.766***
	(4.1205)	(1.684)	(0.1860)	(0.233)	(0.3445)	(0.197)
Observations	119	117	117	116	119	117
R-squared	0.529	0.4905	0.391	0.199	0.309	0.269
Hansen (P-val)		0.104		0.205		0.995
Kleibergen-Paap rk LM statistic (P-val)		0.044		0.046		0.02

Notes: Robust standard deviations shown in brackets *** p<0.01, ** p<0.05, * p<0.1. Men working population only

- Impact of immigration on employment, wages and Job search time duration in new skill groups (sectors of activity and professional experience)

We estimate the following equation 3:

$$\mathbf{Y_{eb}} = \boldsymbol{\alpha_0} + \boldsymbol{\alpha_1}\,\mathbf{I_{eb}} + \mathbf{g_{eb}} + \boldsymbol{\epsilon_{eb}} \;\forall\, \mathbf{e} = \mathbf{1},..,\mathbf{5} \;\; \mathbf{et}\;\forall\, \mathbf{b} = \mathbf{1},..,\mathbf{4}$$

with b the 4 sectors of activity , and e the 5 the work experience groups (**3**)

$\mathbf{Y_{eb}}$ Measures the employment rate of natives, the logarithm of the average wage of natives, and the logarithm of job search time in experience group e and sector b respectively. $\mathbf{I_{eb}}$ measures the share of immigrant workers in work experience e and sector b in relation to the corresponding number of natives and immigrants.

Table 3.4. Impact of immigration on employment, wages and unemployment duration in new skill cells groups at national level (equation 3)

Variables	Employment OLS	Lag. Wages OLS	Job search time OLS
Immigration_2018	-1.0073**	-0.075**	0.050***
	(0.4147)	(0.0269)	(0.014)
Constant	26.4848***	10.7715***	2.576***
	(2.411)	(0.216)	(0.115)
Observations	20	20	20
R-squared	0.223	0.217	0.309

Notes: Robust standard deviations shown in brackets *** p<0.01, ** p<0.05, * p<0.1. Men and women working population. The number of observations corresponds to the value given by, professional experience and sectors 4*5. In column 2 the dependent variable corresponds to the percentage of jobs held by natives in the native labor force by skill group. In column 3, the dependent variable corresponds to the logarithm of the average monthly wages of currently employed natives. In column 4, the dependent variable corresponds to the logarithm of the average duration of the job search time in months for natives currently in employment.

3.5.3. Discussion of the results

This section discusses the econometric results presented and situates them with the literature dealing with the effects of immigration on the labor market of developing countries as destination countries. It also positions the results against previous studies that have focused on other african countries, a summary of which is presented in Table 3.5. Those studies have estimated the effects of immigration on the natives' labor market outcomes, adopting the same methodological approach as ours.

Baseline empirical results show that, on average, the increase in the share of immigrant workers leads to a non-significant decrease in the employment rate of natives, a significant decrease in their average wages, and a non-significant increase in their job search time. These results align with empirical studies on developing countries, which partly find negative but often insignificant effects

of immigration on the labor market. For example, Gindling (2009) for Costa Rica, Biavaschi et al. (2018) for South Africa, Sparreboom et al. (2020) for Ghana, Rwanda, and South Africa, and Viseth (2020) for Ghana, Cameroon, and South Africa, all find an overall negative but statistically less significant impact of immigration on native employment and/or wages.

These results can be explained in concrete terms like. Typically, we find that most immigrants in Togo work in informal jobs. This type of labor market has no regulatory framework, wages are flexible, and recruitment is virtually unregulated. In an economy like Togo's, we can assume that immigrants and natives would occupy complementary or substitutable jobs. For example, immigrant housekeepers could help native women enter the labor market. This is because they would have more time to devote to job-seeking or be more productive.

Moreover, a particular feature of immigrants in Togo is their ability to engage in self-entrepreneurial activities in trade and services. Typically, in Togo, according to the « Recensement Général des Entreprises » (RGE, 2018), compared to natives, we note a significant share of immigrants in goods and services trading activities, especially in Lomé area, the country's capital, and in the border regions with Ghana, Burkina-Faso, Benin. For example, according to this report, Nigerian and Beninese immigrants trade basic necessities in kiosks known as general food stores. They practically tend to have a monopoly on this type of activity. They are involved in every distribution stage (from wholesalers to retailers). The Burkinabés are in the crafts or civil engineering sectors. The Ghanaians are mainly involved in agricultural mechanization. They support the natives in agribusiness. One might, therefore, assume that all these activities would generate positive externalities for the togolese labor market in general and the natives in particular[48]. However, it is worth pointing out that the togolese market is not just informal but also a formal job market. Yet another particularity of immigrants in Togo is that most of them come from neighboring countries. As a result, they are not necessarily seen as foreigners who are less integrated into the host communities, as they often speak the same language and have virtually the same lifestyle, making them potentially more substitutable with competing natives. What's more, sub-regional integration is underway, which would make it easier for immigrants from other ECOWAS countries to find jobs.

[48] Read Togo, INSEED. (2019). Recensement Général des Entreprises (RGE 2018). Ministry of Development Planning and Cooperation. https://inseed.tg/rge-contexte

Although the literature analyzing the effects of immigration on the labor market in developing countries as destination countries is still very limited, the results of this study are consistent with existing studies. For example, Gindling (2009), using household survey data from Costa Rica, analyzes the effect of Nicaraguan migrants on native wages and inequality in Costa Rica. Using a skill group approach (education and experience), the author shows that immigration does not significantly affect native wages or inequality. The author argues that immigrants in Costa Rica occupy jobs that are complementary to those of the natives. For immigrant women, in particular, taking on household chores would enable native women to be more productive in their jobs or to have more time to look for work for those who are unemployed. In the same vein, Ozden and Wagner (2014), using the Malaysian employment survey, found an overall positive impact of immigration on native employment and wages. The authors subsequently show that this impact is heterogeneous when they consider the effects of immigration according to the education levels of natives and immigrants. They find that the impact of immigration on the wages and employment of high-skilled natives is negative compared to the impact of immigration on the outcomes of low-skilled native workers. They explain these results by the fact that the influx of unskilled immigrants would be beneficial for low-skilled native workers, too. Indeed, these immigrant workers would occupy jobs more complementary to those of low-skilled natives. This would not be the case with the jobs of highly-skilled workers. In the case of Malaysia, for example, some relevant descriptive and qualitative studies focus on the construction sector. Narayanan and Lai (2005) argue that migrants have not displaced the employment of native workers since the latter have not taken over jobs held by migrants. Their analysis concludes that immigration may have slowed wage growth but had no immediate negative effect on native wages. The context of these developing countries is similar to that of Togo, so such an argument would explain our results.

For Africa, studies are even rarer (see Table 3.5 below); nevertheless, our results remain consistent with those obtained by such authorsBiavaschi et al. (2018). The authors estimate the effect of immigration on the wages and employment of native men in South Africa, using survey data from 1996, 2001, and 2007. The authors adopt two methodological approaches, namely, by skill group in the regions and skill group at the national level, with the OLS estimator for estimates at the national labor market level and the instrumental variables estimator for the approach by geographical area. In doing so, they conclude that, at the level of the geographical area approach, immigration has a negative and significant impact on native employment, with a non-significant

negative impact on native earnings. At the national level, the results reveal that immigration negatively and significantly impacts earnings, while the impact on native employment is statistically insignificant. Biavaschi et al. (2018) argue that these results suggest that the negative impact observed on native employment at the geographical area level is probably the result of the mobility of natives from areas with high immigration to areas with low immigration and the movement of natives from the formal to the informal labor market. Since their studies focus only on formal jobs. Meanwhile, Viseth (2020), using census and survey data from 2010 for Cameroon, Ghana, and South Africa through the skills group approach at the national level, the author finds that, on the one hand, immigration has a negative and significant impact on formal jobs and a positive one on informal jobs of natives in Cameroon, Ghana, and South Africa. In fact, according to Viseth (2020), in the short term, the arrival of immigrants can lead to the loss of formal jobs for natives who are perfect substitutes for immigrants, and the latter may redirect themselves towards informal jobs. The author shows that intra-african immigration to these various countries would constitute an additional labor supply perfectly substitutable for that of natives in the countries from which these results derive. Sparreboom et al. (2020) use census and survey data in three african countries, including Ghana, Rwanda, and South Africa, to estimate the impact of immigration on native employment, unemployment, and wages. Adopting the skills group approach at the national level, the authors find a significant negative impact on native employment in Ghana against a non-significant impact on native employment in Rwanda and South Africa. The authors found no significant impact on wages in Ghana and South Africa. In Rwanda, however, there was a significant positive effect. The authors also found no significant impact on the unemployment rate of natives in the three countries, as in the case of Togo, where we found no significant impact on the duration of the job search time. The results of this study are partly consistent with our baseline specification. The authors explain that immigrants residing in these countries are sufficiently integrated into the labor market, as they mainly come from border countries and are considered substitutes for natives, hence this negative and sometimes insignificant impact. In addition, a study by the World Bank Group (2018), using survey data from the years 1996, 2001, and 2011 for South Africa and adopting a regional approach shows that immigrants are a source of job creation for natives in industries, as their studies focus only on jobs in industries. The authors show that a 1% increase in the number of immigrants increases industrial employment by 0.2%. In other words, one immigrant worker generates around two jobs for native-born workers, according to the authors.

For the authors, immigration appears to be able to promote the productive fabric in the various industrial sectors. From a macroeconomic point of view, Atanguegnima et al. (2023), in a recent study of 54 african countries covering the period from 2000 to 2020, highlighted the positive impact of immigration on economic growth, which is linked to the contribution of immigrants' human capital to the host economy. The authors show that immigration positively impacts total factor productivity through the main channel of the human capital available to immigrants in the various african destination economies. Finally, more recently, Boubtane and Rault (2023), in their study on the economic impact of migration in Tunisia, with annual data covering the period from 1970 to 2017 on the estimation of vector autoregressive models, find that migration is beneficial for economic growth. Still, these authors do not find a significant impact of immigration on the employment rate in Tunisia. The authors argue that these employment results could be explained by the size of the informal sector in Tunisia and the difficulties immigrants face in obtaining work permits to access the formal labor market.

Table 3.5.Impact of immigration on the labor market in african countries of destination

Authors	Country	Years	Native groups	Study unit	Estimator	Impact on Employment	Impact on wages
Biavaschi et al. (2018)	South Africa	1996, 2001 and 2007	Men	Education & Experience	OLS	0.343	-2.563**
	South Africa	2001 and 2007	Men	Education, Experience and Region	2SLS	-0.473***	-0.880
Viseth (2020)	Ghana, Cameroon, South Africa	2010	Men	Education & Expérience	2SLS	-1.488***	-
			Women			-1.575***	
Spareeboom et al. (2020)	Ghana	2006 and 2013	Men and women	Education & Expérience	OLS	-1.590*	-0.004
	Rwanda	2005, 2011 and 2014	Men and women	Education & Expérience	OLS	-0.134	0.042**
	South Africa	2001, 2011	Men and women	Education & Expérience	OLS	0.440	0.023
World Bank Group (2018).	South Africa	2001 and 2011	Men and women	Industries and Region	2SLS	0.225***	1.371***

Significance *** p<0.01, ** p<0.05, * p<0.10

3.6. Conclusion

The initiatives undertaken by the African Continental Free Trade Area (AfCFTA) project and the African Union's free movement protocol (African Union, 2018) underline once again that the mobility of people is part of a wider ideal of a United Africa. This suggests that the free movement of people across the continent's borders and beyond would be an essential element of regional integration and developing african economies. Moreover, the economic literature on the effects of international migration states that eliminating barriers to migration and encouraging the free movement of workers between countries over twenty-five years would increase global gross domestic product by 50% (Clemens, 2011). Consequently, the impact of immigration on the labor market of destination countries remains unanswered, particularly its impact on the labor market outcomes of african destination countries

The present study extends the literature analyzing the effects of immigration on native labor market outcomes in developing countries as destination countries. We estimate the impact of immigration on employment, wages, and job search time in Togo. The methodological approach used is based on estimating the effects of immigration on labor market variables in different skill groups with the 2SLS estimator. We use data from Togo's ERI-ESI labor force survey to do so.

The baseline results show that a one percentage point increase in the share of immigrant workers leads to a non-significant decrease in the employment rate of natives, a significant 8.6% drop in their average wages, and a non-significant increase in their jobs search time. However, our robustness analyses reveal some significant effects when workers are distinguished by gender and sector of activity. Thus, immigration has a significant negative impact on the wages of native-born men (5.9%) and greater negative effects on employment (1.00 percentage point) and wages (7.5%) when workers are grouped by experience and sector rather than by education. According to the methodological approach, this result has to be seen as a partial direct effect of immigration on competing natives' labor market outcomes.

Beyond contributions to the literature on the effects of immigration on the labor market, our results are part of the broader debate on the challenges of international migration for developing countries. Although our results do not show a strong significant impact of immigration on the labor market in Togo, this should not overshadow other aspects of the economic effects of immigration. In the current context of promoting free movement in Africa, with the Continental Free Trade Area and

the African Union's Protocol on Free Movement, it is important to better understand and monitor the impact of migration on the region's economies. However, the study has its limitations. Further research, taking into account long-term effects, complementarity, and the effects of south-south and north-south immigration, is needed to better identify the other effects of immigration and the issues at stake for the different categories of native workers and the immigrants themselves.

3.7. References

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3.8. Appendices of the chapter 3

Table A. 3.1. Description of variables

Variables and abbreviations	Survey definitions
Dependent variables	
Activity status (Sitac)	1 if the individual is active and 0 otherwise
Jobs or employment	1 if employed e 0 otherwise
Employment by type	1 if job is informal and 0 otherwise
Average salary	Average monthly salary from salaried and/or entrepreneurial activity
Search time for current job (TRE)	Average duration of search before finding current job in months
Independent variables	
Immigration	1 if the individual is of native born and 0 otherwise or 1 if born abroad
Age	Age of individual (years)
Gender	1 if the individual is female
Education or degree obtained	Level of education (0= no education, 1= primary, 2= secondary, 3= tertiary)
Sector or line of business	1= primary 2= industry, 3= trade, 3= service
Place of residence	1 to 6 regions

Sources: ERI-ESI survey questionnaire, 2018

Table A.3.2. Breakdown of the labor market (15-64ans). ERI-ESI dataset presentation

	Percentage of total sample
Women	54.85
Men	45.15
Actives	60.79
Inactives	39.21
Employed persons	58.74
Unemployed	2.05
Natives	94.49
Immigrants	5.51
Level of education	**Percentage of total sample**
No diploma	53.88
Primary	26.83
Secondary	17.05
Tertiary	2.24
Employment situation	**Percentage of active population**
Employed persons	96.63
Unemployed persons	3.37

Breakdown of employment situation	Percentage of employed sample
Informal jobs	94.27
Formal jobs	5.73
Women Employed	52.92
Men Employed	47.08
Women Informal employment	55.30
Men Informal employment	44.70
Precarious jobs for women	30.43
Precarious jobs for men	69.57
No diploma	60.22
Primary	23.82
Secondary	13.36
Tertiary	2.60

Sources: ERI-ESI, 2018

Breakdown of Immigrants

	Percentage of total immigrant stock
Employed immigrants	56.39
Unemployed immigrants	1.13
	Percentage of employed immigrants
Formal jobs	4.00
Informal jobs	96.00
Jobs by sector	Percentage of employed immigrants
Primary	19.00
Industry	16.33
Trade	44.00
Services	20.67
Education level of working immigrants	Percentage of employed immigrants
No diploma	67.86
Primary	15.58
Secondary	14.29
Tertiary	2.27
Are you prepared to review your salary claim if the period of unemployment continues?	
no	33.33
yes	66.67
If unemployment lasts as long as it has, would you be prepared to do this kind of work?	
no	16.67
yes	83.33

Breakdown of natives

	Percentage of total native stock
Native-born Employed	58.83
Native unemployed	2.08
	Percentage of employed natives
Formal jobs	5.79
Informal jobs	94.21
Jobs by sector	Percentage of employed natives
Primary	39.47
Industry	18.75
Trade	18.26
Services	23.52
Education level of working natives	Percentage of employed natives
No diploma	58.72
Primary	24.24
Secondary	14.02
Tertiary	3.02
Are you prepared to revise your salary expectations if the period of unemployment continues?	
no	40.26
yes	59.74
If unemployment lasts as long as it has, would you be prepared to do this kind of work?	
no	24.09
yes	75.91

Sources: ERI-ESI, 2018

Table A.3.3. Stock of immigrants by level of education and experience (% of immigrant workforce) according to Borjas(2003)

	Years of experience							
Education	0-5	6-10	11-15	16-20	21-25	26-30	31-35	35-40
No diploma	0.26	0.59	0.72	0.71	0.69	0.72	0.55	0.81
Primary	0.35	0.23	0.15	0.14	0.09	0.16	0.10	0.09
Secondary	0.19	0.05	0.08	0.07	0.14	0.04	0.28	0.06
University	0.11	2.47	0.37	4.62	3.29	4.16	5.22	2.49
Univ. more	0.09	0.09	0.03	0.02.	0.03	3.31	0.012	0.00

Table A.3.4. Migrants by country of origin

Country of origin	Percentage of Stock of immigrants
Benin	35.49
Burkina-Faso	6.11
Cote d'Ivoire	4.34
Guinee Bissau	0.52
Mali	1.63
Niger	15.15
Senegal	0.52
Gambia	0.19
Ghana	22.10
Guinea	0.90
Nigeria	8.48
Cameroon	2.07
Congo(brazzaville)	0.46
Gabon	0.49
Equatorial Guinea	0.39
Chad	0.46
Rep. of Congo	0.48
Other countries Europe	0.19

Sources: ERI-ESI, 2018

Table A. 3.5. Share of total actives (natives and immigrants) by Education

Education	Percentage of total actives
No diploma	59.11
Primary	23.91
Secondary	14.02
Tertiary	2.96

Sources: ERI-ESI, 2018

Table A. 3.6. Share of distinct natives and immigrants by Education

Education	Immigrants stock	Percent	Natives	Percent
No diploma	544	65.38	7600	53.21
Primary	153	18.39	3903	27.32
Secondary	107	12.86	2470	17.29
Tertiary	28	3.37	311	2.18
Total	832	-	14284	-

Sources: ERI-ESI, 2018

Table A. 3.7. Immigrants share in labor market by region in 2018

Region	Total Effectif Region	Immigrants stock	Percent of immigrants
Maritime	2086	126	6.04
Plateaux	2315	107	4.62
Centrale	2610	97	3.72
Kara	2579	103	3.99
Savanes	3245	137	4.22
Lome	2336	266	11.39
Total of the sample	15171	836	5.51

Sources: ERI-ESI, 2018

Table A.3.8. Skill groups share of natives and Immigrants (%total population 15-64 ans)

Skill Groups	Education	Year of Experiences	Immigrants	Natives
1	No diploma	1-8	4.66	95.34
2		8-16	6.46	93.54
3		16-24	7.34	92.66
4		24-32	7.91	92.09
5		32-40	7.51	92.49
6	Primary	1-8	3.46	96.54
7		8-16	3.19	96.81
8		16-24	4.49	95.51
9		24-32	6.33	93.67
10		32-40	3.42	96.58
11	Secondary	1-8	2.93	97.07
12		8-16	4.09	95.91
13		16-24	7.14	92.86
14		24-32	8.51	91.49
15		32-40	10.91	89.09
16	Tertiary	1-8	9.32	90.68
17		8-16	5.26	94.74
18		16-24	9.43	90.57
19		24-32	14.29	85.71
20		32-40	-	100.00

Sources: ERI-ESI, 2018

Table A. 3.9.Skill groups share of natives and Immigrants (%total actives population)

Skill Groups	Education	Year of Experiences	Immigrants	Natives
1	No diploma	1-8	4.41	95.59
2		8-16	5.92	94.08
3		16-24	6.57	93.43
4		24-32	7.98	92.02
5		32-40	7.67	92.33
6	Primary	1-8	3.85	96.15
7		8-16	3.68	96.32
8		16-24	4.35	95.65
9		24-32	6.46	93.54
10		32-40	2.75	97.25
11	Secondary	1-8	2.23	97.77
12		8-16	4.02	95.98
13		16-24	6.13	93.87
14		24-32	8.53	91.47
15		32-40	12.35	87.65
16	Tertiary	1-8	7.48	92.52
17		8-16	5.48	94.52
18		16-24	9.62	90.38
19		24-32	11.54	88.46
20		32-40	-	100.00

Sources: ERI-ESI, 2018

Table A. 3.10. Skill group distribution of actives immigrants (% total actives immigrants)

Skill groups	Education	Year of Experiences	Percentage of immigrant's active population
1	No diploma	1-8	7.55
2		8-16	15.92
3		16-24	15.51
4		24-32	17.96
5		32-40	8.98
6	Primary	1-8	5.51
7		8-16	4.29
8		16-24	3.47
9		24-32	3.47
10		32-40	1.22
11	Secondary	1-8	2.45
12		8-16	2.65
13		16-24	2.65
14		24-32	2.24
15		32-40	2.04
16	Tertiary	1-8	1.63
17		8-16	0.82
18		16-24	1.02
19		24-32	0.61
20		32-40	-

Sources: ERI-ESI, 2018

Table A. 3.11. Skill group distribution of actives natives (% total actives natives)

Skill Groups	Education	Year of Experiences	Percentage of native's active population
1	No diploma	1-8	9.78
2		8-16	15.11
3		16-24	13.19
4		24-32	12.38
5		32-40	6.46
6	Primary	1-8	8.23
7		8-16	6.71
8		16-24	4.56
9		24-32	3.00
10		32-40	2.59
11	Secondary	1-8	6.40
12		8-16	3.78
13		16-24	2.43
14		24-32	1.44
15		32-40	0.87
16	Tertiary	1-8	1.21
17		8-16	0.84
18		16-24	0.57
19		24-32	0.28
20		32-40	0.16

Sources: ERI-ESI, 2018

Table A. 3.12. Distribution of QIBB survey respondents by region

Region	Effectif	Percent
Maritime	6402	21.50
Plateaux	5537	18.59
Centrale	4721	15.85
Kara	4622	15.52
Savanes	5964	20.03
Lome	2535	8.51
Total sample	29781	100

Sources: QIBB, 2011

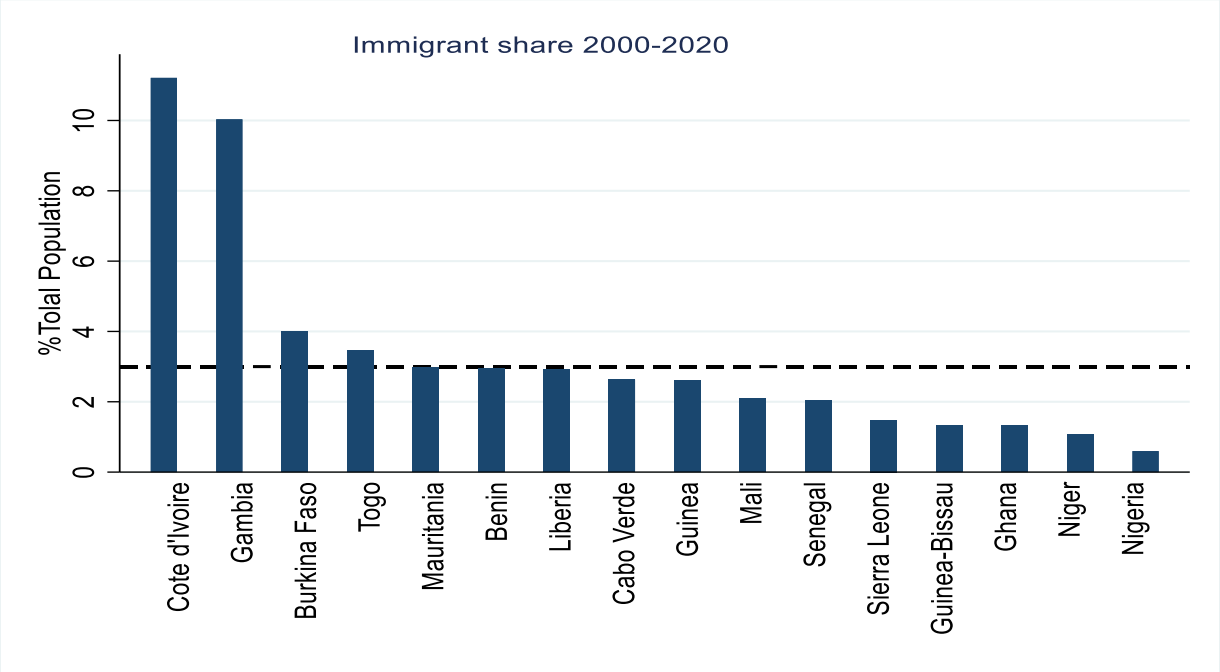
Table A. 3.13. Historical distribution of immigrant by region

Region	Immigrants stock	Effectif region	Percent
Maritime	218	6402	3.41
Plateaux	143	5537	2.58
Centrale	140	4721	2.97
Kara	101	4622	2.19
Savanes	136	5964	2.28
Lome	205	2535	8.09
Total	943	29781	3.17

Sources: QIBB, 2011

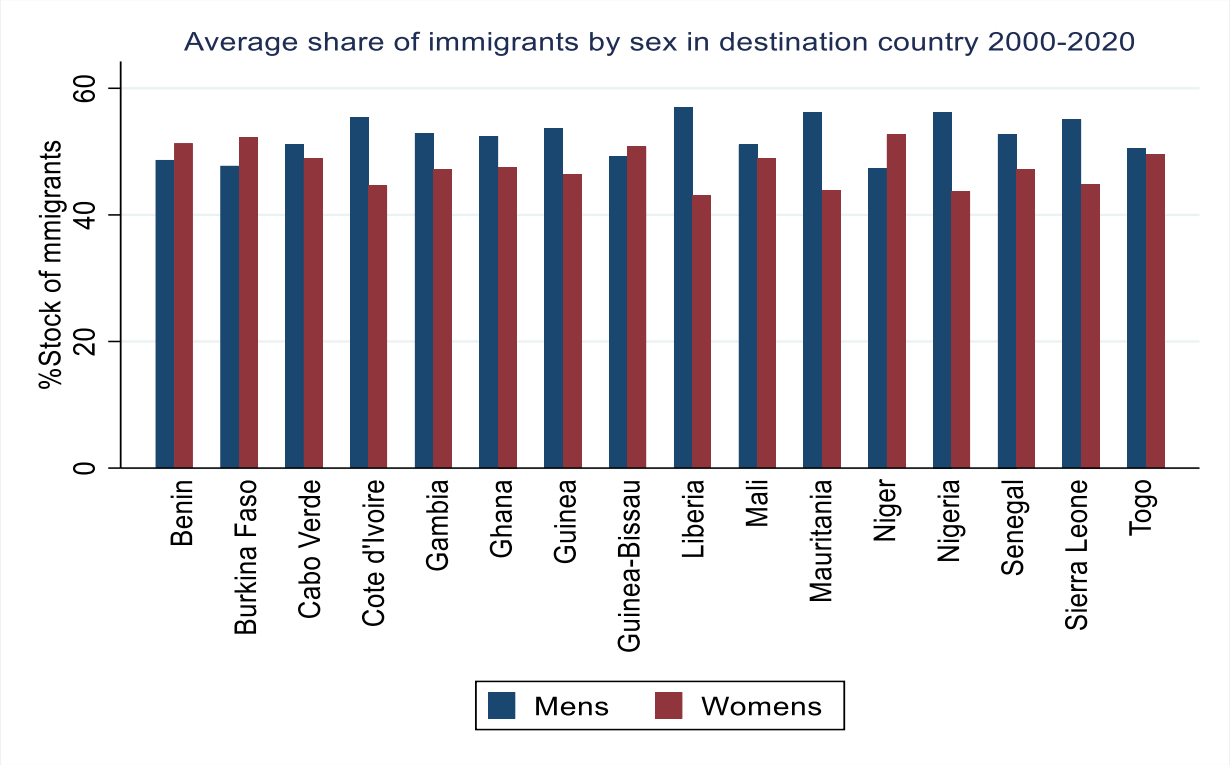
Appendix B : State of migration in ECOWAS

Figure.A. 3.1. Average immigrant rates in the total population of ECOWAS countries, 2000-2020



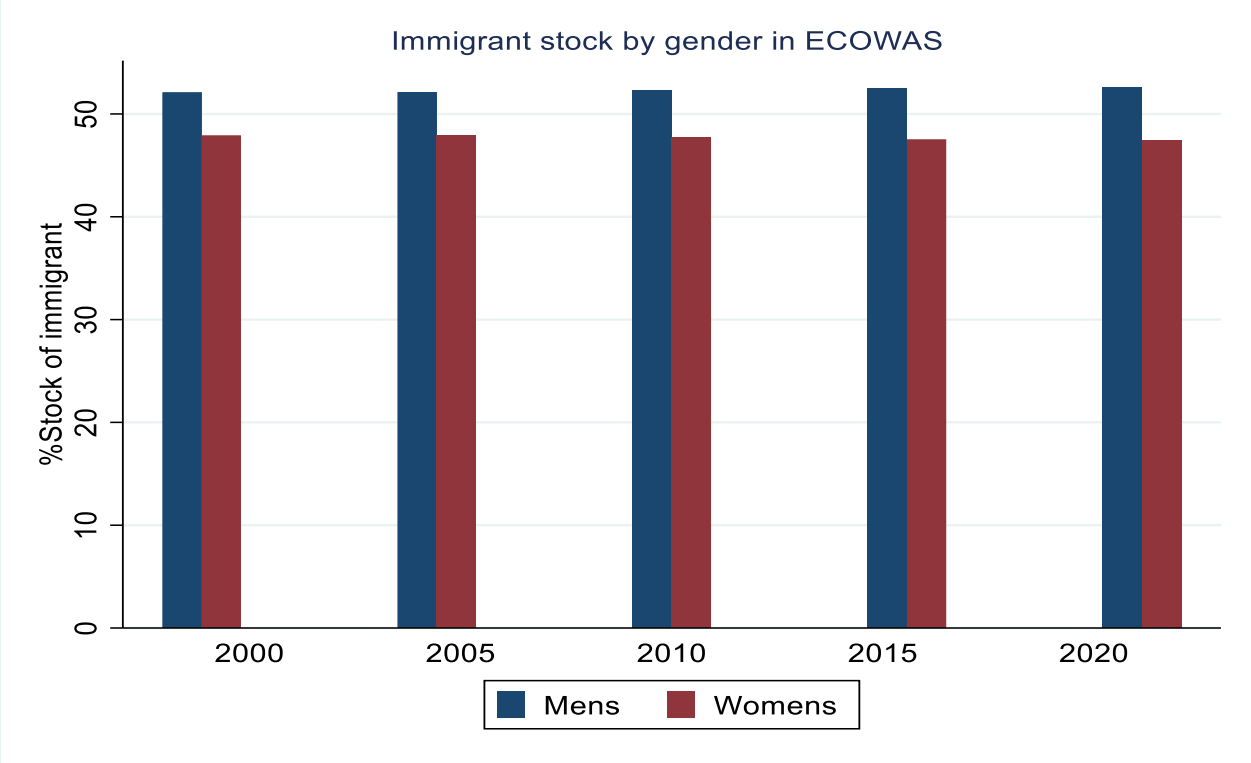
Sources : UN-DESA.2020

Figure.A. 3.2. Average rate of immigrants in the stock of immigrants in destination countries 2000-2020



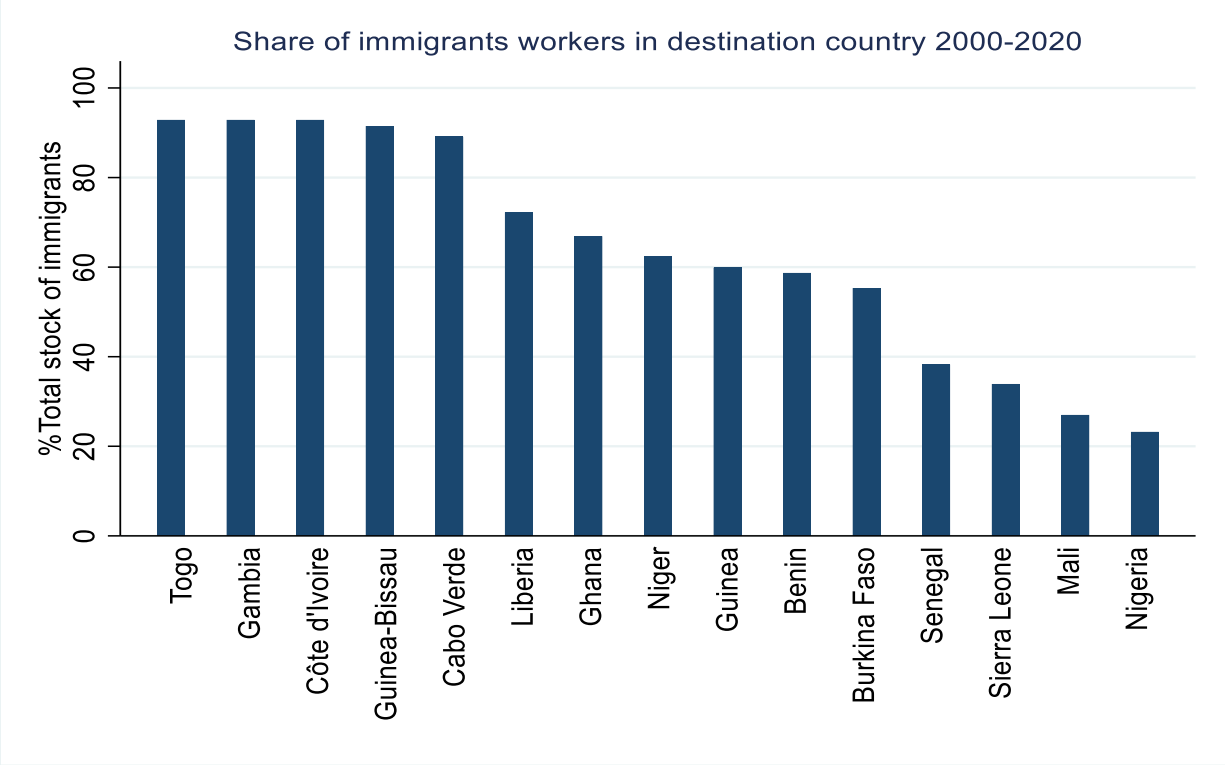
Sources: UN-DESA. 2020

Figure.A. 3.3.Evolution of the average immigrant rate by gender in the CEDAO sub-region



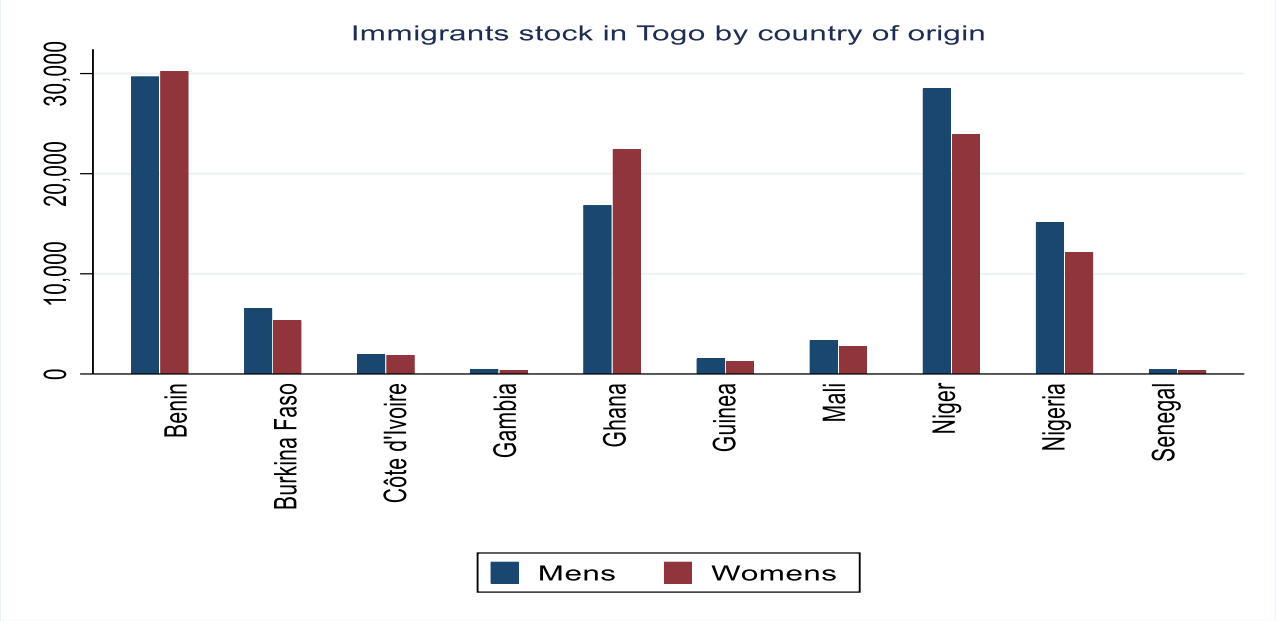
Sources: UN-DESA. 2020

Figure.A.3.4. Average rate of immigrant workers in the immigrant stock between 2000-2020



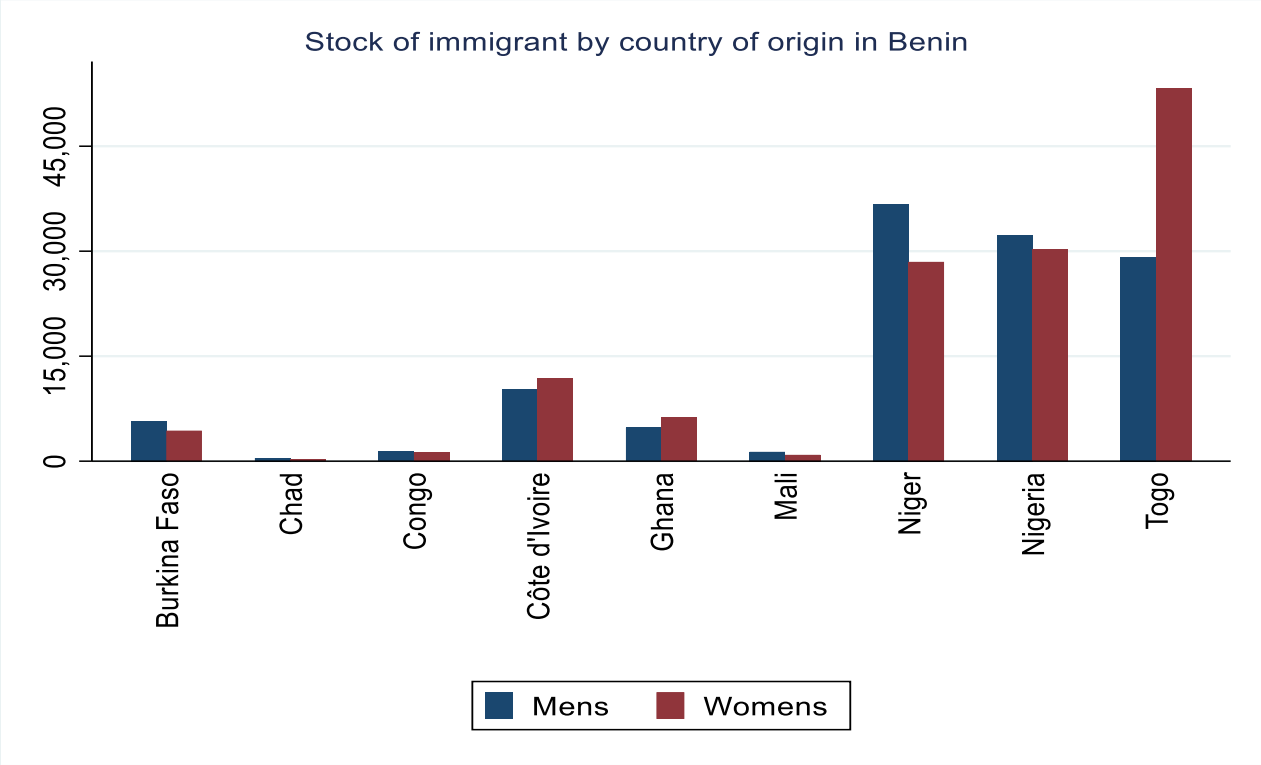
Sources: UN-DESA. 2020; ILO-STAT

Figure.A. 3.5. Main countries of origin of immigrants in Togo between 2000-2020



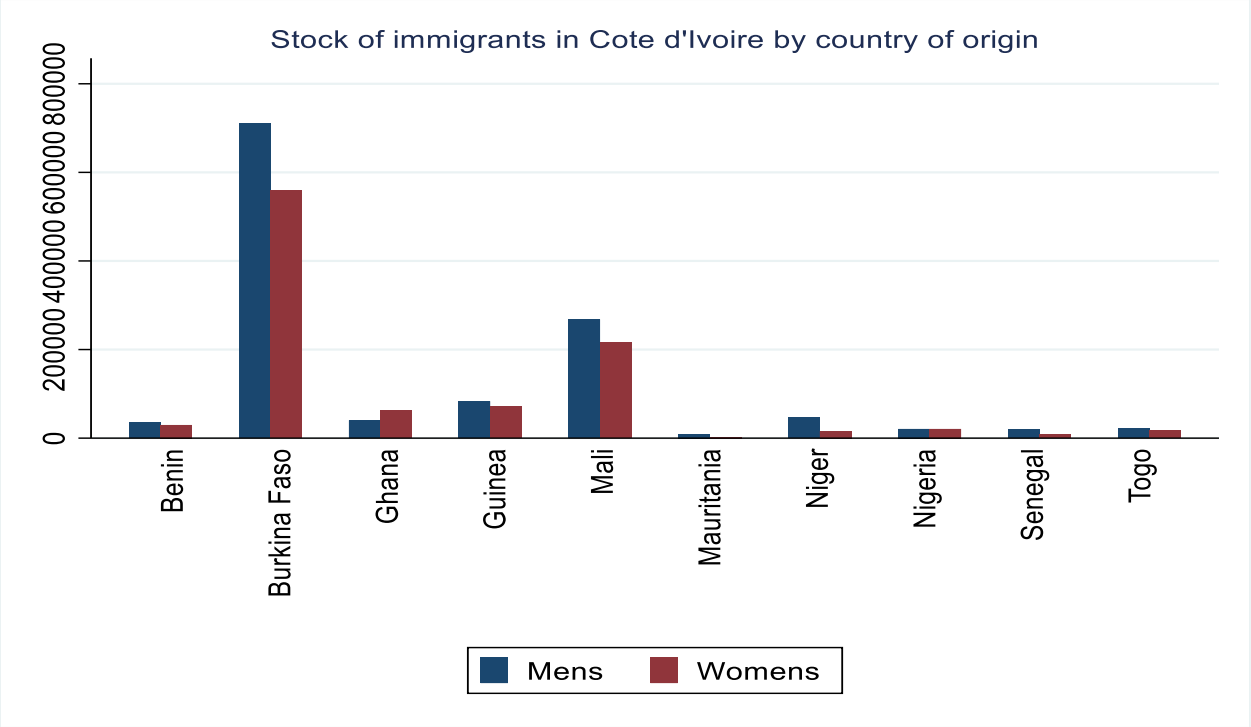
Source : UN-DESA, 2020

Figure.A. 3.6. Main countries of origin of immigrants to Benin, 2000-2020



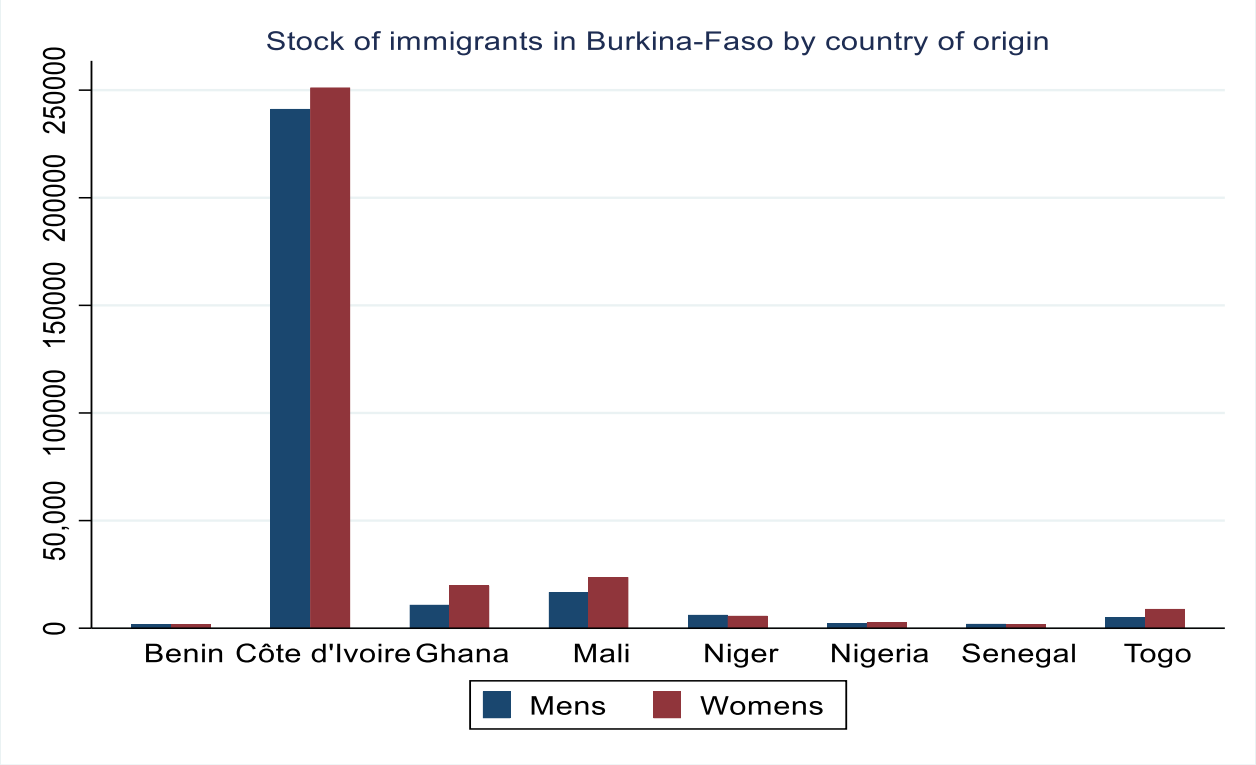
Sources: UN-DESA, 2020

Figure.A. 3.7. Main countries of origin of immigrants in Côte d'Ivoire, 2000-2020



Sources: UN-DESA, 2020

Figure.A. 3.8. Main countries of origin of immigrants in Burkina-Faso, 2000-2020



Sources: UN-DESA, 2020

4. Conclusion générale

À travers la mobilisation des méthodes quantitatives, et dans une approche macroéconomique d'une part, et microéconomique d'autre part, cette thèse a entrepris une exploration des implications économiques des migrations internationales en Afrique. En effet, elle met en exergue, les diverses implications des mouvements de population sur les aspects économiques des pays africains qui ont fait l'objet de peu d'études. Plusieurs travaux de la littérature portant sur les pays développés comme les pays en développement font émerger l'hypothèse selon laquelle, les migrations internationales pourraient jouer un rôle important dans le processus de développement des économies. Cette hypothèse a constitué le point de départ de la thèse dans laquelle nous questionnons ensuite la relation entre les migrations internationales et l'inclusion financière, la croissance économique et le marché du travail. A cet effet, la thèse évalue empiriquement l'impact des migrations internationales sur : l'inclusion financière, la productivité totale des facteurs et le marché du travail, à la fois dans les pays de destination et dans les pays d'origine en Afrique.

Les migrations internationales en Afrique sont caractérisées par une grande diversité, impliquant des mouvements à la fois intracontinental et extracontinental. Ces migrations sont souvent motivées par une combinaison de facteurs économiques, sécuritaires, environnementaux et sociaux. La thèse a pris en compte ces différents aspects, reconnaissant que les motivations et les impacts des migrations seraient intrinsèquement liés aux contextes spécifiques des pays africains. Les conclusions majeures à l'issue de ce travail de recherche sont les suivantes. D'une part, l'immigration impacte positivement la formation du capital humain en apportant des compétences et des talents, stimulant ainsi la PTF dans les pays de destination. D'autre part, l'émigration entraîne une fuite des cerveaux, car elle affecte négativement le capital humain des pays d'origine. Cependant, cette perte peut être compensée par les remittances envoyées par les émigrants aux ménages, lesquelles peuvent être utilisées pour avoir accès aux services financiers, financer l'investissement domestique stimulant ainsi l'économie. En outre, la thèse a également porté sur les effets de l'immigration sur le marché du travail dans les pays de destination africains. Ainsi, la thèse a montré que, bien que l'immigration puisse impacter négativement le salaire et l'emploi des natifs sur le marché du travail, en particulier en cas de concurrence pour les emplois pour lesquels les natifs et les immigrés seraient des substituts parfaits, elle peut également contribuer positivement à l'économie en comblant les pénuries de compétences et en favorisant une plus grande diversité dans less compétences. Un aspect important de cette thèse concerne l'impact des

transferts de fonds des migrations sur la finance inclusive dans les pays d'origine africains. Les remittances jouent un rôle non négligeable dans de nombreux pays africains. Ces fonds, peuvent améliorer l'inclusion financière, en permettant aux bénéficiaires d'accéder à des services financiers des banques et des institutions de microfinance. Cela s'est traduit par des effets positif et significatif des remittances sur les indicateurs d'inclusion financière dans les pays d'Afrique subsahariennes étudiés.

Dans cette conclusion générale nous relevons successivement les principaux résultats des trois chapitres, la contribution à la littérature de ce travail de recherche, les difficultés rencontrées, les perspectives de recherches futures et les implications en matière de recommandations de politiques publiques.

Le premier essai analyse l'impact des transferts de fonds des migrants sur la dynamique de l'inclusion financière, pour 32 pays d'ASS sur une période allant de 2004 à 2019. Huit indicateurs d'inclusion financière allants des indicateurs bancaires aux IMFs sont utilisés. Les résultats obtenus montrent un impact positif et significatif des remittances sur le niveau d'inclusion financière et plus particulièrement sur les services financiers offerts par les institutions de microfinance. Cela suggère que les remittances offrent aux bénéficiaires la possibilité d'ouvrir des comptes bancaires, d'accroître leur épargne et d'accéder aux systèmes financiers tout en permettant aux non bancarisés d'accéder à d'autres produits financiers tels que ceux des microfinances.

Le deuxième essai a entrepris une analyse de l'impact des flux migratoires et des remittances sur la PTF de 53 pays d'Afrique sur une période allant de 2000 à 2020. Les résultats montrent que d'une part, l'immigration a un effet positif significatif sur la PTF. Ce résultat s'explique principalement par l'apport de capital humain que représentent les immigrants. En apportant de nouvelles compétences, connaissances et perspectives, les immigrants peuvent combler les lacunes du marché du travail, augmenter la productivité et stimuler l'innovation. De plus, l'immigration peut favoriser une diversité culturelle et des échanges d'idées qui enrichissent le milieu des affaires et de l'éducation, contribuant ainsi à un environnement plus dynamique et compétitif. En revanche, l'émigration a un effet négatif sur la PTF.

Le troisième essai de cette thèse a approfondi l'analyse de l'impact de l'immigration sur le marché du travail togolais. Ce sujet est d'autant plus important que les initiatives entreprises par le projet de la Zone de Libre Echange Continentale Africaine (ZLECAf) et le protocole de libre circulation

de l'Union Africaine (Union Africaine, 2018) soulignent une fois de plus que la mobilité des personnes fait partie d'un idéal plus vaste d'une Afrique Unie. Par conséquent, cette partie de l'étude a porté une attention particulière au marché du travail à travers trois variables clés : l'emploi, les salaires et le temps de recherche d'emploi des travailleurs natifs au Togo. Les résultats obtenus offrent une perspective nuancée sur les effets de l'immigration sur le marché du travail, soulignant à la fois les bénéfices et les défis potentiels qu'elle peut engendrer. En adoptant l'approche par groupe de compétences défini selon les niveaux d'éducation et l'expérience professionnelle d'une part, ainsi que selon les secteurs d'activité et les expériences professionnelles d'autre part, les résultats montrent que l'immigration a un impact négatif sur l'emploi et les salaires des natifs. L'approche méthodologique par groupe de compétences utilisée suppose au préalable que les immigrés et les natifs sont des substituts dans le même groupe de compétence. Ainsi, l'effet estimé reste un effet direct intra-groupe, de l'immigration sur les variables du marché du travail des natifs.

En somme, à travers ces trois essais, cette thèse contribue à la littérature qui analyse les effets des migrations internationales sur le développement des économies en développement. Les principales contributions se situent à trois niveaux. Premièrement, la thèse se situe dans le prolongement de la littérature qui analyse l'effet des remittances sur le développement financier tout en mettant l'accent sur l'inclusion financière. L'essai contribue à cette littérature en utilisant des indicateurs de finance inclusive issus de l'activité des IMFs. Cet essai aborde les questions de l'optimisation des bénéfices de la migration africaine, le rôle de l'intermédiation financière au service du développement et sur la relation entre remittances et inclusion financière en mettant en avant les institutions de microfinance. En partant du principe que les IMFs seraient plus proches des populations vulnérables et rurales par rapport aux banques classiques. Il met en relief des hétérogénéités dépendamment du prestataire de service financier (banques versus IMFs). En faisant cela, à notre connaissance, elle se veut la première à adopter cette démarche en Afrique subsaharienne d'un point de vue macroéconomique. Deuxièmement, ce travail de recherche prolonge la littérature qui analyse l'impact des flux migratoires sur la croissance économique. A cette littérature, notre contribution majeure réside dans l'approche méthodologique utilisée dans le cadre des économies africaines. Cela nous a permis de tenir compte des spécificités africaines. La migration a été analysée dans un cadre conceptuel basé sur les modèles de croissance endogène. Troisièmement, à travers le dernier essai, la thèse contribue à la littérature qui analyse les effets de l'immigration sur le marché du travail des pays en développement comme les pays de destination.

La contribution réside également dans l'approche méthodologique. L'essai prend en compte dans ses estimations les effets de l'immigration sur des hommes et des femmes occupant les emplois formels et informels dans des groupes de compétences d'éducation et d'expérience professionnelle. Par ailleurs, l'essai définit des groupes de compétences alternatives basées sur l'expérience professionnelle et le secteur d'activité. En regroupant les travailleurs par secteur et expérience plutôt que par éducation, nous proposons une définition alternative des groupes de compétences. Cela permet de tenir compte des spécificités des pays en développement, où une grande part des actifs sont peu diplômés mais possèdent des compétences professionnelles. Cela enrichit la littérature existante sur l'immigration et le marché de travail des pays d'Afrique comme les pays de destination dans lesquels les groupes de compétences sont définis uniquement en fonction de l'éducation et de l'expérience. L'étude se veut être la première pour le cas du Togo.

Comme tout travail de recherche, cette thèse présente des limites principalement dues aux manques de données désagrégées sur les mouvements migratoires en Afrique et sur les indicateurs d'inclusion financière. Le défi majeur de cette thèse fut la disponibilité, la collecte et le traitement des données. Cela nous a donc emmené à utiliser diverses sources de données ainsi que diverses méthodologies. En relevant partiellement ce défi nous avons construit une base de données sur les stocks d'immigrés, d'émigrés désagrégées par niveau d'éducation pour 54 pays d'Afrique allant de 2000 à 2020. Cette base de données sera disponible en ligne sur demande afin de permettre l'étude d'autres questions liées à la migration internationales pour les recherches futures.

Bien que les aspects économiques des migrations aient largement été étudiées, pour les pays d'Afrique, plusieurs domaines restent peu explorés ou nécessitent une analyse plus nuancée. La recherche future sur les migrations internationales, en particulier en Afrique, pourrait se concentrer sur une compréhension plus approfondie des effets des migrations sur divers aspects du développement économique et social.

Pendant que l'Union Africaine a lancé la décennie des diaspora à l'horizon 2030, entérinant une sixième région de l'Afrique qu'est la diaspora, la collecte des données désagrégées et récurrentes sur les flux migratoires et sur la diaspora africaine permettra d'étudier leurs impacts sur le processus de développement des pays d'origine. Les effets de la migration sur le commerce et les IDE mériteraient d'avantage d'attention à l'aube de la ZLECAf. L'influence des migrations sur les structures sociale et culturelle des pays d'origine et de destination mériterait également une attention particulière. Les migrations peuvent transformer les sociétés en apportant de nouvelles

normes culturelles, en modifiant les structures familiales et en influençant les attitudes et les comportements sociaux. Il serait important de comprendre comment ces changements influencent le développement économique et social et comment les politiques publiques peuvent être conçues pour gérer ces transformations de manière positive. Par ailleurs, en fonction de la disponibilité des données, les effets des migrations sur l'innovation et la productivité des entreprises en Afrique pourraient être des sujets de recherche future. Les migrants apportent souvent avec eux de nouvelles idées, compétences et perspectives qui peuvent stimuler l'innovation dans les entreprises et les secteurs où ils travaillent. Les recherches futures pourraient examiner comment l'intégration de travailleurs issus de divers milieux culturels et professionnels peut conduire à une augmentation de la créativité et à l'émergence de nouvelles approches commerciales et techniques. Il serait également pertinent d'analyser comment les migrants, en tant qu'entrepreneurs, contribuent à la création de nouvelles entreprises et stimulent la croissance économique dans les pays de destination.

En définitif, ce travail de recherche, apporte une contribution à la compréhension des implications économiques des migrations en Afrique, révélant à la fois les défis et les opportunités associés à ces mouvements de population pour le développement. Dans une perspective de recommandation de politiques publiques, les résultats de cette étude mettent en évidence l'importance d'une approche holistique dans l'élaboration des politiques migratoires et de développement. Cette approche devrait tenir compte de la complexité et de l'interdépendance des effets économiques, sociaux et culturels des migrations. Les migrations en Afrique présentent des défis, notamment la gestion de l'intégration des migrants dans les économies d'accueil, l'atténuation des impacts de la fuite des cerveaux sur les pays d'origine, et l'équilibre entre les besoins économiques et les droits humains. D'un autre côté, les migrations offrent des opportunités telles que le transfert de compétences, l'enrichissement culturel et la création de liens économiques transfrontaliers. Pour répondre à ces défis et saisir ces opportunités, les politiques migratoires et de développement devraient être formulées avec une perspective globale. Cette conclusion explore les différentes façons dont les politiques peuvent être structurées.

Pour maximiser les aspects positifs de la migration, il serait important de développer des stratégies qui encouragent l'apport de capital humain et financier par les migrants. Cela inclut la mise en place de politiques d'immigration qui favorisent l'entrée de travailleurs et de professionnels dans les secteurs où ils sont le plus nécessaires. Pour atténuer les effets négatifs des migrations, il serait

important d'adopter des politiques qui soutiennent les travailleurs natifs potentiellement affectés par l'immigration et de mettre en place des mécanismes pour compenser la perte de capital humain due à l'émigration. Ceci peut être réalisé grâce à des programmes de formation et de développement des compétences spécifiques pour les travailleurs natifs et immigrés. De plus, des initiatives visant à encourager les émigrants à revenir dans leur pays d'origine après avoir acquis des compétences et de l'expérience à l'étranger doivent être mises en place. Par ailleurs, un système financier inclusif et bien réglementé est davantage nécessaire pour maximiser les avantages économiques des migrations. Il est important de créer des cadres réglementaires qui facilitent les transferts de fonds des migrants de manière formelle et efficace, réduisent les coûts de transaction et encouragent l'utilisation productive des remittances. De plus, les systèmes financiers devraient être conçus pour être plus inclusifs, permettant aux bénéficiaires des remittances d'accéder à un éventail de services financiers, y compris le crédit, l'épargne, l'assurance et l'éducation financière. Par ailleurs, une bonne gouvernance est nécessaire pour gérer efficacement les impacts économiques des migrations. Cela implique la mise en place de politiques responsables qui répondent aux besoins des migrants et des populations natives. La bonne gouvernance devrait également garantir une protection des droits des migrants durant tous leurs parcours migratoires. Des politiques d'intégration efficaces sont essentielles pour une pleine participation des migrants à l'économie des pays d'accueil. Ces politiques devraient faciliter l'intégration des migrants dans le marché du travail, offrir des opportunités d'éducation et de formation, et promouvoir la cohésion sociale. L'intégration réussie des migrants peut non seulement améliorer leur bien-être, mais aussi enrichir l'économie d'accueil par la diversité culturelle et les compétences.