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Impact of migration and remittances on the wellbeing of left-behind households in Ghana. – Exploratory analysis of the “Migrating out of Poverty” data from 2013-2018

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Abstract

From the middle of the 20th century onwards, the impact of migration on left-behind communities has been framed by optimists and pessimists alike. Where neo-classical theories argue that migration is able to trigger development in both migrant-sending and receiving communities, structuralists believe that exploitative capitalistic structures prevent progress in developing regions. In line with the theoretical duality surrounding the migration-development nexus, empirical results have been equally heterogeneous. An important problem of empirical research is the lack of reliable longitudinal datasets in many regions, including sub-Saharan Africa. To contribute to filling this research gap, this thesis explores housing quality and wellbeing levels in Ghanaian regions and assess the impact of migration and remittances on left-behind households. To do so, data from a household panel survey, collected in 2013, 2015 and 2018, is used. Wellbeing is measured by an housing quality index which is constructed by applying multiple correspondence analysis. I find that wellbeing levels are significantly higher in south-eastern regions than in north-eastern regions and that households with low wellbeing are more keen to invest in housing upgrades. Households with very high wellbeing levels receive significantly more remittances than households with low wellbeing. I find no significant effect of migration and remittances on wellbeing changes of households during the 5-year survey period. I conclude that housing quality is a reliable measurement tool for objective wellbeing of households in the Ghanaian context.

Keywords: Migration, Ghana, Remittances, Wellbeing, Housing quality index, Multiple correspondence analysis

Data for Ghana was collected by the Centre for Migration Studies (CMS) of the University of Ghana, through funding from the UK's Department for International Development (DFID) and made available by the Migrating out of Poverty Research Programme Consortium, at the School of Global Studies, University of Sussex, UK.

Abstract

Seit Mitte des 20. Jahrhunderts herrscht, sowohl unter Optimisten als auch unter Pessimisten, eine rege Diskussion über den Einfluss von Migration auf zurückbleibende Gemeinschaften. Neoklassische Theorien argumentieren, dass Migration in der Lage ist, die Entwicklung von sendenden und aufnehmenden Gemeinschaften positiv zu beeinflussen. Strukturalisten hingegen sind der Meinung, dass ausbeuterische kapitalistische Strukturen jegliche Fortschritte in Entwicklungsregionen verhindern. Passend zur theoretischen Dualität, die mit der Migration und Entwicklungsdebatte einhergeht, sind auch die Resultate der empirischen Forschung sehr heterogen. Ein zentrales Problem der Empirie ist die geringe Verfügbarkeit von vertrauenswürdigen Längsschnittdaten in vielen Regionen der Welt, Subsahara-Afrika inklusive. Um die existierende Forschungslücke zu schließen, untersucht diese Arbeit die Wohnqualität und das Wohlbefinden in verschiedenen Regionen Ghanas. In diesem Zusammenhang werden die Auswirkungen von Migration und Rücküberweisungen auf zurückbleibende Haushalte untersucht. Im Rahmen dieser Analyse werden drei Erhebungen einer Panelbefragung berücksichtigt, die in den Jahren 2013, 2015 und 2018 durchgeführt wurden. Das Wohlbefinden der Haushalte wird durch einen Index für Wohnqualität gemessen, welcher unter Anwendung einer multiplen Korrespondenzanalyse konstruiert wird. Es stellt sich heraus, dass das Wohlbefinden in südöstlichen Region deutlich höher ist als im Nordosten Ghanas. Außerdem neigen Haushalte mit niedrigem initialen Wohlbefinden deutlich häufiger zu Investitionen in die eigene Wohnsituation. Haushalte mit sehr hohem initialen Wohlbefinden empfangen deutlich höhere Rücküberweisungen als Haushalte mit niedrigem Wohlbefinden. Im Rahmen dieser Arbeit konnte kein signifikanter Effekt von Migration oder Rücküberweisungen auf die Veränderungen des Wohlbefindens der untersuchten Haushalte nachgewiesen werden. Abschließend ist festzuhalten, dass Wohnqualität ein zuverlässiges Messinstrument für objektives Wohlbefinden von ghanaischen Haushalten ist.

Schlagwörter: Migration, Ghana, Rücküberweisungen, Wohlbefinden, Index für Wohnqualität, Multiple Korrespondenzanalyse

List of abbreviations

CIW	Canadian Index of Wellbeing
CMS	Centre for Migration Studies at the University of Ghana
DHS	Demographic and Health Surveys
FA	Factor Analysis
GDA	Geometric Data Analysis
GDP	Gross Domestic Product
GHS	Ghanaian Cedi
GLSS	Ghana Living Standards Survey
GSS	Ghana Statistical Service
HQI	Housing Quality Index
IOM	International Organization for Migration
OECD	Organisation for Economic Co-operation and Development
MICS	Multiple Indicator Cluster Survey
MCA	Multiple Correspondence Analysis
MOOP	Migrating out of Poverty Program
NELM	New Economics of Labour Migration
PCA	Principle Component Analysis
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

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1. Introduction

Background

Migration is a phenomenon that has been around since the dawn of time, shaping societies all around the world. Human mobility has massively changed, not only in a historical context over the last couple of centuries and decades, but also in very recent years. Environmental, geopolitical and technological factors have deeply affected the way humans migrate, the recent COVID-19 pandemic and the ongoing environmental changes are prominent examples for how migration patterns are susceptible to alterations. In 2020, 281 million people were considered international migrants, representing 3,6% of the global population. (vgl. IOM 2021, 3) Assessing the number of internal migrants has been a monumental task and estimations have been rare. Researchers agree that internal mobility is much higher than international border crossings, estimating the exact number is very difficult. The lack of uniformity in definitions and data across nations makes it hard to quantify internal migration. One of the more recent estimations was published in 2005, when 763 million people were defined as internal migrants. To be considered an internal migrant in this estimation, people had to reside outside their region of birth. According to this research, 12% of the world's population had internally migrated in the early 2000s. (vgl. UNESCO 2018, 13)

When analysing human mobility and the impacts of migration on migrant-sending societies, remittances have become one of the crucial research topics. Remittances have massively increased from 128 billion USD in 2000 to 702 billion USD in 2020. (vgl. IOM 2021, 10) The actual sum of remittances is substantially higher, which is related to the fact that official estimations only consider remittances through formal channels. Informal channels are also frequently used by migrants to send financial assistance back home. The importance of financial transfers from migrants to their communities at the place of origin cannot be understated. Low- and middle-income countries are the main destinations for remittances, concentrating 75% of all transfers in 2020. Since the middle of the 1990s, international remittances alone have far outweighed official development aids in developing regions. (vgl. IOM 2021, 39) Even though the importance of remittances for receiving communities can't be questioned, the impact on local development has been heavily discussed in theoretical and empirical studies. (vgl. KAGACHI & KIAMBIGI 2012, 257) While some researchers suggest that remittances

increase tendencies to invest and trigger economic development at places of origin, others argue that the remitted sums are mostly spend on consumption goods and increase dependency and even inequality levels. The impact of migration and remittances is highly dependent on the local context and the structures the communities are embedded in. The important question is, if migrant-sending communities and households are able to cope with the initial negative effects of losing capable members and subsequently profit from positive aspects of migration in the long run. Studies analysing the effect of remittances on migrant-sending communities have predominantly focused on South America and Asia. (vgl. MAZZUCATO et al. 2008, 104) Multiple important publications in the late 20th and early 21th century have studied impacts on Mexican communities that send migrant-workers to the US. Africa has historically been a continent with high human mobility and African countries have experienced high internal and international migration rates. In 2020, 21 million Africans where living in another African country and roughly 20 million where residing on a different continent, mostly in Europe, Asia and North America. (vgl. IOM 2021, 60) Africa is one of the most important migrant sending regions in the world, but the impact of migration on local communities has not been intensively studied so far. Most of the publications that have assessed the impact of migration in the African context have focused on international migration and remittances. Researchers have predominantly used cross-sectional data for their analysis. (vgl. TEYE et al. 2019b, 6)

Research question and hypotheses

The aim of this thesis is to use recently published panel data on Ghana to assess the impact of migration and remittances on left-behind households. The west African region has traditionally shown high levels of human mobility. In the pre-colonial era, movement was frictionless in a region without explicit borders. (vgl. AGYEI & OFOSU-MENSAH 2009, 9) The tendency to migrate is still very much present in current west-African societies but the structures shaping human mobility in the region have changed drastically over the last two centuries. Ghana, a former colony that was administrated under British rule until 1957, has developed one of the strongest economies in Africa during the latter half of the 20th century. Human mobility has been an integral part of this process but development levels have not risen equally across regions. The main goal is to explore the data at hand and try to identify changes in migrant-sending households' wellbeing that are directly related to remittances. In this thesis, I

investigate changes in household wellbeing in Ghanaian migrant-sending regions from 2013 to 2018 and determine if these changes are related to migrant remittances. In order to further structure my research I have established four hypotheses that are being tested. The first hypothesis (*H1*) is that housing quality of sampled households has improved over the 5-year observation period. The second hypothesis (*H2*) asserts that households in northern Ghana have significantly lower wellbeing levels than households in southern Ghana. The penultimate hypothesis (*H3*) claims that households with high baseline wellbeing levels receive more remittances than households with low initial wellbeing. The last hypothesis (*H4*) states that remittances increase investments in housing quality and improve wellbeing levels of left-behind households. The research question and the hypotheses are assessed in the “Discussion” chapter at the end of the thesis.

Data and methodology

In my thesis I am analysing panel data that was collected by the Centre for Migration Studies of the University of Ghana. The datasets used are part of the “Migrating out of Poverty Research Programme”, a ten-year project that had the aim of analysing the role of migration in poverty reduction in Asian and African countries. One of the key themes of the project was the role of remittances and their effects on migrant-households. For five countries, the Migrating out of Poverty Research Consortium has published datasets online. The Ghanaian data comprises information for three different survey waves from 2013, 2015 and 2018.

This thesis is an empirical study that uses secondary data to run an exploratory data analysis. The first step in my research is to analyse all relevant studies that have already used the Migrating out of Poverty data for Ghana and establish a research question that hasn’t been discussed yet. All the studies that have used the Migrating out of Poverty data are available in the “Publications” section on the MOOP website (<http://www.migratingoutofpoverty.org/publications>). The second step in writing this thesis is to familiarize myself with the data and learn how to construct a composite indicator for housing quality. The construction of the housing quality index, as well as the subsequent statistical analysis, are both done in Stata 16.1. I identified the relevant literature for my thesis by using a variety of academic search engines. I used the library search engine from the University of Vienna (usearch.univie.ac.at) and the search engine for Luxembourgish libraries (a-z.lu), but most of

the papers and studies were found by using the Scopus search engine (scopus.com). Additional literature was identified by snowballing important studies and tracking down other relevant publications. Some of the most recurrent keywords that I used in my literature research were “Ghana”, “impact”, “remittances”, “migration”, “mobility”, “wellbeing”, “welfare”, “housing quality”, “MCA”, “factor analysis”, “composite indicator”, “development”, “internal”, “poverty” and “inequality”. Almost all the literature used in this thesis is accessible online, while Doyal and Gough’s “A theory of human need” is available at the University of Luxembourg. Very importantly, Eva Maria Egger send me her PhD thesis after I contacted her in the early stages of my research process, giving me access to essential information and enabling me to build a composite indicator on housing quality in the first place.

Structure

The second chapter briefly summarizes the current state of research and presents the most important studies that have shaped and inspired my own thesis. I then argue how my work complements the current research gap in migration and development studies. The third chapter of this thesis sets the scene by introducing the extensive migration history of west-African and Ghanaian populations. Human mobility in the region is presented chronologically, beginning with the pre-colonial era. I then describe how colonialism has altered trajectories in Ghana and how these dynamics have evolved after independency was attained. Migration in post-colonial Ghana is embedded in structures previously created which continue to shape human mobility into the 21st century. This first part of thesis explains how agro-ecological conditions, natural resources, colonial administration and independence are all important factors that influence mobility and migration trajectories in the Ghanaian context. The importance of the migration-development nexus is also introduced in this second chapter. In the fourth chapter, the most important literature on migration and development is reviewed and discussed. The way migration impacts migrant-sending communities has been a hotly debated topic from the middle of the 20th century onwards. Since then, neo-classists, structuralists and pluralists have all tried to frame and conceptualize migration and its impacts, resulting in very diverse and even contradictory theoretical approaches. The fifth chapter comprises information on household wellbeing, where objective and subjective factors play crucial roles in determining living quality. In this chapter I present my reasoning why housing quality can be used to assess objective wellbeing levels of households. In the sixth chapter, I

am presenting the Migrating out of Poverty data in great detail and breaking down the construction process of the housing quality index used to assess household wellbeing. Chapter seven holds the results of my statistical analysis and chapter eight discusses the results in light of the theoretical and historical findings made throughout the thesis. The ninth and final chapter summarizes the most important findings of the thesis and presents some concluding remarks.

2. Current state of research and relevance

Richard H. Adams Jr. has done tremendous work in Ghana analysing the impact of remittances and migration for migrant-sending regions. One study that is particularly important for this thesis is “The Impact of Remittances on Investment and Poverty in Ghana” published together with Alfredo Cuecuecha in 2013. The goals of this study are twofold. In a first step, the authors evaluate the impact of international and internal remittances on the investment behaviour of Ghanaian households. They then follow this up by analysing poverty in Ghana and studying how remittances effect this problem. (vgl. ADAMS & CUECUECHA 2013, 24) The poverty-reducing capacity of remittances found by Adams and Cuecuecha indicates the potential for positive migration impacts in the Ghanaian context. In this thesis, I complement their findings by analysing wellbeing levels of households through housing quality, which acts as another layer of overall living standards of migrant-sending communities. The aim is to determine if migration impacts are similar when using a different measurement tool on the household level.

Charles Godfred Ackah and Denis Medvedev have published a World Bank research working paper in 2010 called “Internal Migration in Ghana – Determinants and Welfare Impacts”. Ackah and Medvedev assess migrant characteristics, drivers of migration and most importantly the impact of migration on household welfare. (vgl. ACKAH & MEDVEDEV 2010, 3) The authors find that initial household welfare significantly effects the amount of remittances they receive, where better-off households take in significantly larger sums than poorer households. One of the main goals of this thesis is to check, by using the longitudinal data at hand, if initial household welfare is actually an important factor when assessing remittances of households in Ghanaian migrant-sending regions. Both studies presented here use iterations

of the Ghanaian Living Standards Survey (GLSS), a nation-wide survey offering information on Ghanaian living conditions. The GLSS is published by the Ghana Statistical Service (GSS) and is recurrently used as a mode of comparison in this thesis.

A multitude of authors have used the Migrating out of Poverty data before me and have investigated different aspects of migration in the Ghanaian context. There have been four studies that are particularly important for the research purposes of my thesis. Mariama Awumbila et al. published a working paper in 2016, discussing gains and losses from internal migration when analysing the migrant-sending households surveyed in the Migrating out of Poverty project. Awumbila et al. use household consumption as a measurement tool to identify potential benefits from internal migration. (vgl. AWUMBILA et al. 2016, 4) The data analysed in this study is drawn from the first and second survey waves in 2013 and 2015. A 2019 working paper from Joseph Kofi Teye et al. analyses changing patterns of migration and remittances in Ghana. While mostly producing descriptive statistics on migrant characteristics, the study also assesses changes in subjective welfare levels of households in 2015 and 2018. The second and third survey waves of the MOOP data are used in this analysis. The third important study that uses the MOOP datasets was also published by Teye et al.. This 2019 working paper specifically targets the impact of migration on household welfare using household consumption as an objective measurement. (vgl. TEYE et al. 2019a, 3) The authors compare consumption levels of migrant and non-migrant households using data from 2015 and 2018. The last study presented here is the most important one for my thesis and has massively inspired my methodological approach. Eva Maria Egger submitted her PhD thesis on causes and consequences of internal migration in Brazil and Ghana at the University of Sussex in 2017. With the assistance of Julie Litchfield, Egger analyses the MOOP data in 2013 and 2015 and constructs an index for housing quality as a measurement of household wellbeing. The index used in my thesis is an advancement of the work done by Egger and Litchfield in 2017. Their work on internal migration in Ghana has been published in scientific journals at two separate occasions, all three iterations of their research have been used in my thesis. While all the Migrating out of Poverty studies follow very interesting research paths, none of them has used all three survey waves available for Ghana. In my thesis I am using the full panel nature of the data to compare changes in household wellbeing and migration impacts from 2013 to 2018. One recurrent problem that was mentioned by the authors that previously worked with the MOOP

data, was that the short observation period of two or three years could be preventing them in finding significant impacts of migration on left-behind households. Expanding the observation period from two or three years to five will give me more time to assess the effects of migration and remittances on household wellbeing. In my thesis, I am using an index on housing quality to measure wellbeing levels of households, where most studies have referred to consumption as an assessment on living quality. Even though Egger and Litchfield have used housing quality already, I argue that the advancements made in this thesis are very helpful to grasp the multi-faceted nature of objective household wellbeing and enhance the measurement capacity of the index. The exploratory data analysis in my thesis is shedding light on the complicated relationship between migration and development and combines empirical evidence from Ghana with prominent theoretical and conceptual approaches. An exploratory data analysis is a method of studying data without any predetermined or biased ideas. It is used to determine what the data is actually able to tell about the research topic or question at hand. (vgl. MARTINEZ et al. 2017, 3)

3. Internal migration in Ghana

3.1 Defining migration

Migration is an omnipresent aspect of life, due to its diversity however, finding universally acceptable definitions has been very challenging. (vgl. KOFI TEYE et al. 2019, 7) The Ghanaian Statistical Service (GSS) defines migration “as a form of geographic or spatial mobility involving a change of usual place of residence between clearly defined geographic units.” (GHANA-
IAN STATISTICAL SERVICE 2019, 109) Migration can be further categorized into voluntary and involuntary mobility. Migratory trajectories can cross national borders, this would be considered international migration. When individuals or groups move within national borders, migration is described as “internal”. (vgl. GHANA-
IAN STATISTICAL SERVICE 2019, 109)

The Migrating out of Poverty Research Consortium has used the study by Bilsborrow et al. (1984) to derive their working definitions for migration and migrant types. In comparison to the Ghanaian Statistical Service, the definition used by the Research Consortium includes seasonal migrants. The MOOP Research Consortium distinguishes between four different migrant types and presents them in their user guide.

Differentiations can be made between internal, international, seasonal and returned migrants. (vgl. MIGRATING OUT OF POVERTY RESEARCH CONSORTIUM 2018, 4)

“An internal migrant is anyone who used to live in the household and left to go away in the past 10 years to another location within the country, and with a duration of absence, or Intended absence, of at least 3 months.”

(MIGRATING OUT OF POVERTY RESEARCH CONSORTIUM 2018, 4)

Since this thesis will mostly focus on the impact of internal migration and remittances on household wellbeing, having a consistent and robust definition for internal migrants is essential. International migrants are defined by the same time components as internal migrants, the difference is that they cross national borders to live in another country. A seasonal migrant is a sub-category of either an international or internal migrant and is characterized by staying away from the place of origin for a few months but not more than a year. A return migrant is a person that has left the place of origin for at least 3 consecutive months over the last 10 years but has lived at the place of origin for the last year. (vgl. MIGRATING OUT OF POVERTY RESEARCH CONSORTIUM 2018, 4-5)

3.2 Pre-colonial mobility

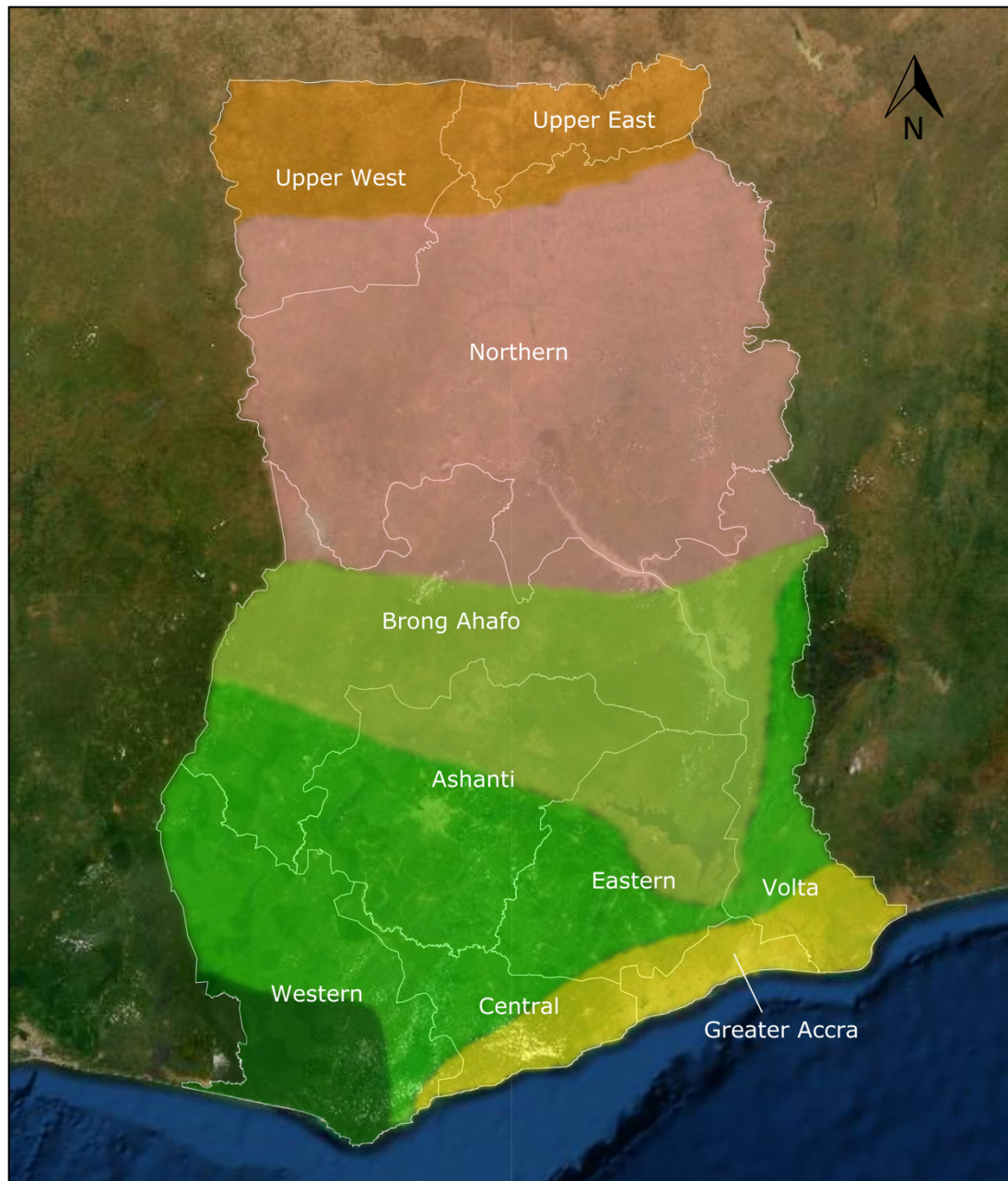
Migration is deeply rooted within West African societies and mobility has been historically high within the region. Europeans have been present on the African west coast since the 15th century and have deeply influenced migratory practices and mobility of local populations. (vgl. AGYEI & OFOSU-MENSAH 2009, 9) Until the British established the Gold Coast Colony and Protectorate in 1874 on territories which today form the nation-state of Ghana, the relationships between locals and Europeans were determined by trade. Until the middle of the 17th century, the most important trade on the Gold Coast came from gold and ivory. (vgl. ADDO-FENING 2013, 39) With a growing demand for manual labour on plantations in the Americas and the introduction of the Atlantic Slave Trade, the dominant trade switched from gold and ivory to slaves in the 18th century. When the slave trade was officially abolished in 1807, ties between West Africa and Europe changed once again. European demand was now heavily focused on natural products like cotton, palm, rubber and gum. Trade structured

around those natural products was typical for West Africa in the first half of the 19th century. (vgl. ADDO-FENING 2013, 39)

In the pre-colonial period, migration and mobility were not only defined through trade and slavery, they were also massively influenced by warfare. Pre-colonial warfare was usually motivated by conflicts over fruitful or mineral rich lands, migration often took place on the macro-level. Communities with small military power were displaced by stronger groups or were incorporated into their structures. (vgl. AGYEI & OFOSU-MENSAH 2009, 10-11) To summarize, in pre-colonial West Africa the main motivations for migration were fertile lands, trade, shelter, security and ecological conditions. (vgl. AGYEI & OFOSU-MENSAH 2009, 38) Prior to the British declaration of the Gold Coast Colony, the region was culturally and politically diverse. Decentralized communities as well as centralized kingdoms existed in the beginning of the 19th century, the southern regions were characterized by a stronger centralization of societies. Centralization in the north was only put into practice with the beginning of colonial rule. (vgl. ADDO-FENING 2013, 40-41)

3.3 Colonial impact on regional development and migration

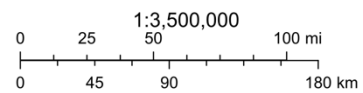
In the 1830s, first attempts were made by the British to extend their territorial control in Ghana when they tried to put in place colonial structures that went beyond simple fortifications on the Gold Coast. After struggling to implement said territorial control in the following decades, the southern regions of Ghana were finally declared as the Gold Coast Colony and Protectorate in July 1874. (vgl. ADDO-FENING 2013, 45) The initial Gold Coast Colony was made up of territories that form the Western, Central, Eastern and Volta regions in modern-day Ghana. After being defeated in a war that spanned from March 1900 to March 1901, the Ashanti region was annexed in January 1902. A couple months prior, in September 1901, the northern regions of Ghana were already annexed as a Protectorate. After the first world war, Great Britain and France gained control over Togoland, the British part of the territory was subsequently incorporated into the Gold Coast Colony. Almost half a century after proclaiming the Colony in 1874, the British had annexed all territories that would later form the Ghanaian nation-state upon independence in 1957. (vgl. ADDO-FENING 2013, 47)



31.5.2022

Agro-Ecological Zones of Ghana

 Coastal Savannah	 Transitional
 Sudan Savannah	 Semi-Deciduous
 Guinea Savannah	 Rain Forest



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Figure 1: 6 Agro-Ecological Zones of Ghana (Data basis: OSEI & STEIN 2017, 4)

In many west African regions, subsistence agriculture and trade were central elements of societies during pre-colonial times. (vgl. PLANGE 1979, 6) Northern Ghana was part of a large trading network that had connections to other African regions and even southern Europe. Even before colonial rule, gold was an important Ghanaian resource and created a substantial interconnectedness of the mineral-rich Ashanti region. (vgl. PLANGE 1979, 11) Pre-colonial societies in the North were able to adapt to the climatic circumstances of the Savannah regions by creating seasonal processes for dry and rainy periods. Northern Ghanaian households were participating in small-scale subsistence farming during the rainy season in the spring and the harvesting season in the fall, while also engaging in non-agricultural practices and seasonal migration in other months. (vgl. PLANGE 1979, 7) The significant ecological differences in Ghana always required the different regions to engage in trade and exchange goods and resources, migration along these lines was a very common practice. (vgl. AGYEI & OFOSU-MENSAH 2009, 12) British colonial rule however inherently changed Ghanaian societies from the latter part of the 19th century onwards.

During the 19th century, increasing levels of industrialisation in Europe created an ever growing demand for resources. (vgl. ADDO-FENING 2013, 50) The British were especially interested in West African gold, rubber, timber, coffee and cocoa and started to establish new structures to extract these resources soon after creating the Gold Coast Colony and Protectorate. (vgl. AGYEI & OFOSU-MENSAH 2009, 38) Infrastructure was financed in regions that were deemed economically profitable for the colonial administration, creating new hubs and centres for work and trade. Pre-colonial trade networks were eliminated under colonial rule and local activities were shut down or discouraged when they didn't coincide with administrative interests. (vgl. PLANGE 1979, 8) New mobilities and unequal regional development in colonial Ghana revolved mainly around two resources, gold and cocoa.

Ghana's gold mines

Until the 1850s, mining for gold was a practice that was mostly controlled by West Africans. With the increasing European influence and presence in the region, mining drifted away from African control and was decades later firmly in the hands of European investors. (vgl. ADDO-FENING 2013, 50) In the beginning of the 20th century, Ghanaian gold mines profited from the Second Boer War and the subsequent stop of gold exploitation in South Africa. Gold mines in

the Gold Coast Colony became hugely successful and their growth created an enormous labour demand. In 1905, the colonial administration was keen to recruit labourers for gold mines and was confident to do so after ending pre-colonial warfare and establishing a “peaceful state of the country”. (vgl. LENTZ 2006, 139) The labour demand however massively outweighed the regional labour supply, triggering the search for labourers in other parts of the colony and even beyond the colonial borders. Border controls were reduced by the colonial administration to encourage immigration from other colonies, this turned out to be a successful attempt to generate labour supply, it didn’t satisfy the need of the mining industry though. (vgl. AGYEI & OFOSU-MENSAH 2009, 14) In their search for labour, the mines and the colonial administration turned their attention to the recently annexed northern territories. (vgl. LENTZ 2006, 139) The northern regions were largely overlooked up until this point, mainly due to their lack of colonial resources. The North wasn’t particularly ecologically suited for planting cash-crops and didn’t hold any other natural resources that the colonial administration desired in the early years of the Gold Coast Colony and Protectorate. Since the northern territories however held large parts of the colonial population, recruiting young men as mining labourers became very interesting. With the boom of the gold mining industry, the administration extracted workforce from the North, which subsequently became the most important colonial resource for the region. (vgl. PLANGE 1979, 6) In 1906, the labour recruitment in the northern territories officially started and picked up pace in the following years. Labour migration to southern mines was stronger from north-eastern regions but the North-West also massively contributed workforce for mining purposes. In the early stages of the recruitment period, mining labourers from the North were relatively content with low wages and problematic working conditions but soon realised their worth for the colonial gold production. (vgl. LENTZ 2006, 140) Northerners had a general distaste for underground work, grounded on cultural beliefs and safety issues. Being recruited by the colonial administration also frequently brought back the fear of being enslaved. (vgl. AGYEI & OFOSU-MENSAH 2009, 15) Other factors that contributed to the growing distaste in mining work were the horrendous working conditions, the high costs of living in mining towns, the array of diseases circulating in worker’s accommodations and the high number of deaths in the mines. (vgl. LENTZ 2006, 142) After massive migratory movements in the early years of the 20th century, migration to the mines slowed down leading up to the First World War. During the war, many young men from the North were used as soldiers, which further decreased the labour supply for the

mines. (vgl. LENTZ 2006, 140) Recruitment was once again pushed by the administration and the mines after the end of the war but the initial success of the campaign in the early 1920s died down rather fast. (vgl. LENTZ 2006, 142) In 1925, the colonial government stopped recruiting for mining workforce and the mines themselves took the same decision two years later. Even though administrative recruiting stopped in the 1920s, the blueprint for labour migration from the northern territories to southern mines was laid. This migratory trajectory was still very popular until the middle of the 20th century. (vgl. LENTZ 2006, 143)

Booming cocoa industry

Besides safety issues and poor working conditions, the emergence of a powerful cocoa industry was one of the main reasons for decreasing labour migration towards mining centres. The cocoa industry was developed parallel to the gold mine rush in the early 20th century and symbolised a second important pull-factor for migrants. (vgl. AGYEI & OFOSU-MENSAH 2009, 14) Cocoa farms could offer migrants a substantially higher salary than gold mines, which resulted in a shift in labour migration. The cocoa industry could pay up to 5 times the amount that was offered by gold mines or the colonial administration for infrastructural work. (vgl. LENTZ 2006, 140) Not only was cocoa the most import export product from 1906 onwards, the Gold Coast Colony and Protectorate even became the global leader in cocoa production in 1911. (vgl. ADDO-FENING 2013, 50) While people from several different regions moved to the Ghanaian forest zone in the West, migration from the North had very unique characteristics. The height of the annual labour demand on cocoa farms coincided with the dry season in the northern territories from October to May. Seasonal migration from the Savannah zones to the forest regions in the South-West intensified in the early 20th century and became the signature migration type for Northerners in the following years and decades. (vgl. AGYEI & OFOSU-MENSAH 2009, 16) In the 1920s and 1930s, northern men had established substantial knowledge of the cocoa industry and seasonal migration to plantations became basically a universally applied method for young males from the North. Every administrative attempt to regulate or control the migratory dynamics and slow down the “muscle drain” from northern territories failed. (vgl. LENTZ 2006, 144) Since the administration in the Gold Coast Colony never regulated migration, the seasonal mobility of labourers was extremely high. (vgl. LENTZ 2006, 152) The more young men migrated to the South to work on cocoa plantations, the

more the aspirations of like-minded Northerners back home grew to follow them. (vgl. LENTZ 2006, 147)

Unequal regional development as a result of colonial policies

In his study published in 1979, Nii-K Plange argues that the unequal regional development in Ghana and the problems faced by the northern regions since the Ghanaian independence in 1957 are not determined by natural, climatic or cultural conditions in these regions but rather stem from the lasting impact of discriminatory colonial policies. Plange uses the concept of “naturalistic fallacies” as his main analysis tool and distinguishes five different components. The idea behind this concept is that dire natural conditions of a region, or the lack of cognitive capacities of the population living in it, are the reasons for low levels of overall development. (vgl. PLANGE 1979, 4) This concept has been frequently used during colonial rule and even afterwards to legitimize the lack of investment in northern Ghana. The five most common arguments used to approve discriminatory policies against the North are the absence of natural resources, the poor quality of the soil, the difficult climatic circumstances, the low intellectual capacities of northern populations and the incapacity of those population to use and manage the resources found in their regions. (vgl. PLANGE 1979, 5) Plange debunks these assumptions and argues that specific regions received privileged treatment due to their importance for the economic goals of the colonial administration, while other regions were ignored because they weren’t perceived as useful for the Colony or the British Empire. (vgl. PLANGE 1979, 5) During the pre-colonial period, northern populations were well aware of the difficult climatic circumstances in the Savannah regions but were able to adapt and minimize their vulnerability for environmental shocks due to extensive local knowledge. Diversifying regional practices and participating in extensive trade contributed to the wellbeing of northern households. (vgl. PLANGE 1979, 7) With the introduction of colonial rule, local markets were closed and previous trading networks dissolved in favour of centralized hubs in resource-rich regions in the South. (vgl. PLANGE 1979, 8) The administrative and economical centres of the Gold Coast Colony received substantial investments by the government and were provided with new infrastructure. (vgl. ARTHUR 1991, 91) The subsistence agriculture that was previously prominent in rural areas was replaced by cash-crop farming. Land that was owned by local households or communities was either leased or sold to international companies. The administration also expropriated desirable land to sell it to the same

companies. The export-oriented farming practices were profitable for foreign investors but the rural communities were excluded from profits. (vgl. ARTHUR 1991, 92) Northerners were, step by step, stripped from their pre-colonial practices and pushed to participate in colonial structures, mostly as labourers on cocoa plantations or in gold mines. (vgl. PLANGE 1979, 9) By 1945, men from northern Ghana had basically no other option than to participate in activities defined by the colonial administration. (vgl. PLANGE 1979, 12)

3.4 Development and mobility after independence

Ghana reached independence in 1957, but the colonial structures that were established during the previous decades did not just simply perish. At the end of the colonial period, inequalities between northern and southern regions were very pronounced. At the dawn of independence, structural differences were evident in poverty, income levels, infrastructure, social services, education and urbanisation rates. (vgl. PLANGE 1979, 5) In the first two decades after independence, the economic development in Ghana was very uneven and unpredictable. (vgl. ARYEETEEY & McKAY 2004, 4) Medium- and large size mines, that were established during the colonial period, continued to be operated until the early 1980s. In the following years, neo-liberal governmental policies and the privatization of many state-held actors and organizations diminished the mining sector. The wealth that was generated in the colonial mining centres deteriorated and the mining sector regrouped with a specified focus on small-scale artisanal practices. (vgl. NYAME et al. 2008, 7) In many regions though, Ghana has remained heavily focused on agriculture. The way agriculture is assessed by the government also didn't significantly change in the post-colonial period. The British administration favoured the growth of cash crops over the previously dominant subsistence farming, this trend continued under the Ghanaian government after independence. (vgl. ARTHUR 1991, 92) The economic benefits of cash crop production were substantially higher than the earnings generated in subsistence farming and the revenue from exports had become key on a national level. The export-oriented agricultural system also didn't require any major infrastructural investments for further processing materials. (vgl. ARTHUR 1991, 93) In the first two decades after independence, development projects were mostly financed in the central and southern regions of the country. (vgl. ARTHUR 1991, 94) The southern Ghanaian coastal region has historically concentrated large parts of the national wealth. The socio-economic success is partly related

to its important urban centres in Accra and Sekondi-Takoradi, as well as to the presence of the two largest national ports. The central regions in Ghana are characterized by an abundance of national resources and fertile lands, Kumasi acts as the centre for trade and commerce. Kumasi was the capital of the rich Ashanti empire prior to its forceful annexation by the British and is currently the second largest metropolitan area in the country. While the northern regions make up half of the Ghanaian territory, they haven't experienced the same development. (vgl. AGYEI & OFOSU-MENSAH 2009, 19) The governmental strategy for national development was firmly focused on industrial production, investments were made accordingly. (vgl. AGYEI & OFOSU-MENSAH 2009, 21)

The 1970s and early 1980s were dominated by an economic crisis that was mostly related to poor structures and planning on the governmental level. Major policy changes were made in the 1980s and an economic recovery programme was introduced. These changes were supported by the World Bank and the International Monetary Fund and historic monetary aid was provided. (vgl. ARYEETEEY & MCKAY 2004, 7) In the last two decades of the 20th century, Ghana experienced a much more stable economic growth. Often seen as a flagship for development in West-Africa and beyond, Ghana is considered a strong democracy and an economic leader. (vgl. ARYEETEEY & MCKAY 2004, 4) Since these reforms were introduced, Ghana has been able to significantly reduce poverty and the reduction of extreme poverty has been even more impressive. (vgl. COOKE et al. 2016, 24) Even though Ghana has managed to outperform most African countries in the last decades, it still faces serious challenges. Economic development and poverty reduction have been true on the national level, the inequality in both dynamics has been very high though. Inequalities in development, as well as poverty reduction, can be categorized into two groups, which are not mutually exclusive. Strong inequalities exist between northern and southern Ghanaian regions and between rural and urban areas. The Upper East, Upper West and Northern regions currently have the highest poverty rates and levels of poverty depth, they all belong to the ecological Savannah zones in the North of Ghana. The Upper East and Upper West regions have made significant progresses in reducing poverty rates over the last decades, the Northern region has only seen slight improvements since the late 20th century. Poverty depth rates remain high in all three regions in the 21st century. (vgl. COOKE et al. 2016, 1) Poverty is generally much higher in rural Ghanaian regions than in urban areas. (vgl. ARYEETEEY & MCKAY 2004, 11) The negligence and exploitation of

rural regions during colonial times and the following lack of investment in agricultural practices after independence have contributed to the wide urban-rural gap in development and poverty.

Key role of internal migration

Prior to the colonial period and the establishment of nation-states, people in West Africa were able to move relatively freely and create important trade-networks that had ties far beyond the region. To this day, West Africans are considered some of the most mobile people in the entire world. (vgl. AWUMBILA et al. 2018,10) The north-south trajectory of migrants, that became immensely popular in the colonial period, dictated internal Ghanaian migration after 1957 and is still omnipresent in the 21st century. Migratory flows in Ghana are quite diverse and there are different categories that can be distinguished. Apart from permanent migration, temporary movements, such as cyclical or seasonal migration, are very common. Seasonal migration is mostly motivated by important ecological differences within the country. (vgl. AGYEI & OFOSU-MENSAH 2009, 31) Farmers and agricultural workers from the Savannah region frequently migrate during the dry season and perform agricultural practices in the central and southern regions. Fertile areas in the Brong Ahafo region for example have two rainy seasons, while there is only one rainy season in the ecological Savannah zones per year. Excellent agricultural conditions thus act as an important pull-factor for seasonal migrants in Ghana. (vgl. VAN DER GEEST 2011, 85) Northern Ghanaians also temporarily migrate as labourers to work on oil palm or cocoa plantations. Even though migration rates among Ghanaian women have rapidly increased in the last few years, seasonal migration is still widely acknowledged as a male-dominant practice. (vgl. AGYEI & OFOSU-MENSAH 2009, 31)

Another mobility type that has an important role in Ghana is step migration. The large industrial centres in the South are very attractive for people that are keen to improve their living conditions. A lot of Northerners envisage a better life in these urban centres but simply don't have the necessary resources to realize a direct move. As a result, it is very common to initially migrate from the northern Savannah zones to the ecological transitional zone in the middle of the country and built up capital. An important share of people permanently settle in the transitional zone, while others manage to generate enough resources to finance a move further south. (vgl. AGYEI & OFOSU-MENSAH 2009, 32) While migrants from the North tend to

move across regions, southern Ghana is dominated by a high intra-regional mobility. From 1960 to 2000, the most important migrant receiving regions were Greater Accra, Ashanti, Brong Ahafo and Western. (vgl. AGYEI & OFOSU-MENSAH 2009, 30) Migration flows between rural and urban areas are very common but the human mobility in Ghana is not restricted to just one type of trajectory. Rural-rural and urban-urban movements are frequently observed as well. Up until the turn of the 21th century, differences between urban and rural migrants were strongly related to educational levels. (vgl. AGYEI & OFOSU-MENSAH 2009, 37)

Different agro-ecological zones of Ghana

(Source: KEMAUSUOR et al. 2013, 122)



Figure 2: Sudan Savannah (Source: GRONER 2017, 9)

Sudan Savannah

The average rainfall per year is 1000mm and there are 150 to 160 growing days for agricultural purposes. The land is most notably used for the production of food crops and livestock, the dominant crops being millet, groundnut, yam, maize and cowpea.



Figure 3: Guinea Savannah (Source: ARMANI 2021)

Guinea Savannah

Situated south to the Sudan Savannah zone, the Guinea Savannah is one of the largest agro-ecological zones in Ghana. The average rainfall is very similar to the Sudan Savannah (1100mm/year) and there are 180 to 200 total growing days. The main food crops that are grown are maize, groundnut, millet, yam and cowpea. Raising livestock is another important agricultural practice in this zone.



Figure 4: Coastal Savannah (Source: ARMANI 2021)

Coastal Savannah

The Coastal Savannah receives the least amount of rainfall of all Ghanaian zones (800 mm/year) and only has 50 to 110 growing days, depending on the rainy season. The two most important food crops produced in the coastal zone are cassava and maize.



Figure 5: Transitional Zone (Source: OLIVERAS et al. 2016, 3)

Transitional zone

Situated between the northern savannah and the southern forest, the transitional zone is a mix of both. The dominant food and cash crop systems produce similar crops than the northern zones, including maize, yam, cassava and groundnut. The transitional zone receives slightly more rainfall than the North with an annual average of 1300mm and has up to 200 growing days per year.



Figure 6: Semi-deciduous (Source: OWUSU-AFRIYIE et al.)

Semi-deciduous

Cocoa and oil palm plantations are to be found in the semi-deciduous forest zone in southern Ghana. In the 90 to 160 growing days, farmers also produce cassava, plantain and maize. This zone receives the second highest rainfall with 1500mm per year.



Figure 7: Rain forest (Source: THE AFRICA REPORT 2019)

Rain forest

The highest annual precipitation can be found in the Ghanaian rain forests. (2200mm/year) Like in the semi-deciduous zone, the rain forest zone is predominantly used to plant oil palm as well as plantain, cassava and maize. In all Ghanaian forest regions timber is heavily exploited.

People with higher education or educational goals migrated to urban areas for work or further training, while those with no or low education mainly migrated as farmers or labourers to rural regions. In the last two decades, education has become less of a determinant for migration destinations, a large share of urban migrants are unskilled now. (vgl. AGYEI & OFOSU-MENSAH 2009, 37)

North-South migration has been a Ghanaian staple for more than a century, with a small exception during the economic crisis in the 1970s and early 1980s. The crisis affected the southern regions more than the North, leading to a period of increased South-North trajectories. Since the mid 1980s, migratory flows have been once again targeting southern regions and have strongly intensified since. (vgl. VAN DER GEEST 2011, 73) The economic growth, that has particularly been experienced by the southern regions and urban areas, has amplified much of the inequalities visible in the current Ghanaian society. Since independence in 1957, the government has imposed massive taxes on agriculture to finance and subsidize development projects, infrastructure and consumption in urban areas. The intense rural-urban migration flows are fuelled by the unequal development in both regions. (vgl. ARTHUR 1991, 96) For rural regions, population aging and the loss of workforce are the most striking consequences of urban migration. (vgl. ARTHUR 1991, 97) After having absorbed large migrant groups in the decades after independence, urban centres themselves struggled to accommodate arriving migrants. Even though the new urban residents provided cheap labour resources for urban employers and stimulated demand, finding adequate housing for all of them proved difficult. The creation of squatter settlements led to unregulated and overcrowded living conditions with deficient facilities. The urban labour market was also not able to provide jobs for everybody, generating an unemployment increase in cities. (vgl. ARTHUR 1991, 100)

In conclusion, migratory practices in Ghana have a long history and tradition which has been ever-changing due to the influence of internal and external forces. The ecological diversity of the country triggered population movement way before European intervention and created interconnected regions and extensive trade-networks. The introduction of the Atlantic Slave trade led to a period of involuntary migration and mobility where West-Africans were taken to labour-demanding regions, most notably the Americas. In pre-colonial times, disputes over mineral rich and fruitful lands created conflicts between communities, leading to the large-

scale migration of weaker population groups. Migration on the individual level became much more popular after the Gold Coast Colony and Protectorate was declared in 1874 under British rule. The administrative interest in several natural resources, particularly in cocoa and gold, inherently changed migratory flows in Ghana. Resources of colonial value were almost exclusively located in the middle and southern regions of the country, those became the regions with extensive administrative investments. Large mining centres and cocoa plantations were built and the necessary infrastructure was provided by the colonial administration. The northern regions in the ecological Savannah zones didn't provide any colonial resources but held a large share of the colonial population. Labourers were actively recruited by mines and by the colonial government from the early 20th century onwards. The northern workforce became the main commodity for the British administration and was subsequently exploited in the following decades. While many of the mining workers gradually switched to safer and better-earning jobs on cocoa plantations, the north-south trajectory that was established by the recruitment of mining labourers continued to dominate Ghanaian mobility, even after independence. Colonial structures eliminated agricultural markets and networks in rural areas and the export-oriented cash crop system mainly financed development projects in urban centres. Even though Ghana has become a striving economy in West-Africa, extreme inequalities in poverty and development are still crucial problems.

4. Theoretical approaches on migration and development

Having established that there is no universal set of definitions for migration in the early stages of this thesis, the focus now shifts on the theoretical frameworks that try to grasp the relationships between migration and development. Since the middle of the 20th century, the migration-development nexus has been of enhanced interest in a multitude of scientific disciplines. There have been numerous conceptual frameworks and schools of thought, but the ideas can generally be classified into two main categories. The first set of theories believe that migration has a positive effect on the development of countries and places of origin, they are called “optimists” from here on out. The opposing theoretical approach has very contradictory views. The authors that represent this second school of thought believe that migration actually has negative effects on development processes at the places of origin and even further aggravates problems like poverty or inequality. Representatives from this second group are thus called “pessimists”. During the last 70 years, there have been periods where optimistic views have dominated but there have also been some decades where the broad consensus was clearly draped in pessimism. (vgl. DE HAAS 2010, 227) In this chapter I will analyse some of the most important theories on migration and the migration-development nexus and highlight the contrasting views and struggles of researchers, which are all trying to conceptualize the same topic but with very different perspectives and outcomes.

4.1 Early migration studies and neo-classical optimism

The first important publication that attempted to conceptualize and define migration is “The Laws of Migration” by Ernest-George Ravenstein, published originally in 1885. Even though factors like flawed laws, difficult climatic and social circumstances, high taxes and external forces are all very important drivers of migration, the most important aspect, according to Ravenstein, is “[...] the desire inherent in most men to “better” themselves in material respect.” (RAVENSTEIN 1889, 286) Ravenstein proposes a multitude of “laws” which should be applicable in a variety of migration contexts. He evokes that migration rates are very much defined by the distance between the place of origin and the destination. Migration rates are higher when the distance between both places is smaller. Even back in 1885, Ravenstein mentions the concept of step-migration where people first tend to move to local agglomerations and in a next step move to larger urban areas. On the topic of urban and rural differences he

also evokes that out-migration is higher in rural than in urban areas. Another proposed law of Ravenstein is the idea of streams and counterstreams. He argues that for every migratory flow, from one place to another, there is a current that flows back in the opposite direction. (vgl. RAVENSTEIN 1885, 199) A last important proposition that Ravenstein makes is that technological advances will lead to increased migration rates. Improvements in communication and other technologies will simplify the migration process by reducing costs and risks and enhance the knowledge of people that are keen to move. Ravenstein argues that migration happens in contexts where there is a population-surplus in one part of the region or country and an abundance of resources or opportunities in another. People from the surplus-community move to places where labour is scarce and in demand. (vgl. RAVENSTEIN 1889, 286)

Ravenstein recognized the importance of economic factors as drivers of migration decades prior to the first actual migration and development model. Early neo-classical theories on the migration-development nexus started to appear in the middle of the 20th century and were mostly drawn from the field of economics. (vgl. ARANGO 2000, 284) The central aspect of neo-classical theories are wage levels of different regions and countries. Migration generally takes place when differences in wage levels exist between places. In 1954, William Arthur Lewis developed the dual-sector model in his study "Economic Development with Unlimited Supplies of Labour." Lewis establishes models both for a closed and an open economy where he distinguishes between capitalist and subsistence sectors. The model was created for economies in development, mostly referring to newly decolonized nations in the global South. In a closed economy, the capitalist sector concentrates most of the capital but has a general lack of unskilled labour. (vgl. LEWIS 1954, 146) The subsistence sector on the other hand has very little capital but a major surplus in labour. Lewis determines that a wage gap of 30% is usually enough to draw people from the subsistence into the capitalist sector. (vgl. LEWIS 1954, 150) The new workforce contributes to the generation of new capital which is reinvested and even more employment and capital is created in the capitalist sector. (vgl. LEWIS 1954, 152) Due to the seemingly unlimited supply of labour from the subsistence sector, wages can be kept low in the capitalist sector. The massive out-migration from the subsistence sector is its only chance of getting rid of the labour surplus and lays the groundwork for a development process that eventually should lead to the generation of capital and enable higher wages. (vgl. ARANGO 2000, 284) When wages in the subsistence sector begin to rise and the massive

migration to the capital sector slows down, countries might start to look beyond their national borders. Countries encourage immigration of unskilled labour from places that still have a labour surplus or they start exporting their capital to countries where subsistence wages are still low. (vgl. LEWIS 1954, 159) Lewis's model is a crucial building block for the neo-classical theories that emerge in the 1950s and 1960s. John C.H. Fei and Gustav Ranis (1961) further develop this model, as does Michael Todaro (1969). Todaro introduces a second stage to Lewis's model and argues, that mobility between capitalist and the subsistence sector is not only determined by the difference in wage levels but also by the probability of actually finding a better-paying job in the capitalist sector. (vgl. TODARO 1969, 139) When combining both the wage differences and the job probability, Todaro creates the concept of "expected gains". Migrants choose their destination based on those expected gains rather than only on the income differential. In line with the neo-classical thought process, both Lewis's and Todaro's model are strictly economic concepts.

Micro and Macro theories

While analysing important theoretical models from the neo-classical approach on migration and development, some particularities have stood out. The level of analysis in the neo-classical approach isn't set in stone, models rather switches between the macro and the micro level. Macro theories focus on the labour surplus and wage differential of entire regions or countries and frame migration as movement of labour and capital on a grand stage. Lewis's model is a particularly relevant example for a macro theoretical approach. Workers from labour-rich regions or countries move to labour-scarce areas and investment capital flows in the opposite direction.(vgl. MASSEY et al. 1993, 433) The neo-classical macro theories conclude, that migration is principally linked to the labour market and that mobility will stop, once an equality in wages is attained. Since labour markets are crucial in determining migration flows, governments can influence migration by making changes in these markets, either at the place of origin or at the destination. (vgl. MASSEY et al. 1993, 434)

When Todaro elaborates Lewis's model, a decade after it was first proposed, he is much more focused on the individual decision making process. Along with other micro theoretical approaches Todaro considers migration to be a result of individual choices made by rational actors that are seeking to improve their own wellbeing. (vgl. ARANGO 2000, 285) Large

migration flows are simply a conglomerate of individual actors that are all driven by higher expected wages in different markets. Larry A. Sjaastad generally accepts the importance of wage differentials as a main motivation for migration however, he also mentions other factors that can act as additional determinants of migration. Locational preferences as well as age and sex of migrants also play a role in the migration decision which isn't solely determined by labour market differences. Sjaastad further introduces the concept of "human capital" where migration, along with other factors like training or education, is seen as an investment in a specific person. If the market changes and specific wages are reduced, labourers that are employed in the affected sectors can either accept these lower wages or invest in themselves, through training or migration for example, and thus gain access to better-paying occupations or different markets. Investments like migration come with significant costs which have to be included when assessing the return that a migrant might expect in another market. (vgl. SJAASTAD 1962, 86) Sjaastad remains true to many of the micro-theoretical neo-classical approaches but concludes that migration can't be seen as an isolated phenomenon and that costs and returns are heavily influenced by different structures, policies and demographic characteristics. (vgl. SJAASTAD 1962, 93)

Impact on development

"Large-scale emigration can contribute to the best of both worlds: rapid growth in the country of immigration and rapid growth in the country of origin."

(KINDLEBERGER 1965, 253)

The impact that migration has on development in sending regions is quite straight forward in neo-classical theories. In line with developmentalist thinking, societies in the global south should rapidly follow the same processes of industrialization and modernization as seen in the global North. A blueprint of economic growth was established based on the development process of western societies. (vgl. DE HAAS 2010, 231) Large flows of out-migration were seen as necessary for developing societies to get rid of the immense labour surplus and subsequently increase productivity and raise wages. Like most of the neo-classical authors, Kindleberger is very optimistic and believes that the massive out-migration is beneficial for both the sending and the receiving society. Not only would capital flow from capital rich to capital

poor regions, but migrants would return to their places of origin with intensive knowledge and resources to trigger development back home. Return migration is one of the most crucial aspects of the migration-development nexus in the neo-classical context. The idea is that the returned migrants act as pioneers of development in their communities and possess enough entrepreneurial capacities and information to trigger real change. Since neo-classical theories are very much centred around the rational individual that seeks to maximize its own well-being, remittances flowing back to the places of origin don't have a central role in their models. (vgl. DE HAAS 2010, 231) Even without the consideration of remittances as a major development mechanism, many countries in the global South adopted emigration as a central development strategy. (DE HAAS 2010, 232)

4.2 Structural pessimism

While neo-classical models were dominant during the 1950s and 1960s, the two following decades were characterized by a hard ideological turn. Since migration theories tend to evolve in line with larger ideological trends in social and development theory, changes in those major scientific fields are also reflected in migration studies. The optimistic views held towards the migration-development nexus decreased and a much more pessimistic attitude took over once neo-classical models became less relevant. (vgl. DE HAAS 2010, 233) The pessimistic migration-development approaches in the 1970s and 1980s are more difficult to summarize and conceptualize than the neo-classical optimism in the years and decades prior. (vgl. WOOD 1982, 301) Most of the historical-structuralist approaches from this era are based on Marxist ideologies and evoke notions such as social classes and the exploitation of marginalized groups at the benefit of a select few. For structuralists, migration is not conceptualized on the individual level but it is rather a phenomenon that takes place on the macro scale. (vgl. WOOD 1982, 302) While neo-classical authors conceptualize the migration-development nexus as a model of balanced growth, where migration has a positive outcome for both the sending and the receiving region, the historical structuralists argue that migration produces asymmetrical growth. (vgl. LEWIS 1986, 30) This shift from optimism to pessimism was largely driven by results of empirical studies that simply wouldn't support the positive impacts of migration on the development of sending communities. (vgl. DE HAAS 2010, 233) The main argument of the structuralist approach is that there is an unequal distribution of power

among countries of the global North and global South, this gap is inherent in a capitalist world system and is widened by the spatial extension of the capitalist market. (vgl. DE HAAS 2008, 7) Two of the most important theories of the structuralist approach are the Dependency Theory, which was popularized by André Gunder Frank amongst others, as well as the World System Theory introduced by Immanuel Wallerstein.

Dependency and World System Theory

In 1966, Frank publishes “The Development of Underdevelopment” where he lays out a critical response to the previously dominant neo-classical approach. Frank argues, that previous concepts have all focused on the development process in societies from the global North. Neo-classical researchers believe that societies in the global South are taking the same exact development path as seen in industrialised countries. The only difference is that these societies are still in the early stages of “our” development while western societies are already further along the same process. (vgl. FRANK 1966, 17) While neo-classical theories might argue that low levels of development are natural in the earlier stages of the process, Frank believes that they are not. The structuralist argument is that slow development rates in societies from the global South are attributed to discriminatory structures built up between metropolitan and satellite countries. (vgl. FRANK 1966, 17-18) Frank also criticizes the dual-sector model and denounces it as being inherently flawed. While Lewis and other neo-classical researchers argue that economies in the global South are characterized by a capitalist and a subsistence sector, where the capitalist sector generates profit exclusively due to its ties to the global market, Frank argues that global capitalist markets have already invaded almost every corner of the globe without generating any real benefits for the local communities. (vgl. FRANK 1966, 19) Frank subsequently proposes several hypotheses himself, saying that the development potential in satellite countries or regions is very limited due to its subordinate status to the metropole. (vgl. FRANK 1966, 23) He also evokes, that satellites have the strongest economic progress when the connection to the metropole is weak. (vgl. FRANK 1966, 24) The last major argument is that regions who have experienced the least development are usually the ones that, historically, had the closest bond to their metropolises. (vgl. FRANK 1966, 27)

Immanuel Wallerstein cites André Gunder Frank as one of his major inspiration for his own theoretical approach. The world system theory by Wallerstein is based on the idea that the

world economy is divided into three different structural groups, countries either belong to the core, the periphery or the semi-periphery. Core countries and regions accumulate the large majority of surplus generated in the world economy, while the periphery and semi-periphery only marginally profit. (vgl. WALLERSTEIN 1974, 401) Wallerstein explains why a division into three structural groups is essential for the functioning of the capitalist world market. The upper group is characterized as a minority that suppresses the majority through military power and ideological beliefs. The most important way of securing their position as the dominant group is by dividing the large majority into periphery and semi-periphery. While the periphery is exploited of its resources, the semi-periphery is given a specific role in the world economy and is granted access to some of the surplus generated in the capitalist system. The semi-periphery is given a dual role of being the exploiter as well as the exploited. (vgl. WALLERSTEIN 1974, 404) The semi-periphery exploits the periphery and accumulates some profits but isn't granted political rights by the core, guaranteeing a high degree of dependency. By giving some power to the semi-periphery, the core makes sure that there is some level of satisfaction which holds people back from overthrowing the oppressing minority. The world economy would be able to operate similarly with just the core and the periphery, the semi-periphery however creates a political stability that cannot be guaranteed in a bipolar system. (vgl. WALLERSTEIN 1974, 405)

The vicious cycle of migration

Both Frank and Wallerstein establish concepts that underline the asymmetric growth between a minority that concentrates wealth and power and a majority that is being exploited of its resources and excluded from development. Neither of the concepts however, are structured around migration. Historical-structuralist argue that people are not free to move based on their own rational decisions, as proposed by neo-classical theories, but that they are rather forced to migrate because their traditional systems have been penetrated by global capitalism. (vgl. DE HAAS 2008, 7) People flee from the dire conditions that the expanding capitalist system has created for them and move to places where labour is required. (vgl. DE HAAS 2010, 233) Migration has not delivered the expected benefits in sending regions. Peripheral regions were not expecting that the emigration of people that were considered "surplus-labour" in a neo-classical world, would lead to the depletion of their most skilled, healthy and productive groups of society. Migration was not successful in transforming the structural weaknesses in

sending countries. (vgl. PAPADEMETRIOU 1985, 212) Not only has migration not been able to initiate structural change, historical-structuralists believe that it has contributed to a further growth of inequalities in sending regions and has slowed down the development process even more. (vgl. DE HAAS 2010, 233) De Haas establishes a conceptual framework for what has been called the “Migrant Syndrome” by historical-structuralists. The main idea of this framework is that migration leads to higher dependency rates and slows down development which then further triggers migration. The “Migrant Syndrome” is a vicious cycle for migrant sending regions where the most capable workforce, skilled and unskilled, migrates which leads to a reduction of productivity at the place of origin. In this conceptual approach, migration also tends to increase inequalities in sending regions. This assumption is related to the observation that usually migrants already come from better-off situations while the poorest are generally not very mobile. Individuals and households that are able to send migrants away may well reek the benefits through remittances or return-migration, the situation of the immobile poor will potentially even worsen. (vgl. DE HAAS 2010, 236) Increasing inequality and poverty will then force a new group of people to move.

This development is in line with Myrdal’s theory of cumulative causation, which focuses on circular and aggregating effects in the world economy. (vgl. FUJITA 2007, 276) In the aim of accumulating capital, the capitalist market penetrates and exploits the periphery which widens the welfare gap between core and peripheral areas. Inequalities are seen as main drivers of migration which push people to move out of peripheral regions and countries and into core areas. (vgl. MASSEY 1990, 17) Once these inequalities have been established, both the core and the peripheral areas find themselves in self-reinforcing cycles. The core areas are part of a virtuous cycle that reinforces welfare while the periphery is stuck in a vicious cycle that prevents development. (vgl. FUJITA 2007, 276) Migration does create so called positive spread effects for peripheral regions, remittances would potentially be considered here, but the negative backwash effects are always larger and thus cancel out any chance of significant development. (vgl. DE HAAS 2010, 239)

To sum this up, historical-structuralist believe that migration is based on economic inequalities between core and peripheral regions. The most capable workforce is drawn out of the periphery into the core which further increases the welfare in core areas and prevents

development in the periphery. This process increases the dependency on core regions which leads to even more out-migration. This approach is applicable on the international level, where people move from countries in the global South to countries in the global North, but also on the national level where people move internally, from peripheral rural regions to core urban areas. (vgl. DE HAAS 2010, 234)

4.3 Pluralist approaches and renewed optimism

After dominating the 1970s and 1980s, the structuralist approach started to lose momentum and was superseded by pluralist theories and models. Migration theories underwent important changes during a time where international migration became much more heterogeneous. At the end of the 20th century, Asia, South America and Africa were now the most important sending regions and international migration became much more challenging due to highly restrictive immigration policies. (vgl. ARANGO 2000, 287) Coinciding with changes in migration came significant shifts in social and development theory. Where neo-classical and structuralist authors try to explain the entirety of the migration-development nexus, the pluralist approach combines different concepts in order to explain the complexity of the topic. Both the individual and the structural level are recognized in the pluralist approach and linking agency and structure allows researchers to evaluate the migration-development nexus in a much broader context. (vgl. DE HAAS 2010, 241) The pluralist approach is not so keen on inventing completely new and unique migration concepts, pluralists rather built on some of the theories established in previous decades, all while acknowledging the heterogeneous nature of migration and development. Some of the most important pluralist concepts are presented in the following part of this chapter.

New economics of labour migration and livelihood approach

The economist Oded Stark has spearheaded a theoretical approach that was born out of micro neo-classical ideas, called the new economics of labour migration. Like the neo-classical frameworks, Stark and his fellow representatives believe that people are rational beings, trying to secure and maximise their wellbeing. While neo-classists figure that the migration decision is based on rational choices at the individual level, the new economics of labour migration argue that migration is rather motivated by choices and decisions of rational households and families. (vgl. ARANGO 2000, 288) In contrast to the historical structuralist paradigm,

NELM views migration as a part of a rational household strategy and not as a flight from dire living conditions. (vgl. STARK & BLOOM 1985, 175) The decision to participate in migration is motivated by two different factors. Households try to maximise welfare through migration while also hoping to increase resilience and diversify income, thus leading to a risk reduction. (vgl. MASSEY et al. 1993, 436) Within a household or family, migration is constructed like an unwritten contract between the migrant and the members that stay at the place of origin. While the household, as an entity, usually finances the migration process of one or more individuals, the migrants are expected to share some of the gains they receive while being away. (vgl. STARK & BLOOM 1985, 174) In the new economics of labour migration, remittances play an essential role when discussing the migration-development nexus. Where neo-classists are focused on return migrants as the main catalysts of development in sending regions, NELM puts the emphasis on remittances. (vgl. DE HAAS 2010, 243) Diversifying resources and income is especially important for households in the global South, where markets and governmental programs are prone to failure and insurance might not be available at all. (vgl. ARANGO 2000, 436)

Even though the new economics of labour migration are in line with neo-classical economists when it comes to the rationality of migration decisions, many of its findings differ from earlier studies. NELM representatives argue that wage differentials are not the main motivation behind migration and don't believe that migration will cease, once equal wages in sending and receiving areas are attained. (vgl. ARANGO 2000, 440) Similar to Myrdal's theory of cumulative causation, NELM also implies that development and economic progress in sending regions can actually trigger further migration. People at the place of origin are able to acquire new social capital by staying in contact with migrants that have previously left and might be enticed to move themselves. Furthermore, migration incentives are also linked to the degree of relative deprivation that is felt by households in their respective communities. Households with higher relative deprivation are usually more inclined to participate in migration, relative deprivation is also higher in communities where inequalities are elevated. (vgl. STARK & BLOOM 1985, 174)

Concepts from the new economics of labour migration have strong similarities to the livelihood approach which emerged during the same period. The renewed interest in agency came

at the end of the 20th century and followed two decades of rigid structuralism. Like NELM, the livelihood approach focuses on strategies applied by groups that try to manoeuvre through vulnerable and impoverished situations where they are exposed to a variety of risks. (vgl. SAKDAPOLRAK 2014, 19) The livelihood approach clearly focuses on agency and less on structure but acknowledges the multiple dimensions that people's daily lives have. Similar to NELM, the livelihood approach refutes the idea that poor people and households are passive victims of global capitalist expansion but recognizes, that resources and power are clearly unequally distributed. Livelihoods are seen as very complex systems that incorporate resources, social capital, capabilities and activities that are necessary in daily lives. (vgl. DE HAAN & ZOOMER 2003, 352) Poorer populations have to be very strategic when utilizing their assets, the diversification of income is seen as a crucial way of reducing risks and possibly finding a way out of poverty. (vgl. DE HAAN & ZOOMER 2003, 356) The aim of the household strategy is to secure or improve the own livelihood by making the best possible choices with the available resources, assets and structures. (vgl. DE HAAS 2010, 244) Migration being an essential part of income diversification shows the relevancy of the household as the central unit of analysis. The strong ties between migrants and the non-mobile members at the place of origin are primarily reflected through remittances, which usually act as a safety net for the entire household. (vgl. DE HAAN & ZOOMER 2003, 358) For poorer populations, diversifying income is not so much about increasing the overall wealth of a household, but is rather meant for securing the current living standard. (vgl. DE HAAN & ZOOMER 2003, 356)

4.4 Impact of remittances on development

While remittances only play a supporting role in neo classical migration theory and were marginally analysed in the early stages of the migration-development research, the 1970s and 1980s were characterized by a strong focus on remittances and their impact on sending communities. (vgl. RAPAPORT & DOCQUIER 2005, 4) The first empirical studies that analysed the effect that remittances might have on local development were very interested in the expenditures of receiving households and individuals. Migration studies in the 1970s believed that, in order to actually have a positive impact on development in receiving areas, remittances need to be invested productively. The development pessimism was largely based on the assumption that remittances were used to finance household consumption or housing and that

recipient households wouldn't invest in new businesses or other productive structures in the community. (vgl. RAPAPORT & DOCQUIER 2005, 54) In his 1980 study, Michael Lipton analyses the impact of migration and remittances on the productivity and income distribution in developing countries. He concludes, that 90% of a village's remittances is spend on consumption and that those who receive the largest part of the remittances are generally the better-off households. Remittances are used to maintain or increase social status and are often spend on imported goods, disrupting positive feedback for the local economy. (vgl. LIPTON 1980, 12) Remittances create a more exclusive and expensive taste among recipient households which leads to a reduction in consumption of local products. Investment only ranks 4th among expenditures of remittances receiving households and the productivity of these investments is rather low. Households often feel the need to replace the members that left with other workers to maintain their own productivity levels, the benefit for the local economy is very slim. (vgl. LIPTON 1980, 12) The higher living standards of recipient households increase dependency levels, which is in line with pessimist concepts formulated by Myrdal, Frank or Wallerstein. The general consensus during the pessimist era was that the lack of productive investment in receiving communities prevented remittances to have a substantial positive impact on local development. (vgl. DE HAAN 2006, 9)

The shift in social and developmental studies, from very rigid conceptual frameworks to a more pluralist approach, also brought a change of scenery in the remittances research. While the impact of remittances was previously seen as a question of productivity, the focus switched to other aspects such as income inequality and poverty. (vgl. RAPAPORT & DOCQUIER 2005, 54) The resurgence of more optimistic views on migration and development at the end of the 20th century is also visible in remittances research. However, impacts of migration and remittances are mostly determined by specific contextual factors. Similar to other strands of migration research there hasn't been a universal theory on remittances, and optimistic as well as pessimistic views are still very present today. The impact of remittances on poverty is much clearer than the effects on inequality. Most empirical studies conclude, that remittances are important tools for poverty reduction in migrant sending regions. (vgl. AZIZI 2021, 971) While analysing data from 103 countries between 1990 and 2014, Azizi et al. found that an increase in remittances led to a significant decline in poverty headcount ratio, poverty gap and poverty severity. (vgl. AZIZI 2021, 971) International remittances in particular

have a very strong impact on poverty in receiving communities, the problem is that remittances are often skewed towards better-off households. (vgl. DE HAAS 2010, 249) International migration is associated with considerable costs which act as entry barriers for poor households and individuals. High income opportunities in foreign countries can only be pursued by people that have abilities to overcome this initial barrier. (vgl. RAPAPORT & DOCQUIER 2005, 63) Remittances that have been sent through official channels have increased from 68 billion \$ in 1990 to 553 billion \$ in 2015 and the mean amount remitted has more than tripled during this period. (vgl. AZIZI 2021, 969) International remittances have become an integral part of a developing countries' GDP and in many instances outweigh financial aids. (vgl. HOUSEN et al. 2013, 610)

While remittances have proven to be effective for different aspects of poverty reduction, explaining their impact on inequality has not been so straightforward. Initial migration is usually performed by a few pioneers with substantial resources, which allow them overcome initial constraints such as high transportation costs and little social capital. In a first step, inequalities in migrant sending regions tend to increase because the recipient households are fairly wealthy and poorer households don't receive any remittances. Optimistic theories suggest that the pioneer migrants establish networks and gather information and resources which are passed down to the communities at the place of origin, facilitating migration and reducing the costs of moving. These developments open up migration and make it accessible to a much larger part of the community. Remittances might increase inequality in the short-term, which could be necessary to insure a sustainable reduction in the long run. (vgl. DE HAAS 2010, 249) In developing countries, the intent to participate in migration is usually stronger in poor households, but wealthy families face much less constraints to actually move. (vgl. RAPAPORT & DOCQUIER 2005, 63) As seen with the livelihood approach on migration and development, households use remittances to diversify their risks and create a safety net for potential shocks. Even when remittances are not directly used for "productive" investments, they still might indirectly increase the economic stability of poor households and allow them to pursue investment opportunities. (vgl. RAPAPORT & DOCQUIER 2005, 54) The impact that remittances have on the wellbeing of receiving communities is highly contextual. The amount and the type of remittances are crucial determinants for development in migrant sending regions, as is the distribution of remittances among all social groups. Even non-migrant households might

benefit from remittances if the recipients reinforce local structures and markets. (vgl. RAPAPORT & DOCQUIER 2005, 52) Countries from the global North should decrease high transaction costs for international remittances, thus reducing constraints for monetary transfers to the places of origin. (vgl. AZIZI 2021, 987) Policies in the receiving countries should encourage local investment by creating a stable and safe economic environment. (vgl. RAPAPORT & DOCQUIER 2005, 76) As with all theoretical approaches on migration, generalizations are very difficult to establish.

Even though internal migration and remittances clearly outweigh international mobility and monetary transfers, they have not nearly received the same attention. Data on internal migration and remittances has often proven to be unreliable or non-existent. The ability to migrate internationally is very limited, especially in developing countries and regions with low income-levels. People often don't have the required qualification, skill or capital to realize a move abroad. Migration is still pursued by poor households but they tend to participate in internal migration rather than crossing national borders. Risks and costs are substantially lower when moving internally, as are remittances, but those financial transfers still play a crucial role for many households. Even though the monetary value of internal remittances is usually much smaller than international transfers, they can still change the trajectory of households and communities and can lead to a reduction in poverty and trigger local development. (vgl. HOUSEN et al. 2013, 610) Housen et al. analyse 18 different studies on internal remittances from 11 different developing countries. The authors find that internal remittances affect more households in the lower-income groups and that these monetary transfers can represent a large part of the household income. Households that sent members away struggle with the reduction of productivity that is triggered by the loss of labour force. This detrimental effect is countered by remittances that migrant members send back, Housen et al. determine that internal remittances were generally able to make up for lost labour. (vgl. HOUSEN et al. 2013, 614) While internal remittances were able to reduce the severity of poverty in a majority of case studies, the impact on income inequality has been equally as heterogeneous than for international remittances. (vgl. HOUSEN et al. 2013, 624)

Empirical research in Ghana

A majority of research on the impact of migration on development has analysed Latin America and Asia, Sub-Saharan African countries and regions haven't received the same attention. (vgl. ADAMS & CUECUECHA 2013, 24) Richard H. Adams Jr. is has done tremendous work while analysing the impact of remittances in different regions and scenarios. Adams is particularly important for the Ghanaian context, publishing multiple studies on the effects of remittances on left-behind communities in the early 21st century. In a 2013 study titled "The Impact of Remittances on Investment and Poverty in Ghana" Adams and Cuecuecha analyse the effects of remittances using data from the Ghana Living Standards Survey 5. The main research questions are how internal and international remittances are spent by receiving households and what impact these transfers have on poverty in sending regions. (vgl. ADAMS & CUECUECHA 2013, 24) They find that households with internal or international remittances spend significantly less on food, compared to what they would have spent without receiving remittances. Households with remittances tend to invest the additional financial resources on three specific aspects: housing, health and education. Compared to the expenditure without remittances, households with remittances spend up to 5,7% more on housing. The section on remittances and poverty in receiving communities has provided some of the most crucial findings of this paper. Internal remittances reduce the likelihood of a household being poor by 17% and international remittances by 97%. The huge impact of international remittances on poverty reduction is probably linked to the amount that is being remitted. International remittances are 3,5 times larger than internal remittances and are thus much more effective in reducing poverty. Adams and Cuecuecha conclude that households don't simply adjust their consumption and increase their expenditure on food when receiving remittances, but rather use them to purchase investment goods and services. They argue that these investments have positive long-term effects on local development and that remittances should be considered as essential parts of the economy when developing respective policies. (vgl. ADAMS & CUECUECHA 2013, 38)

Ackah and Medvedev published a working paper in 2010, discussing characteristics of internal migration in Ghana and the impact that it has on migrant sending regions. Using the same GLSS 5 data than Adams and Cuecuecha, they find that 80% of Ghanaian migration is internal and that 70% of all migrants move to urban centres. Southern areas, predominantly the

Greater Accra and the Ashanti region, are the intended destinations for an overwhelming majority of Ghanaians. (vgl. ACKAH & MEDVEDEV 2010, 4) They are surprised to find that only 36% of migrants send remittances to their households at the place origin, having expected a higher rate of remitting migrants going into their research. Ackah and Medvedev analyse the remitting behaviour of long-term migrants and establish the hypothesis that those people had more time to generate capital and should thus be able to send remittances back to their households at the place of origin. However, they don't find any significant differences in remitting practices. The authors find a positive correlation between initial household welfare and the amount of remittances received. Concluding, that wealthy households are more likely to have higher remitting migrants than poor households. (vgl. ACKAH & MEDVEDEV 2010, 6) The impact of migration on local development in receiving communities is influenced by three different aspects of remittances. The likelihood of receiving remittances when sending household members away is key, as is the amount and the frequency of these transfers. Remittances are the most palpable link between migration and development and play a crucial role in the Ghanaian context. (vgl. ACKAH & MEDVEDEV 2010, 10) An important constataion is that a positive effect of migration on household welfare is only observed when urban remittances are received. Rural migration on the other hand doesn't seem to have a significant impact on welfare in sending regions. Ackah and Medvedev conclude, that households with a least one urban migrant have significantly higher per capita welfare than non-migrant households. (vgl. ACKAH & MEDVEDEV 2010, 12)

Awumbila et al. 2016, Teye et al. 2019a, Teye et al. 2019b and Egger and Litchfield 2019 all analyse the same Migrating out of Poverty data that is studied in this thesis. All the studies struggle to identify significant impacts of migration and remittances on welfare and wellbeing of left-behind households. Teye et al. find that internal mobility is high for rural Ghanaian households and that poverty is a very important driver of migration. Households with lower wellbeing levels tend to be more likely to have a migrant than households with higher wellbeing. (vgl. TEYE et al. 2019a, 4) When comparing consumption levels of migrant and non-migrant households over the 3-year observation period, there are no significant differences. Neither a positive or negative effect of migration on household consumption is observed. (vgl. TEYE et al. 2019a, 24) Using the difference-in-differences method Teye et al. find that internal migration seems to have an immediate impact on inequality, narrowing the consumption

level gap between disadvantaged and advantaged households. Low income households tend to profit the most from participating in migration. (vgl. TEYE et al. 2019a, 26-27) The study concludes that a positive effect of migration on left-behind households is possible but the very short observation period isn't sufficient for evaluating the entirety of the impact. (vgl. TEYE et al. 2019a, 25) In a similar working paper from 2019, Teye et al. analyse migration and remittances patterns in rural Ghana. In this study, they evaluate the MOOP variables on subjective wellbeing and conclude that households with international migrants perceive the most significant improvements from 2015 to 2018. On the other end, non-migrant households register the smallest perceived improvements over the 3-year period. (vgl. TEYE et al. 2019b, 43) Awumbila et al. 2016 try to identify gains and losses from internal migration and observe changes in migrant-sending households. Awumbila et al. run OLS regression models for migration and consumption levels but get very ambiguous results. When controlling for selection it appears that non-migrant households are better off than migrant-households, the contrary is true if they don't control for selection. (vgl. AWUMBILA et al. 2019, 20) They also figure that migration wasn't able to help disadvantaged households escape from poverty during the 2-year observation period. (vgl. AWUMBILA et al. 2019, 23) The type of migration seems to be very influential when determining the impact of remittances. When migrants move outside of their initial districts, left-behind households experience much larger gains than if members migrate to other places within the districts. (vgl. AWUMBILA et al. 2019, 24) Egger and Litchfield don't go down the road of using consumption levels as an indicator for household wellbeing but rather build an indicator for housing quality. They justify this approach with a strong link between remittances and housing investments in migrant-sending regions. (vgl. EGGER & LITCHFIELD 2019, 2) Egger and Litchfield argue that the impact of migration depends on counteracting factors, which materialize at different stages. The detrimental effects of migration, mainly referring to the costs of moving and the loss of local workforce, materialize immediately while the positive effects usually don't occur instantly. When household members move, they go through an initial period of migrating, looking for employment, settling in at the new place of dwelling and establishing new contacts. Migrants might only be able to send remittances to their households back home, once they have adapted to their new surroundings and generated substantial capital themselves. This delay of positive effects of migration might be the reason why the Migrating out of Poverty studies struggle to find any significant impacts during the 2- or 3-year survey period. (vgl. EGGER & LITCHFIELD 2019, 4-5) In the

specific case of Egger and Litchfield, the stable character of housing quality over a very short observation period might be another reason why they don't find any significant impact of migration and remittances on household wellbeing. (vgl. EGGER & LITCHFIELD 2019, 19)

In conclusion, empirical evidence from Ghana on migration and development has been equally as ambiguous as previously seen in other spatial contexts. The lack of extensive panel data in Sub-Sahara Africa is one of the main reasons for the absence of information and knowledge regarding the migration-development nexus. Ghanaian studies underline some of the major hypotheses in migration and development research. International remittances seem to have a more substantial effect on development in migrant-sending communities than internal remittances. International remittances are usually much larger than internal transfers, the amount of remittances received is thus crucial for determining impacts on left-behind households. Initial household welfare is important when discussing the amount of remittances received, with better off-households receiving substantially more than disadvantaged households. This finding has to be taken into account when assessing the inequality-reducing potential of remittances. Sending migrants to other districts and most importantly to urban centres seems to generate more positive effects for left-behind households than inter-district and rural migration. The Migrating out of Poverty datasets have allowed researchers to analyse dynamics and impacts beyond the cross-sectional limits. While finding some indications for positive effects of migration and remittances on poverty and inequality reduction, the studies mostly fail to identify coherent characteristics and trends. Different speeds of counteracting factors are one of the reasons why these studies seem to struggle, combined with the very short observation period of 2 or 3 years. Most studies conclude that an elongated observation period would be very much needed in order to assess the migration and development nexus in Ghana. The empirical evidence from Ghana shows how difficult it is to isolate the effects of migration and remittances on receiving households and communities and is in line with the historical and theoretical struggles in migration research.

In this chapter, I have given an overview of different theoretical approaches and frameworks that have emerged in the migration-development context. Changes in migration concepts have mainly coincided with larger transformations in social and development theories. At the end of the 19th century, Ravenstein established the laws of migration and created a playing

field for modern migration research, which started to pick up the pace in the middle of the following century. The dominance of neo-classical thinking in the 1950s and 1960s created the hypothesis that migration is dominated by economic factors on the micro and macro level. On the micro level, individuals are characterized as rational actors that migrate once expected gains are higher in other markets. On the macro level, population movement is explained by a labour-surplus in developing regions and a high demand of workers in regions that concentrate the majority of the capital. Optimists like Kindleberger expect migration to positively benefit migrant-sending and receiving regions. By participating in migration, countries in the global South are able to get rid of their labour surplus, increase productivity and wage levels and trigger local development by following the blueprint of western Societies. Migration theories in the 1970s and 1980s acknowledge the split from neo-classical thought processes and the rise in popularity of neo-Marxist and structuralist views. The structuralist break with the previously positive attitude held by neo-classists and blame the expansion of the global capitalist system for the major differences in development. Countries in the global North have created a system of dependency and exploit societies in the global South by trapping them in vicious structural cycles. People are forced to flee the dire conditions they encounter in their own communities, this movement reinforces internal and international inequalities by draining the disadvantaged regions of their most capable workers. After the very one-sided and rigid views of neo-classical and structuralist thinkers both failed to establish universal concepts for migration and development, a more pluralist approach took over at the end of the century. The harmonization of agency and structure and the departure from the idea of explaining the migration-development nexus with a single concept created new possibilities for inter-disciplinary approaches. Theories like the new economics of labour migration and the livelihood approach are centred around the household as the main unit of migration analysis. Sending household members away isn't solely conceptualized as a way of increasing household welfare, it is also seen as a risk reduction process and a tool to increase household resilience in unforgiving markets. While acknowledging findings from both neo-classical and structuralist authors, pluralist research isn't so keen to frame migration as either "good" or "bad" for the development of left-behind communities. Short-term negative effects as well as long-term positive effects have been empirically observed. The heterogenous nature of migration is visible throughout this entire chapter and the need to evaluate a multitude of contextual factors when assessing its impacts cannot be understated.

5. Household wellbeing and the role of housing quality

5.1 Conceptualizing Wellbeing

In order to analyse impacts of migration and remittances on left-behind households, it is essential to create a measurement tool that can reliably recognize patterns and trends. In this thesis, I study characteristics and changes in household wellbeing and assess how migration and remittances influence this particular aspect. Wellbeing is a multifaceted and complex concept, the first essential step is to define the subject at hand and figure out how to measure it.

There is no universally agreed upon definition for wellbeing in current research and terms such as quality of life, life satisfaction, happiness and wellbeing are often used as interchangeable synonyms. (vgl. OECD 2013, 27) Several studies such as Osberg (1985), Bough (1994) and Cattaneo et al. (2016) also use welfare and wellbeing as synonymous concepts. In its most rudimentary form, wellbeing is defined as “The state of being comfortable, healthy or happy.” (REZA et al. 2019) The OECD distinguishes between three different types of wellbeing definitions. The most basic definitions evoke wellbeing as a whole and don’t analyse different components, while a second definition type breaks up wellbeing into its key elements. The third type focusses on one, or several of those key elements. (vgl. OECD 2013, 27)

“Wellbeing is regarded as an overarching concept arising from a combination of what people have, what they can do and what they think and feel about what they have and can do.”

(NEWTON 2007, 4)

With this definition of wellbeing, Newton refers to J.Allister McGregor who further elaborates the individual components. For McGregor, wellbeing is a combination between the resources that a person commands, the needs and goals that are satisfied with said resources and the meaning that people ascribe to the goals they are able to reach. It is important to mention that these three key elements are all embedded in a societal context. (vgl. MCGREGOR 2009, 317)

Research on the quality of life was established in the 1960s and has since been prevalent in many countries and regions of the global North. Wellbeing as a specific research interest, was largely ignored until the late 20th century. (vgl. GASPER 2009, 47) Quality of life is a concept that is used to evaluate the wellbeing of societies as well as individuals and is seen as the overarching aim of sustainable development. (vgl. STREIMIKIENE 2015, 140) One crucial problem that has held back wellbeing research, has been the struggle in defining universal concepts and measurements. The ability to use an applicable framework in different cultural scenarios and generate comparable results is the central aim. After the second world war, several concepts were used to assess wellbeing of populations and individuals including the level of living, human development, basic needs and social indicators. The concepts mentioned here were especially important to analyse and compare levels of wellbeing in the global South (vgl. GOUGH 1994, 27) The quality of life research is focused on measuring the overall assessment of human experiences and rests on two pillars of wellbeing. On the one hand, quality of life is influenced by universal human needs and how well those are met, this is summarized under the term of objective wellbeing. (vgl. COSTANZA et al. 2007, 268) The second pillar of living quality acts as the counterpart of objective wellbeing and analyses how individuals perceive their own lives. This second pillar, which is summarized under the term subjective wellbeing, relies on people's self-reports on happiness, pleasure or fulfilment. (vgl. COSTANZA et al. 2007, 268)

Objective wellbeing

To analyse the objective wellbeing of households and its members, I refer to the conceptual framework established by Len Doyal and Ian Gough in "A theory of human need" from 1991. Doyal and Gough argue that the universal and objective goal of every person is to avoid serious harm. If serious harm is avoided, a person is able to participate in their specific chosen form of life. (DOYAL & GOUGH 1991, 170) The authors establish two universal basic needs for individuals that are true, no matter the cultural or geopolitical environment. Those basic needs are physical health on the one hand, as well as autonomy on the other. How those basic human needs are satisfied is usually very specific to the respective environment people find themselves in, a need can subsequently be met by an almost infinite amount of so called specific satisfiers. (vgl. GOUGH 1994, 28) Doyal and Gough argue however, that there are several universal satisfier characteristics that positively contribute to physical health and

autonomy. Those universal satisfier characteristics are called “Intermediate needs” and the authors distinguish 11 different categories. (vgl. DOUGH 1994, 28) 9 of the 11 intermediate needs are relevant for every person while two further needs are solely applicable to specific population groups. The 9 universally applicable intermediate needs are adequate nutritional food and water, adequate protective housing, a non-hazardous work environment, a non-hazardous physical environment, appropriate health care, significant primary relationships, physical security, economic security and basic education. Further intermediate needs are safe birth control and child-bearing, which are solely applicable for female individuals, and security in childhood, which only concerns children. (vgl. DOYAL & GOUGH 1991, 170) The theory of human need by Doyal and Gough allows researchers to compare objective wellbeing across different cultures and societies. (vgl. GOUGH 1994, 29)

Subjective wellbeing

Whereas objective wellbeing analyses universal indicators, the subjective approach focusses on people’s self-reported perception of wellbeing. With the increasing popularity of participatory research in the 1990s, including people’s own perception of their wellbeing levels became a very important aspect of wellbeing research. (vgl. GASPER 2009, 48) While Doyal and Gough establish 11 different categories of objective needs, Steptoe et al. (2015) propose three different categories for subjective wellbeing. The first category is the evaluative wellbeing and analyses people’s overall life satisfaction and their perceived living quality. The second category mentioned by Steptoe et al. is the hedonic wellbeing, which refers to feelings such as happiness or anger that people perceive in their day-to-day life. Especially hedonic wellbeing has been a changing and very talked about concept since the early 2000s. The third and last category is called eudemonic wellbeing and analyses, on a much broader basis, how people define and feel about their purpose in life. (vgl. STEPTOE et al. 2015, 641) The conceptual division between objective and subjective aspects of wellbeing might come in very handy when developing a framework, it is however important to mention that aspects from both categories often overlap. One example for such an overlap is health, where the overall physical health of a person is probably mentioned as an objective indicator, which is thus comparable in basically all scenarios, whereas the mental health of the same person much rather refers to subjective forms of wellbeing. (vgl. GASPER 2009, 59)

5.2 Different wellbeing measurements

In the post-war era, the central measurement for objective wellbeing has been the gross domestic product (GDP). GDP has been used to assess the wellbeing of a population on the national level and compare wellbeing levels over countries. During the last decades, there has been a growing sentiment that GDP alone isn't able to grasp the entire scope of population wellbeing. Several alternative measurements of wellbeing have emerged, some are trying to correct problems of GDP while others try to directly measure wellbeing or create composite indices for this matter. (vgl. KANGMENNAANG & ELLIOT 2019, 177) The main problem that GDP has, is its inability to grasp the distribution of economic welfare between population groups or geographical regions. GDP also isn't able to analyse the impact that the growth in national welfare has on different groups and members of the population, neither can it assess the effects on the environment. (vgl. DOYAL & GOUGH 1991, 151) The shortcomings of GDP as a wellbeing measurement tool have led to the emergence of "Beyond the GDP" programs, which try and incorporate other wellbeing dimensions. (vgl. KANGMENNAANG & ELLIOT 2019, 177)

In line with their Better Life Initiative, the Organisation for Economic Co-operation and Development (OECD) has created a framework for wellbeing that incorporates 11 different dimensions in 3 categories. (vgl. OECD 2020, 3) This part of the OECD's framework specifically focusses on the current wellbeing of individuals, groups and populations and doesn't incorporate future levels of wellbeing like Osberg (1985) in his conceptual framework. (vgl. OECD 2020, 20) The first category that the OECD establishes incorporates income, wealth, housing and job quality, they summarize those elements as material conditions of wellbeing. The second category comprises elements that relate to the quality of life, those elements are health, knowledge, skills, environment quality, subjective well-being and safety. The last category focuses on the societal connectedness and incorporates the work-life balance, social connections and the civil engagement of people. (vgl. OECD 2020, 20) The Canadian Index of Wellbeing (CIW), which is developed at the University of Waterloo, is another composite measurement that tries to determine the quality of life of a population. The CIW identifies 8 main domains which are similar to the wellbeing categories defined by the OECD. The CIW establishes that health, democratic engagement, community vitality, environment, leisure and

culture, time usage, education and living standards all impact the wellbeing of the respective population. (vgl. CANADIAN INDEX OF WELLBEING 2016, 2) Both the OECD's better life framework, as well as the Canadian index of wellbeing can be used to compare trends in wellbeing over time and for different population groups. "Beyond the GDP" concepts offer a much broader analysis of wellbeing, but they still have a very restricted geographical focus. Middle- and high income countries are usually the central units of analysis, while low-income countries are often left out. Ghana, as well as the rest of the Sub-Sahara African region, has been widely overlooked when it comes to elaborated wellbeing measurements. (vgl. KANGMENNAANG & ELLIOT 2019, 177)

Kangmennaang and Elliot (2019) analyse how wellbeing is perceived in different Ghanaian regions. Their aim is to identify patterns in wellbeing perception along socio-cultural, ecological and geographical lines and to show how important those specific contexts are while discussing objective and subjective wellbeing. . (vgl. KANGMENNAANG & ELLIOT 2019, 178) In this study, participants were asked to define wellbeing and specify the most important indicators that influence their quality of life. Results from the interviews show, that wellbeing in Ghana is a very complex subject and that significant differences, depending on the economic, cultural, social or ecological context exist. According to current research, material wellbeing and living standards are considered to be the most important indicators for people's wellbeing. Results by Kangmennaang and Elliot suggest that the same indicators are also crucial determinants in Ghana. Aspects such as money, housing, as well as food and water security, were among the most important indicators of wellbeing mentioned by the participants. (vgl. KANGMENNAANG & ELLIOT 2019, 185) Kangmennaang and Elliot conclude that the most important wellbeing indicators mentioned by Ghanaian participants were in line with wellbeing categories defined by the OECD or the CIW. It is possible to use those frameworks for the Ghanaian context, all while being sensible to geographical and cultural differences and specificities.

5.3 Using housing quality as a wellbeing indicator

Quality is a product of subjective judgement which arises from the overall perception which the individual holds towards what is seen as the significant elements at a particular point in time. (AMAO 2012, 72)

Even though quality is defined as a subjective sentiment, many researchers try to find objective links between housing quality and concepts such as wellbeing. This is especially true for studies that try to establish a universally applicable framework. While establishing their theory of human need, Doyal and Gough define 11 intermediate needs that positively contribute to the overall wellbeing of people. Several of those intermediate needs are directly related to the quality of people's dwellings and the living conditions they find themselves in. Alongside the importance of clean water access, adequate protective housing is a crucial need while referring to one's living conditions. Housing requirements are not universally identical and vary according to climate, society or other specific contextual circumstances. (vgl. DOYAL and BOUGH 1991, 196) In line with their search for universal wellbeing indicators, Doyal and Bough give three satisfiers for housing that improve wellbeing, regardless of situation. An adequate dwelling must act as a protective space from physical threats such as climate or weather extremes and disease carriers. (vgl. DOYAL and BOUGH 1991, 196) Clean sanitary facilities and safe water sources reduce the risk of being exposed to infected or bacterial water and diminish the risk of catching a related disease. Having substantial liveable and private space also has a universal positive correlation with better physical health and higher levels of wellbeing. Overcrowding has a multitude of negative effects on the physical and the mental health of dwellers and creates detrimental repercussions for people in inadequate housing conditions. (vgl. DOYAL and BOUGH 1991, 197) The authors conclude that a majority of dwellings in the global south have deficits in all three satisfier categories. A lack of adequate infrastructures and sanitary facilities are combined with overcrowded living situations and inadequate or even dangerous dwelling lands and usually appear in the population groups with the lowest incomes. (vgl. DOYAL and BOUGH 1991, 197-198) Other studies also suggest that the income of a household is the most important determinant for housing quality. Households with inadequate housing quality usually belong to low-income groups. (vgl. AMAO 2012, 78)

The first measurements of housing quality were made in the United States during the 1930s. (vgl. FIADZO et al. 2001, 140) Unfortunately, causal links between housing quality and aspects like wellbeing and health are still not easily identifiable. Having established that housing quality is an essential part of wellbeing, studying connections between both aspects is the next important task. (vgl. CATTANEO et al. 2009, 75) Previous research has established that housing improvements tend to have an important role in poverty-reduction programs and that a sole focus on household earnings or consumption would miss significant opportunities for affecting communities living in poverty. (vgl. CATTANEO et al. 2009, 97) Von Seidlein et al. (2019) do extensive research on rural housing in different climatic circumstances in Africa. Their findings act as a starting point for my own research on housing quality in different Ghanaian regions. Better housing conditions can lead to higher wellbeing and health rates for households members, both Von Seidlein et al. (2019) and the Ghana Statistical Service (2019) conclude. Dwellings that are well-designed and constructed can reduce several health risks, specifically in rural African regions. High quality walls and roofs are able to keep infectious flies out, while other health and safety risks are avoided when the dwelling is free of mould or indoor pollution. Further risks are reduced when toilets, bathrooms and kitchens are hygienic and safe water supply is guaranteed. (vgl. VON SEIDLEIN et al. 2019, 3) Especially the access to safe drinking water is an important instrument to reduce parasite infections among household members. (vgl. CATTANEO et al. 2009, 99) Cattaneo et al. (2009) find that upgrading dirt floors to cement floors has further positive effects on household members' wellbeing and overall health. Parasitic infestations, diarrheha and anaemia are all significantly reduced after switching to cement flooring and subjective aspects like the overall satisfaction with the dwelling and the perceived living quality substantially increase. The authors further find a reduction in perceived stress and depression. (vgl. CATTANEO et al. 2009, 75) Improving one's dwelling not only seems to have a positive impact on quantifiable measurements of objective wellbeing but also increases evaluative and hedonic aspects of subjective wellbeing.

Housing quality in Ghana: Observations from the Ghanaian Living Standards Survey 7

The Ghanaian Living Standards Survey (GLSS) provides extensive information on the living situation in all Ghanaian regions. The seventh instalment of the GLSS dedicates an entire chapter to housing while also providing crucial information on migration and remittances, both aspects that are intensely analysed in this thesis. According to the latest Ghanaian living

standards survey from 2019, the national housing stock faces several challenges. Housing quality is often inadequate and dwellings are overcrowded and congested. One explanation for the poor housing quality is the irregular or even absent maintenance of dwellings. Overcrowding on the other hand is closely related to fast urbanization rates in Ghanaian cities. (vgl. GHANA STATISTICAL SERVICE 2019, 134) The chapter on housing gives in depth statistical information on specific aspects, beginning with the materials used for the construction of outer walls, floors and roofs of dwellings. The largest discrepancies between Ghanaian regions were seen when observing the material used to build outer walls of dwellings. More than half of Ghanaian households have outer walls made from cement blocks or concrete. In southern Ghanaian areas, like the Greater Accra and the Ashanti region, over 75 percent of all dwellings have concrete or cement walls. In northern Ghana, especially in the Northern, Upper East and Upper West region, the vast majority of dwellings still use mud or earth as their main construction materials for outer walls. (vgl. GHANA STATISTICAL SERVICE 2019, 141) While there are no information on regional differences for floor material, the GLSS indicates regional specificities for the main construction material used for roofing. Households from the Northern, Upper East and Upper West region are slightly more prone to use mud, earth, thatch, palm leaves or raffia as their main roofing material but the most frequently used material by far are metal sheets. (vgl. GHANA STATISTICAL SERVICE 2019, 141)

Another aspect of housing that has previously been linked to the overall wellbeing and health of household members is the water supply type. The type of drinking water is especially important when discussing overall household wellbeing. Over 80 percent of households from the Upper East and Upper West region receive their drinking water from wells. Over all Ghanaian regions, only 29 percent of households refer to wells as their main source of drinking water. Sachet water has a crucial role in the Greater Accra region where almost 80 percent of households indicate this as their primary source of drinking water supply. In general, drinking water sources are quite heterogeneous in Ghana where pipe-borne water, wells, natural sources and sachet water all contribute to the overall supply, all while bearing significant regional differences. (vgl. GHANA STATISTICAL SERVICE 2019, 142) Sanitation is also covered by the GLSS in the form of toilet facilities, where availability and type are analysed. Again, the Northern, Upper East and Upper West regions have significantly lower sanitation standards than the residual Ghanaian regions. More than half of all dwellings in those regions don't have

any form of toilet facilities and subsequently use bushes, beaches or fields. Having no toilet facilities or ones with low quality is significantly more likely in rural than in urban areas. 29 percent of rural households don't have any facilities, whereas only 6 percent of urban households mentioned not having any toilet facilities. (vgl. GHANA STATISTICAL SERVICE 2019, 160)

The last relevant housing quality indicator discussed in the GLSS is the source to electricity. The Volta, Brong Ahafo, Northern, Upper East and Upper West region, are generally those with the highest shares of households without electricity supply. Only 6 percent of households in the Greater Accra region don't have any type of electric power while more than 40 percent of households are excluded from electricity supply in the Upper West region. The GLSS also asked why households weren't connected to the national grid connection for electricity supply. Over 50 percent of those who were affected mentioned the lack of availability in their community, the distance to electrical lines or the cost for initial connection as explanations. In rural areas, the most frequent explanation was the considerable distance to the national grid. (vgl. GHANA STATISTICAL SERVICE 2019, 151)

Establishing housing quality indicators

To assess objective wellbeing levels of households in Ghanaian regions, relevant indicators for housing quality have to be identified in a first step and then combined as a composite indicator in a second step. Choices regarding the variables used for the construction of the composite indicator are predominately inspired by the research done by Fiadzo et al. (2000) and Arias and De Vos (1996). Arias and De Vos propose a scale of six household items to explain the underlying factor of housing quality. (vgl. ARIAS & DE VOS 1996, 65) The authors create a composite indicator to evaluate the housing quality for a multitude of Latin American countries. The six items they use for the construction of their composite indicator are the material of the outer walls of the dwelling, the material of the floor, the material of the roof, the availability of electrical service, the type of sewage system as well as the type of water service. The items wall, floor and roof material are all standardized according to their durability, whereas the type of sewage system and the type of water service are standardized according to the hygienic quality. Lastly, the electrical service is standardized according to its availability. (vgl. ARIAS & DE VOS 1996, 59) In order to test the robustness of their composite indicator, Arias and De Vos first run Cronbach's alpha to assess the internal consistency. In a second step, the

authors run factor analysis on the components to identify if one, or potentially several underlying factors are explained by the composite indicator. (vgl. ARIAS & DE VOS 1996, 65) The housing quality index built by Arias and De Vos is finally used to evaluate socioeconomic status of households. The authors conclude that their index has reasonable explanatory value for aggregated levels of socioeconomic status, while they find it difficult to assess individuals. (vgl. ARIAS & DE VOS 1996, 71)

Fiadzo et al. (2000) use the composite indicator created by Arias and De Vos to analyse housing quality in Ghana. In their initial literature review, Fiadzo et al. conclude that variables such as wall, roof and floor material all have been reliable indicators for the willingness-to-pay for housing characteristics. (vgl. FIADZO et al. 2000, 141) The components used by both Fiadzo et al. and Arias and De Vos are based on recommendations of the United Nations. Fiadzo et al. added additional variables, mainly the distance to social services and important infrastructures, to the calculations of their housing quality indicator. (vgl. FIADZO et al. 2000, 148) Similar to Arias and De Vos, Fiadzo et al. first use Cronbach's alpha and in a second step run principal component analysis to assess the robustness of their composite indicator. The authors conclude that a 9-component indicator actually has a higher consistency than the 13-variable indicator they had initially build. (vgl. FIADZO et al. 2000, 153) Checking for and eventually dropping variables that are irrelevant or detrimental to the overall explanatory power of the composite indicator are crucial steps in the construction process. The authors conclude that the housing quality index they build can be used to evaluate the welfare of Sub-Sahara African households and individuals. (vgl. FIADZO et al. 2000, 160)

In a more recent publication, Dalia Streimikiene (2015) investigates wellbeing measurements and introduces important aspects of housing characteristics and living conditions that can be used to assess the quality of life. When discussing housing conditions Streimikiene establishes physical dwelling attributes and dwelling satisfaction as the central concepts. (vgl. STREIMIKIENE 2015, 140) Those two concepts refer to objective, as well as subjective components of household wellbeing. When assessing the physical attributes of a dwelling, Streimikiene proposes a multitude of potentially fitting measurements. The presence and quality of different facilities such as bathroom, toilet and kitchen are important indicators for housing quality while the availability of electricity and the type of water supply are further

ways of measuring this concept. Finally, the construction materials used and the deterioration levels of the dwelling complete the list of physical housing characteristics presented in this study. (vgl. STREIMIKIENE 2015, 140) When building a multifaceted indicator for housing quality, square meters of living space per household member can be an important tool to assess overcrowding rates. If there is information on the availability and the distance to social services, as well as other information on the overall dwelling environment in the community, it can also be included in composite indicators on housing quality. (vgl. STREIMIKIENE 2015, 142) The most important takeaway from this study is the importance of environmental housing aspects and communal characteristics in addition to the physical dwelling aspects, which are dominant in the work done by Arias and De Vos. Hussey and Malczewski (2018) analyse housing quality in the Ghanaian Ashanti region and acknowledge, that most housing quality studies in the African context analyse either physical or environmental indicators of housing, or use factors that refer to economic housing characteristics or overcrowding. (vgl. HUSSEY & MALCZEWSKI 2018, 210) Most African housing quality studies don't use all four elements, they rather limit themselves to specific dimensions. The choice of housing quality indicators is often influenced by the data available for the specific research purpose.

Eva-Maria Egger and Julie Litchfield analyse the impact of successive migration on household welfare in rural Ghana and use the Migrating out of Poverty data to identify potential impacts. Egger and Litchfield analyse household welfare and construct a composite indicator to measure this concept. For the construction of their index, the authors use different households assets. The indicators that they use are the number of rooms of a dwelling, dwelling ownership status, bathroom presence, toilet presence, main source of drinking water, main construction material of the floor and the main construction material of the outer walls. The authors choose the indicators based on previous research and popular households surveys for developing countries like the Demographic and Health Surveys (DHS). When comparing an asset index to other welfare indicators, such as consumption or income, Egger and Litchfield conclude that the asset index is easier for measuring and assessing long term variations in economic welfare of households. Asset indices have also repeatedly been used to analyse variations and trends in poverty. The asset index that they construct is a relative and continuous measurement of household welfare and can be used to assess changes between different population groups and over time. (vgl. EGGER 2017, 131) To guarantee the robustness of

their index, Litchfield and Egger apply Multiple Correspondence Analysis (MCA) to retrieve indicator weights for the different assets used in the construction process.

This chapter starts with a conceptualization of wellbeing and presents the difficulties of establishing universal definitions and frameworks for this concept. In its most basic form, wellbeing can be divided into objective and subjective categories. Doyal and Gough's "A theory of human need" is one of the most important studies on objective wellbeing and manages to establish universal human needs and satisfiers. With the emergence of participatory research in the late 20th century, subjective wellbeing has become a focal point of wellbeing research. In the post-war period, objective wellbeing was predominantly measured by the gross domestic product, which was subsequently used to draw comparisons between countries and regions. "Beyond the GDP" programs offer a broader access to wellbeing and assess objective, as well as subjective indicators. Wellbeing frameworks such as the OECD's "Better Life Initiative" offer a multitude of wellbeing indicators and are able to reliably measure the quality of life on the national and on the household level. Important wellbeing indicators like living standards or income also play essential roles in the Ghanaian context. Housing quality has proven to influence objective and subjective aspects of household wellbeing. When dwellings are of good quality, the exposure to health and safety risks is massively reduced and the probability of experiencing serious harm diminishes. The Ghana Living Standards Survey and the Migrating out of Poverty data both offer valuable information on housing quality in Ghana and provide insights into regional and cultural particularities. In northern and rural Ghanaian regions, housing quality has been significantly lower than in southern or urban areas. To summarize the multi-dimensionality of housing quality, researchers have recurrently constructed composite indicators. Different methods for creating housing quality indices in the Sub-Saharan African context are presented at the end of this chapter. In the next chapter, I introduce the Migrating out of Poverty data in detailed fashion and I dissect the construction process of the housing quality index used to assess household wellbeing in my research.

6. Methodology

6.1 Data

Migrating out of Poverty

The data analysed in this thesis is a result of the research done by the Migrating out of Poverty research program, which was a ten-year research partnership that officially ended in 2019. The Migrating out of Poverty program (MOOP) has studied relationships between migration and poverty in 11 countries from 5 different regions. Regions covered by MOOP were South and Southeast Asia as well as East, West and Southern Africa. The main goal of the MOOP program was to analyse why migration significantly effects poverty reduction in some cases, while it doesn't create the same impacts in other contexts. To assess the potential that migration has for poverty reduction, a conceptual toolkit was developed. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2019, 3) The Migrating out of Poverty research was funded by the United Kingdom's Department for International Development and the program coordination was led by the University of Sussex in Brighton. With MOOP, the Research Programme Consortium was able to create longitudinal and comparative household data for several regions and countries. The data generated in Africa was used by two important United Nations reports in the process. In Ghana, the MOOP research consortium and its partners established the Media Network on Migration which helped reframe the public debate on migration in the country. Prior to the projects' start in 2010, the public opinion on the migration-development nexus was rather negative. At the end of the 10-year project period, the potential of migration for local development and poverty reduction was much more recognized in Ghana. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2019, 4) One aspect of the MOOP research is a comparable household survey that was organised in Indonesia, Bangladesh, Zimbabwe, Ethiopia and Ghana. The household survey comprises information generated in three survey waves in 2013, 2015 and 2018. In Ghana, households were initially surveyed in 2013. The same households were subsequently re-surveyed during a second and third wave in 2015 and 2018. Due to the general lack of panel data on migration impacts in Sub-Sahara Africa, the information and knowledge generated by the Migrating out of Poverty research is extremely valuable. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2019, 7) The datasets used in this thesis are all available online and free of charge, they can be accessed by visiting the Migrating out of

Poverty website for Ghana. (<http://www.migratingoutofpoverty.org/themes/migration-data/ghanaquant>)

Ghanaian household survey: 2013-2018

In Ghana, data for the household survey was collected by the Centre for Migration Studies (CMS) of the University of Ghana and the project was supported by other core partners such as the African Migration and Development Policy Centre (AMADPOC) in Kenya, the African Centre for Migration and Society in South Africa, the Refugee and Migratory Movements Research Unit in Bangladesh and the Asia Research Institute at the National University of Singapore. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2018, 2)

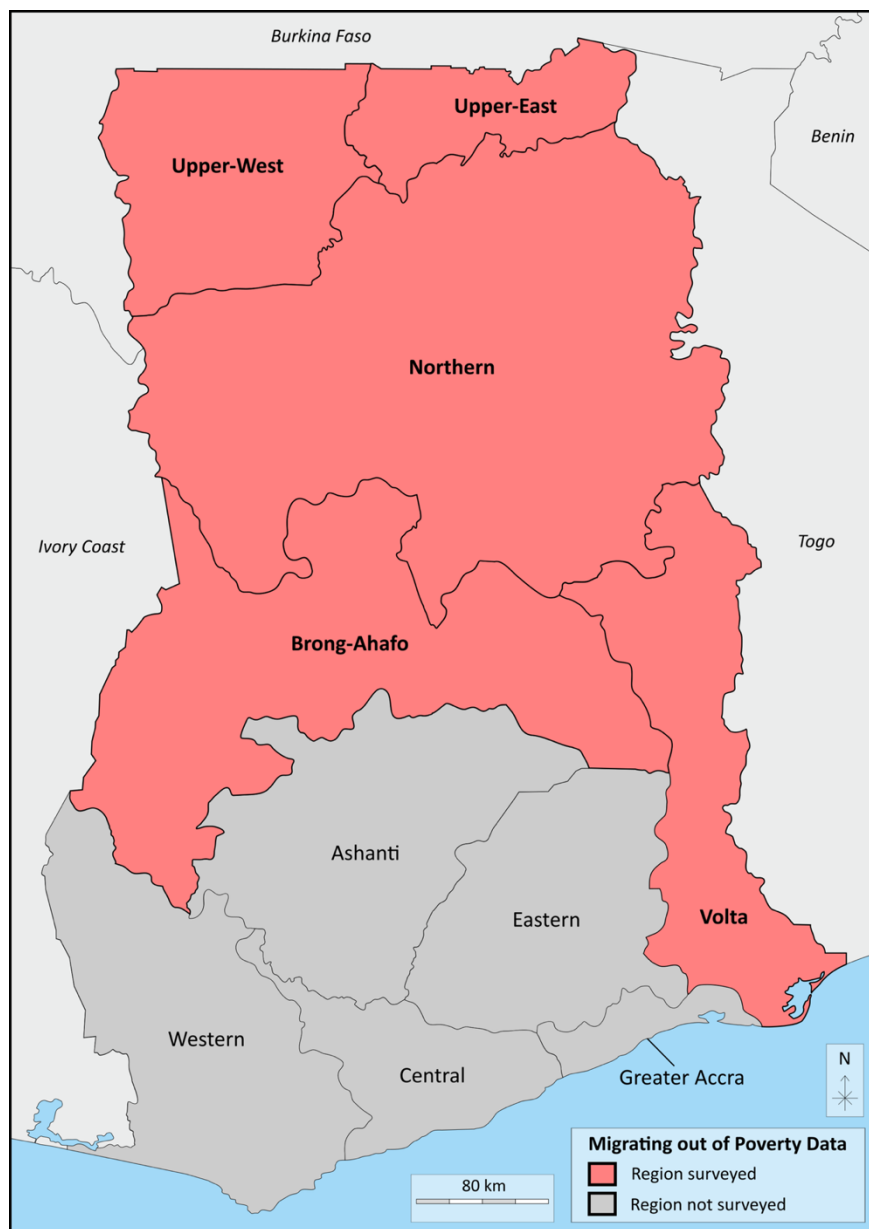


Figure 8: Migrating out of Poverty: Ghanaian survey regions 2013-2018

The main goal of the Ghanaian household survey is to identify different categories of migrant and non-migrant households and create a questionnaire that gathers information on migration experiences at destination and the effect of migratory movements on the households at the place of origin. Out of ten possible Ghanaian regions, five were chosen for the household survey. The selection process for survey regions was derived from information gathered from the 2010 Ghana Population and Housing census. Regions surveyed in the MOOP household survey are the Upper East, Upper West, Northern, Volta and Brong-Ahafo region. While the first four regions mentioned here represent the most important migrant-sending areas in Ghana, the Brong-Ahafo region is simultaneously a major migrant-sending, as well as an important migrant-receiving region. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2018, 2)

A two-staged stratified sampling design was used for the Ghanaian household survey where in a first step, 1500 households were selected from the five research regions. The 2010 census enumeration areas were used as the sampling frame and the number of enumeration areas included in the MOOP sample were directly derived from the number of out-migrants from each region. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2018, 2) The Volta Region had the highest number of out-migrants in 2013, consequently it had the most enumeration areas and households included in the sample. In a second step, migrant and non-migrant households were chosen from the sampled enumerations areas while making sure that 400 out of the 1500 households selected were non-migrant households. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2018, 3) One problem that arises when using the full panel nature of the data is attrition in the second and third survey waves. The sample size in 2013 was 1412 households of which 1100 were re-surveyed in 2015. In 2018, the sample size was increased back to 1429 households, when households that previously dropped out were replaced by new ones with similar characteristics from the same enumeration area. The MOOP Research Programme Consortium also made sure to increase the significance of international migration in the last survey wave. While the first two waves were mainly centred around internal migration and its effects on left-behind households, the third wave explicitly oversampled households with international migrants. (vgl. MIGRATING OUT OF POVERTY RESEARCH PROGRAMME CONSORTIUM 2018, 3) It is important to mention that none of the survey waves are regionally or nationally

representative since migration households were purposely oversampled to fit research purposes. (vgl. EGGER 2017, 111) Since the aim of this thesis is to observe the evolution of remittances and its effects over the entire 5-year observation period, the household sample had to be further delimited. In my analysis, I included households that could be clearly identified in all three survey waves, leaving a sample of 831 households for the period from 2013 to 2018.

Region	Households in all 3 survey waves	Households in 2013	Attrition
Brong-Ahafo	126	271	53,51%
Northern	196	305	35,74%
Upper East	155	217	28,57%
Upper West	148	180	17,78%
Volta	206	445	53,71%
Total	831	1418	41,40%

Table 1: Households surveyed in all three waves (2013, 2015, 2018) according to Ghanaian regions

The Volta region had the highest number of households in the first survey wave, this observation holds up when looking at the households included in all three waves. The Upper West region had the least households surveyed among the five regions included in the study. Attrition has been significantly lower in the northern Ghanaian regions (Northern, Upper East and Upper West) than in the Volta and Brong-Ahafo region, where over half of the initial households dropped out in one of the follow-up survey waves. While the Upper West region had the least households surveyed in the first wave, a vast majority of those households were part of the MOOP household survey for the entirety of the project.

6.2 Composite Indicator for Housing Quality

In the previous chapter, a multitude of indicators for housing quality in the African and Ghanaian context were identified and discussed. With this initial knowledge in mind, I construct a composite indicator for housing quality with the Migrating out of Poverty data at hand.

An indicator is a quantitative or qualitative measure derived from a series of observed facts that can reveal relative positions in a given area. (OECD 2008, 13)

A composite indicator is created when multiple indicators are analysed as an ensemble, often describing a latent multidimensional concept that can't be explained by just one single measurement. (vgl. OECD 2008, 13) Composite indicators are frequently used to measure multidimensional concepts such as housing quality, its main draws being the simplification of complex connections and the enhanced comparability of results. Results generated by composite indicators are usually easier to follow and facilitate the accessibility to convoluted concepts, which is especially important when aiming at a broad public. Composite indicators are also frequently used to measure changes over time or compare different regions and countries. The major drawback that comes with composite indicators is a potential lack of transparency in the construction process. The choice of indicators, as well as the weighting method used in the construction process, must be justified and in line with the scientific consensus. If the construction process is unclear, the interpretation of the results might be very misleading. (vgl. OECD 2008, 13-14) Before selecting variables for a composite index, it is important to establish a robust theoretical framework. To construct a composite indicator, three main steps have to be followed. First, the desired variables are chosen from the available data and then a weighting method is defined. After having applied the weights to their specific indicators, the latter can then be added up. (vgl. NJONG & NINGAYE 2008, 5) The previous chapter has defined the concept of household wellbeing as the desired object of investigation. In a next step, I discuss how a composite indicator for housing quality can be used to analyse this latent concept.

A multidimensional approach to household wellbeing

Fiadzo et al. (2001), Egger (2017) and Booysen et al. (2008) all use composite indicators on housing quality in African contexts. Welfare and poverty levels are some of the aspects that those studies are interested in. In this thesis however, I construct a composite indicator that assess household wellbeing. I have decided to use wellbeing as a conceptual approach because it allows me to include different aspects of living quality and doesn't limit my research to economic measurements as using a welfare index does. By constructing this housing quality index I am aiming to create a reliable and multidimensional measurement that includes all relevant information available in the Migrating out of Poverty data. After defining the theoretical groundwork for the composite indicator, the next step is to assess the data and determine relevant variables that must be included in the construction process. The Migrating out

of Poverty data provide three survey waves generated in 2013, 2015 and 2018. Based on experiences and information gained during the early stages of the project period, changes in the sample and the questionnaire were made accordingly in 2015 and 2018. Having previously established the sample for my analysis, the next challenge is to identify variables that are identical in all three survey waves. The questionnaire developed by the Migrating out Poverty Research Consortium is divided into thematic sections. In its most elaborated form, the questionnaire has seven different sections ranging from basic household and individual information to questions on household wellbeing and remittances. Sections 1 to 4, which contain information on the household grid, migration history, migration experiences at destination and remittances from absent migrants, are identical in all three survey waves. Section 5 further elaborates on remittances and is only marginally different in the three survey waves. Section 6 on return migration, and section 7 on households assets and wellbeing have major differences depending on the survey round. Section 7 includes variables that measure subjective aspects of household wellbeing. Analysing subjective wellbeing would be in line with the theoretical concepts presented earlier unfortunately, those variables are not available for all three survey waves and are thus not available as potential building blocks for the composite indicator. Composite indicators on household wellbeing don't necessarily need to refer to housing quality as the measurement tool, studies frequently use information on consumption as their designated wellbeing variables. Teye et al. (2019) use the Migrating out of Poverty data to assess the impact of migration on left-behind households in Ghana by using consumption expenditure as a measurement for welfare. (vgl. TEYE et al. 2019, 4). Awumbila et al. (2016) use the MooP data to create a test and a control group and measure the impact of migration on the consumption levels of households at the place of origin. (vgl. AWUMBILA et al. 2016, 5) In the Migrating out of Poverty data, variables on household consumption were first introduced in the second survey wave in 2015. Since there is no information on consumption behaviour in the first survey wave, creating an index on household consumption is impossible. While several researchers have studied the impact of migration on left-behind households in Ghana using the Migrating out of Poverty data, none have used the entire panel nature of the data. While research groups have analysed the impact of migration on households in Ghana, they aren't able to use the entire panel nature of the data.

Question:	Answer(s)
1. If the household owns land, what is the size of this land.	01 Acre 02 Poles 03 Ropes 04 Hectares 05 Plots 06 Other (specify)
2. Does your household own this dwelling, or do you pay rent to live here?	01 Yes 02 No
3. How many rooms does this household have? Please exclude the kitchen and bathrooms.	XX Number of rooms
4. Does this household have the following facilities?	Bathroom: 01 Yes 02 No Toilet: 01 Yes 02 No
5. What is the main source of drinking water for this household?	01 Pipe borne water inside house 02 Pipe borne water outside house 03 Borehole 04 Dug well 05 Tanker service 06 Stream/river/lake 07 Rain water 08 Bottled or sachet water
6. Which is the predominant material for the floor of this dwelling?	01 Mud 02 Raw wood, boards 03 Cement/concrete 04 Burnt brick 05 Terrazzo 06 Floor tile (vinyl, porcelain, marble) 07 Polished wood 08 Other (Specify)
7. Which is the predominant material for the exterior walls of this dwelling?	01 Bamboo or other organic materials 02 Cloth, cardboard, cans 03 Zinc 04 Raw wood 05 Mud, adobe, cane wall 06, Blocks, bricks, stone, prefabricated material, polished wood 07 Other, specify
8. Which of the following public services, private or communal, does this household have access to?	01 Electricity 02 Natural gas 03 Safe drinking water 04 Sewerage system 05 Garbage collection 06 Telephone

Table 2: Questions on household assets and access to public, private and communal services in the Migrating out of Poverty dataset

After an in depth analysis of the Migrating out of Poverty questionnaires, eight relevant questions remain for the construction of a composite indicator for household wellbeing. Table 2 gives an overview of the questions and respective answer options in the MOOP questionnaires. All variables that are considered for the construction of the composite indicator refer to housing quality, considering various aspects of dwelling and living quality. Questions 1 and 2 refer to the ownership status and size of land and dwelling, while question 3 is interested in the number of rooms per residence. Question 4 is divided into two parts and assesses the availability of sanitary facilities, namely toilet and bathroom. Question 5 refers to the quality of drinking water households have access to, while questions 6 and 7 investigate the main construction material used for the floor and the exterior walls of dwellings. Finally, question 8 assesses public, private or communal services including electricity, natural gas, sewerage system and garbage collection. The variables that are considered for the construction of the housing quality index all refer to objective aspects of wellbeing. Since the variables in question measure different dimensions of housing quality, it is essential to figure out if they can all be used to measure the same latent concept in form of a composite indicator.

Constructing an index and applying weights

The main argument for using a composite indicator on household assets, rather than analysing household consumption or income, is that the initial method is easier to measure and is more reliable when assessing long-term trends in economic wellbeing. (vgl. EGGER & LITCHFIELD 2018, 32)

$HQI_i = w_1a_{1,i} + w_2a_{2,i} + \dots + w_ka_{k,i}$	
HQI_i	= Housing Quality Index for household i
a_k	= Indicator k → Each indicator is equal to 1 if the household owns, or has access to the specific indicator and 0 if the household doesn't own, or have access to said indicator
w_k	= Indicator specific weight → The indicator specific weights are assigned by running and applying Multiple Correspondence Analysis (MCA) to the set of housing quality variables.

Table 3: Housing quality index

Table 3 presents the housing quality index used in this thesis. In line with the methodology by Egger and Litchfield, the composite indicator of household i is equal to the sum of all housing quality indicators ak , which are weighted by indicator specific weights, wk . (vgl. EGGER & LITCHFIELD 2018, 32) There is no arbitrary method to assign weights to the individual indicators, in a next step I am presenting different weighting methods for constructing composite indicators.

A majority of composite indicators are constructed by using equal weights for all variables. By using this method, all variables are valued as equally important for explaining an underlying concept. A second way of applying weights is to analyse the data and determine which variables have higher importance for the overall significance of the composite indicator. Variables that are deemed as important are given stronger weights while less important variables are treated opposingly. A third way of assessing weights for composite indicators is by using statistical techniques. (vgl. OECD 2008, 31) When using statistical methods to determine variable weights, Principal Component Analysis (PCA) and Factor Analysis (FA) are the most frequently used approaches. (vgl. BOOYSEN et al. 2008, 1115) A third statistical method for calculating weights is Multiple Correspondence Analysis (MCA). All three methods are aspects of geometric data analysis (GDA). The idea for geometric data analysis was introduced by Jean-Paul Benzécri in the 1960s, mainly evolving around the concept of correspondence analysis. The idea is to create a two-way table where sets of two different aspects, usually statistical individuals and variables, are represented as points in a geometric space. (vgl. LE ROUX & ROUANET 2010, 10) When analysing a rather simple concept, where the relationship between two variables is assessed, correspondence analysis can be applied to the two-way frequency table. PCA and MCA are being used when analysing tables that represent statistical individuals and variables. The choice between PCA and MCA is mainly being made based on the type of variables in the model. Principal component analysis is usually used for continuous variables while multiple correspondence analysis is applied when using categorical variables. (vgl. LE ROUX & ROUANET 2010, 10)

Multiple Correspondence Analysis (MCA)

MCA is a data exploration technique that is used to reveal correlations between sets of variables that can be described by a single component. Those single components are usually being

Table 4 is an example for an indicator matrix with three questions *A*, *B* and *C*. All three questions are dummy variables with two possible response options, represented by *K*. When constructing an asset index, studies often recur to Yes-No questions discussing the availability of certain goods or services. Table 4 can be used to exemplify the concept of the indicator matrix. For this exercise, question *A* is assessing the access to electricity on the household level. A household now has two different options for answering this question. Either the household says that it has access to electricity (*a1*), or the household indicates that it doesn't have access to electricity (*a2*). For the indicator matrix, each variable is subsequently coded as 0/1 indicators. (vgl. EZZRARI & VERNE 2012, 5) For each variable, a household must have a "1" in only one single category and "0" in all others. Going back to the example of electricity, it is impossible that the household has access, as well as no access to electricity at the same time. (vgl. EGGER 2017, 194) In this particularly example, table 4 represents two households (*h* and *h'*) who answer three different binary questions. Households are usually represented by rows in the disjunctive table while categories are separated by columns. To effectually generate indicator weights, the initial variables from the MOOP data have to be recoded to fit the indicator matrix.

When recoding the relevant variables for the indicator matrix, it is important to pay attention to the number of categories that are included per variable. The more categories a variable has, the stronger the contribution to the overall variance of the model is. Le Roux and Rouanet advocate to avoid large differences in category numbers and recommend to recode questions, so that the amount of categories are all equal or very similar. (vgl. LE ROUX & ROUANET 2010, 46-47) When going back to table 2 and analysing the nature of the data, it is evident that several questions can easily be recoded into binary variables. For question 2 on dwelling ownership, two indicators are created that divide households who own their dwellings from those who pay rent. Questions 4 and 8 are recoded according to their accessibility to different facilities and services, dividing the sample into households that have access from those who don't. Since it is advised to create variables with an equal amount of categories, I have decided to recoded all other questions also into binary components. Recoding questions 5, 6 and 7 into binary variables is an important challenge which has to be assessed transparently. Question 5 discusses the main source of drinking water of the household and has 8 different categories in the initial MOOP data. To recode question 5 I have followed the WHO's and UNICEF's

joint monitoring program for household drinking water services. The joint monitoring program divides drinking water into improved and unimproved sources. Improved sources are defined as those that are potentially capable of delivering safe water by nature of their design and construction. (WHO & UNICEF 2017, 13) Sources that deliver potentially unsafe water are considered to be unimproved sources. Examples for unimproved sources are unprotected wells or springs. (vgl. WHO & UNICEF 2017, 13) In a next step, the WHO and UNICEF establish a 5-step ladder for water sources, ranking them from unsafe to safe. The safest drinking water sources are those who are safely managed and are, among other things, characterized by their location on premises. (vgl. WHO & UNICEF 2017, 12) The only drinking water sources in the MOOP data that fulfil this highest standard of safety are "Pipe borne water inside the dwelling" and "Pipe borne water outside the dwelling". All other sources can't be indefinitely verified as fulfilling the necessary requirements. Question 8 on public, private and communal services also assesses the access to safe drinking water in a separate variable. To have a maximum of information on the surveyed households and since the Migrating out of Poverty Research Consortium doesn't provide any information on how drinking water sources were categorized, I included my own recoded drinking water variable as well as the original MOOP variable in my housing quality index. For the recoding of questions 6 and 7, regarding the predominant material used for the floor and the exterior wall of the dwelling, I refer to Multiple Indicator Cluster Survey (MICS) from 2017/2018, carried out by the Ghana Statistical Service. In their MICS questionnaire, the GSS includes questions on floor and exterior wall material, almost identical to the questions asked by the Migrating out of Poverty Research Consortium. For both questions, the GSS creates 3 ordered categories according to the quality of material. Categories for the main material of the dwelling floor are "Natural Floor", "Rudimentary Floor" and "Finished Floor". The GSS uses the identical terms to create the categories for exterior wall quality. After analysing the MOOP data and adapting to the binary format to fit the indicator matrix, I have recoded both variables accordingly. All respective materials that fall under the "natural" or "rudimentary" categories in the MICS are grouped in a first category indicating households with lower building material quality. Construction materials from the "finished" categories in the MICS are grouped together and used to indicate households with higher housing quality. Table 5 summarizes the final recoded variables that were used for the construction of the housing quality index.

Question:	Answer(s)
1. Presence of a bathroom	0 = No 1 = Yes
2. Presence of a toilet	0 = No 1 = Yes
3. Main source of drinking water	0 = Potentially unimproved water sources (Borehole, Dug well, Tanker service, Stream, River, Lake, Rain water, Bottled or sachet water) 1 = Safely managed improved water sources (Pipe borne water inside the dwelling, pipe borne water outside the dwelling)
4. Main construction material of the floor	0 = Natural or rudimentary floor (Mud, Raw wood, Boards, Burnt bricks) 1 = Finished floor (Cement, Concrete, Terazzo, Floor tile)
5. Main construction material of the exterior walls	0 = Natural or rudimentary wall (Bamboo, Organic material, Cloth, Cardboard, Cans, Adobe cane wall, Zinc) 1 = Finished wall (Block, Bricks, Stone, Prefabricated mat, Raw wood)
6. Access to electricity	0 = No 1 = Yes
7. Access to natural gas	0 = No 1 = Yes
8. Access to safe drinking water	0 = No 1 = Yes
9. Access to a sewerage system	0 = No 1 = Yes
10. Access to garbage collection	0 = No 1 = Yes
11. Access to a telephone	0 = No 1 = Yes

Table 5: Recoded variables used for the construction of the Housing Quality Index

2. Controlling for incoherent variables

To test if the initial questions shown on table 2 all explain the same latent concept, I applied MCA to a first indicator matrix containing recoded variables for all 8 questions. After assessing the outcome of this first analysis it became evident, that several variables had to be dropped from the model. Recoding question 1 on land ownership presented a challenge, since answers were given in a multitude of different land size units. Even after calculating the size of owned land in a universal unit, land ownership didn't seem to reliably explain the latent concept of housing quality. Question 2 on dwelling ownership was excluded for the same exact reason. Question 3, referring to the number of rooms of a dwelling, also didn't have a conclusive link

to the overall model. Going back to the theoretical concept of wellbeing, overcrowding has been identified as one of the major detriments when discussing housing quality. (vgl. DOYAL and BOUGH 1991, 197) I therefore calculated the variable “Household members per room” to assess potential overcrowding. The number of household members per room seems to have a significant effect on the overall housing quality of households, where overcrowded living situations negatively affect household wellbeing. Using household members per room to assess the housing quality seems to have important explanatory power unfortunately, the necessary information to calculate this variable isn’t available in all three survey waves. Question 3 was subsequently excluded from the model as well, leaving the final housing quality index with 11 dummy variables and 22 indicators that all contribute in the same direction. It is essential that indicators that reflect higher levels of wellbeing have positive contributions to the housing quality index, while indicators that reflect lower levels of wellbeing contribute negatively. (vgl. BOOYSEN et al. 2008, 1116)

3. Applying MCA to the indicator matrix and generating categorical weights

When applying MCA to the indicator matrix, principal coordinates for each indicator are calculated. “Dim 1” on table 6 is the first one-dimensional axis of best fit and explains slightly more than 50% of the overall inertia of the model. (vgl. EGGER & LITCHFIELD 2018, 59) The other dimensions are ranked in a decreasing order according to their overall importance. (vgl. LE ROUX & ROUANET 2010, 15-16) Inertia can be described as a measure of weighted spread of the points and is closely associated to the concept of variance. (vgl. ALUJA-BARNET et al. 2018) Since I’m looking for the dimension with the highest explanatory power for the latent factor of housing quality, the first dimension is best suited to generate indicator weights. The coordinates generated for the first dimension of the MCA are used as weights for the 22 categories included in the model. Table 7 summarizes the categorical weights for the housing quality indicators. Indicators that represent higher levels of housing quality have negative weights, while indicators that represent lower levels of housing quality have positive ones. Weights are then inserted into the housing quality formula seen on table 3. To simplify the interpretation of the final index, overall scores were multiplied by -1 to make sure that positive values reflect high levels of wellbeing and vice versa.

. mca T1_Bathroom_Yes-T1_Telephone_No			
Multiple/Joint correspondence analysis		Number of obs	= 831
		Total inertia	= .07162578
Method: Burt/adjusted inertias		Number of axes	= 2
Dimension	principal inertia	percent	cumul percent
dim 1	.0359096	50.14	50.14
dim 2	.0045277	6.32	56.46
dim 3	.0040581	5.67	62.12
dim 4	.0021832	3.05	65.17
dim 5	.0017279	2.41	67.58
dim 6	.0012915	1.80	69.39
dim 7	.0005912	0.83	70.21
dim 8	.0005267	0.74	70.95
dim 9	.0001592	0.22	71.17
dim 10	.0000798	0.11	71.28
Total	.0716258	100.00	

Table 6: Final output table for the Multiple Correspondence Analysis in Stata 16.1

Variables	Categories	Weights
Presence of a bathroom	No	1.650
	Yes	-0.120
Presence of a toilet	No	0.703
	Yes	-1.663
Main source of drinking water	Potentially unimproved water sources	0.556
	Safely managed improved water sources	-1.156
Main construction material of the floor	Natural or rudimentary floor	1.850
	Finished floor	-0.818
Main construction material of the exterior walls	Natural or rudimentary wall	1.158
	Finished wall	-1.484
Access to electricity	No	1.345
	Yes	-1.048
Access to natural gas	No	0.462
	Yes	-3.535
Access to safe drinking water	No	0.554
	Yes	-0.258
Access to a sewerage system	No	0.261
	Yes	-4.160
Access to garbage collection	No	0.261
	Yes	-2.786
Access to a telephone	No	0.633
	Yes	-1.048

Table 7: Variables with their specific categorical weights obtained by applying MCA

To compare all three survey waves, categorical weights must be consistent over time. (vgl. EGGER 2017, 198) Categorical weights are calculated for the first survey wave in 2013 and are subsequently used for the housing quality index in 2015 and 2018 as well. Booyesen et al. (2008) and Egger (2017) construct their housing quality index with this methodology and both retrieve reliable results.

7. Results

After creating an index for housing quality I have a reliable tool that helps me assess changes in household wellbeing over the 5-year observation period. In this chapter I present the results of my analysis which is split into three different sections. First, I analyse changes in housing quality from 2013 to 2018 and I dissect dynamics and particularities on the regional and district level. In a second section, I present trends and changes in remittances, while the last section brings both elements together, evaluating possible impacts of migration and remittances on household wellbeing.

7.1 Housing quality in Ghanaian regions and districts

In a first step, I present a variety of descriptive statistics that visualize dynamics in housing quality from 2013 to 2018. Table 8 comprises all variables that are used for the construction of the housing quality index and shows the proportion of households for each year and category. A vast majority of surveyed households (93%) had a bathroom during the observation period and the proportion was stable over the five years. Only 30% of all surveyed households had a toilet in 2013, there was a slight increase to 35% in the last survey wave in 2018. No real trend can be observed in the main drinking water source of households, where roughly only one third had access to safely managed sources during the observation period. The variable “Safe drinking water” indicates that up to 75% of households had access to safe drinking water during the observation period, unfortunately the Migrating out of Poverty Research Consortium does not disclose which sources were considered “safe” in the data. A number of households did invest in better exterior wall material, the proportion of households using materials that are classified as “finished wall” increased from 44% in 2013 to 59% in 2018. Over the 5 year period there has been a decrease in access to natural gas, sewerage systems and garbage collection. In 2018, only 7% of household still had access to natural gas, a

decrease of 5 percentage points from 2013. Only 1% of all surveyed households indicated to have access to a sewerage system, a decrease from 2013 was observed but sewerage systems didn't seem very accessible in the first place. The development of the last variable, that indicates if households have a telephone, is quite surprising. In 2013 and 2015 well over 30% of all households had telephone access while only 3% reported the same in the last survey wave.

Housing Quality Indicator	2013	2015	2018
<i>Bathroom</i>			
No	0,07	0,07	0,07
Yes	0,93	0,93	0,93
<i>Toilet</i>			
No	0,70	0,69	0,65
Yes	0,30	0,31	0,35
<i>Main source of drinking water</i>			
Potentially unimproved source	0,67	0,62	0,65
Safely managed source	0,33	0,38	0,35
<i>Floor material</i>			
Natural or rudimentary floor	0,31	0,20	0,27
Finished floor	0,69	0,80	0,73
<i>Wall material</i>			
Natural or rudimentary wall	0,56	0,55	0,41
Finished wall	0,44	0,45	0,59
<i>Electricity</i>			
No	0,44	0,34	0,21
Yes	0,56	0,66	0,79
<i>Natural Gas</i>			
No	0,88	0,86	0,93
Yes	0,12	0,14	0,07
<i>Safe drinking water</i>			
No	0,32	0,25	0,31
Yes	0,68	0,75	0,69
<i>Sewerage system</i>			
No	0,94	0,94	0,99
Yes	0,06	0,06	0,01
<i>Garbage collection</i>			
No	0,89	0,92	0,97
Yes	0,11	0,08	0,03
<i>Telephone</i>			
No	0,62	0,67	0,96
Yes	0,38	0,33	0,03

Table 8: Housing Quality Indicator variables in all 3 survey waves (2013,2015,2018)

The most important trend that is observed in the survey period is the significant increase of households that have access to electricity. Only slightly more than half of all surveyed households had electricity in 2013, this proportion increased to 66% in 2015 and even 79% in 2018. The Volta region consistently had the highest rates of electricity access over the 5 year period, peaking at 87% in 2018. The Brong Ahafo and Upper West region had the smallest electricity rates in 2013 but the proportion of households with access to electricity increased substantially over the survey period. Every region surveyed increased the proportion of households with electricity access between 2013 and 2018, the Brong Ahafo region had the biggest increase with 24 percentage points.

When comparing drinking water sources over Ghanaian regions, a very heterogeneous picture presents itself. Pipe borne water inside and outside the dwelling were classified as safely managed water sources in the housing quality index, following this definition, over 60% of households in the Volta region have access to safely managed drinking water. In the Upper East and Upper West region, less than 20% of households have safe drinking water access, the overwhelming majority uses boreholes as the main source of water supply. Both the Upper East and Upper West region have very homogenous drinking water supply when comparing them Ghanaian regions, where a multitude of sources is used. Bottled or sachet water are considerable factors in the Brong Ahafo and Volta region, as are Streams, Rivers and Lakes. Households from the Northern region also frequently use surface water sources to satisfy their drinking water needs. The most important conclusion here is that the two most northern regions, Upper East and Upper West, are both heavily depended on drinking water from boreholes, while the other regions have a much more diverse selection of supply possibilities. Regional differences are also apparent when comparing the main building material that was used for the construction of the exterior walls of dwellings. 68% of households in the Brong Ahafo region, 71% in the Volta region and 85% in the Upper West region have exterior walls made out of block, bricks or stone. There is a large discrepancy between both “Upper” regions when comparing exterior wall material. While the Upper West region predominantly uses block, bricks or stone, which are classified as “finished wall” in the HQI, households in the Upper East region largely rely on mud, adobe or cane to construct exterior walls of their dwellings. The Upper East region is the only survey area where more than half of all household dwellings have “unfinished” exterior walls.

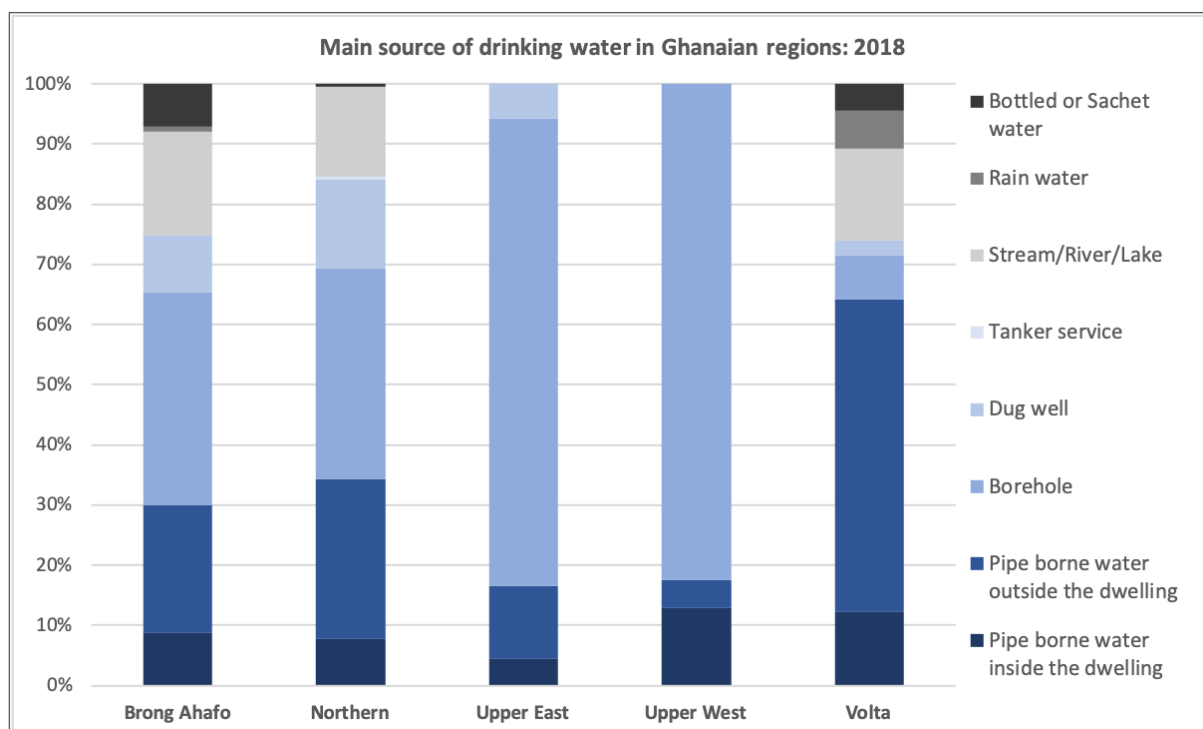


Figure 9: Main source of drinking water in Ghanaian regions in 2018

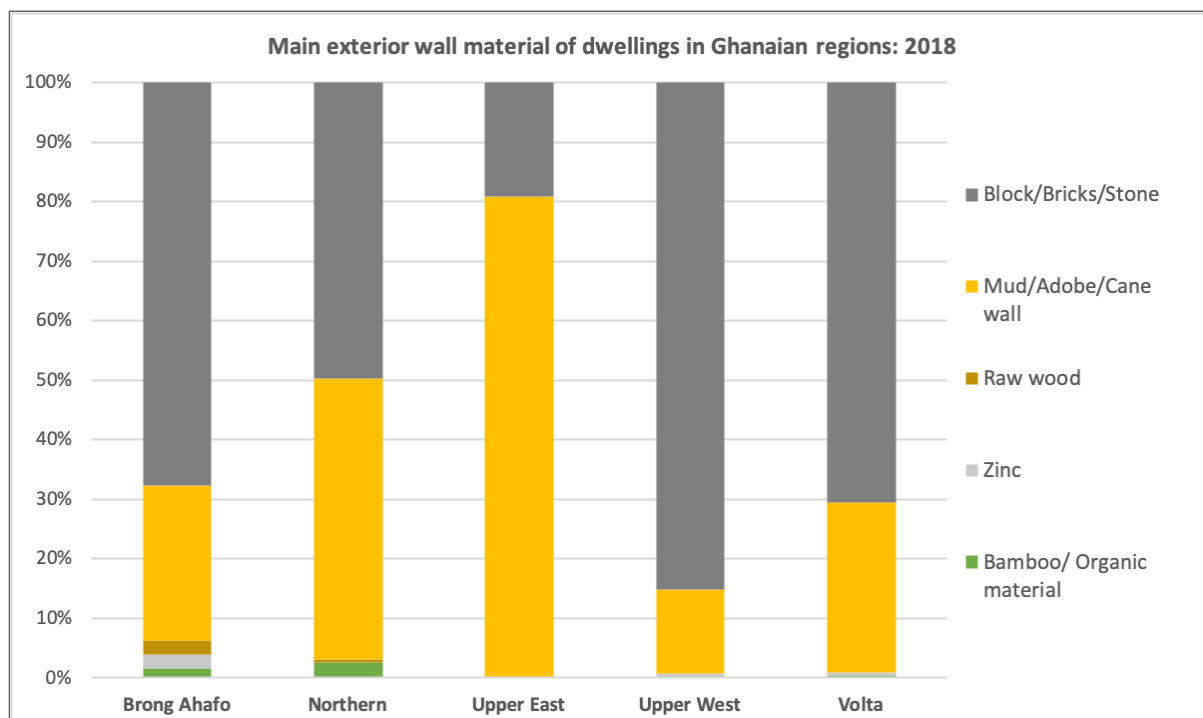


Figure 10: Main exterior wall material of dwellings in Ghanaian regions in 2018

The Northern region doesn't have a dominant construction material for exterior walls, exactly half of all surveyed households live in dwellings with "unfinished" walls while the other half have referred to block, bricks or stone. Figure 11 comprises 95% confidence intervals and means for the housing quality index scores of the five survey regions. The Volta region had the highest mean housing quality in all three survey waves, while the Northern and especially the Upper East region reported very low housing quality scores.

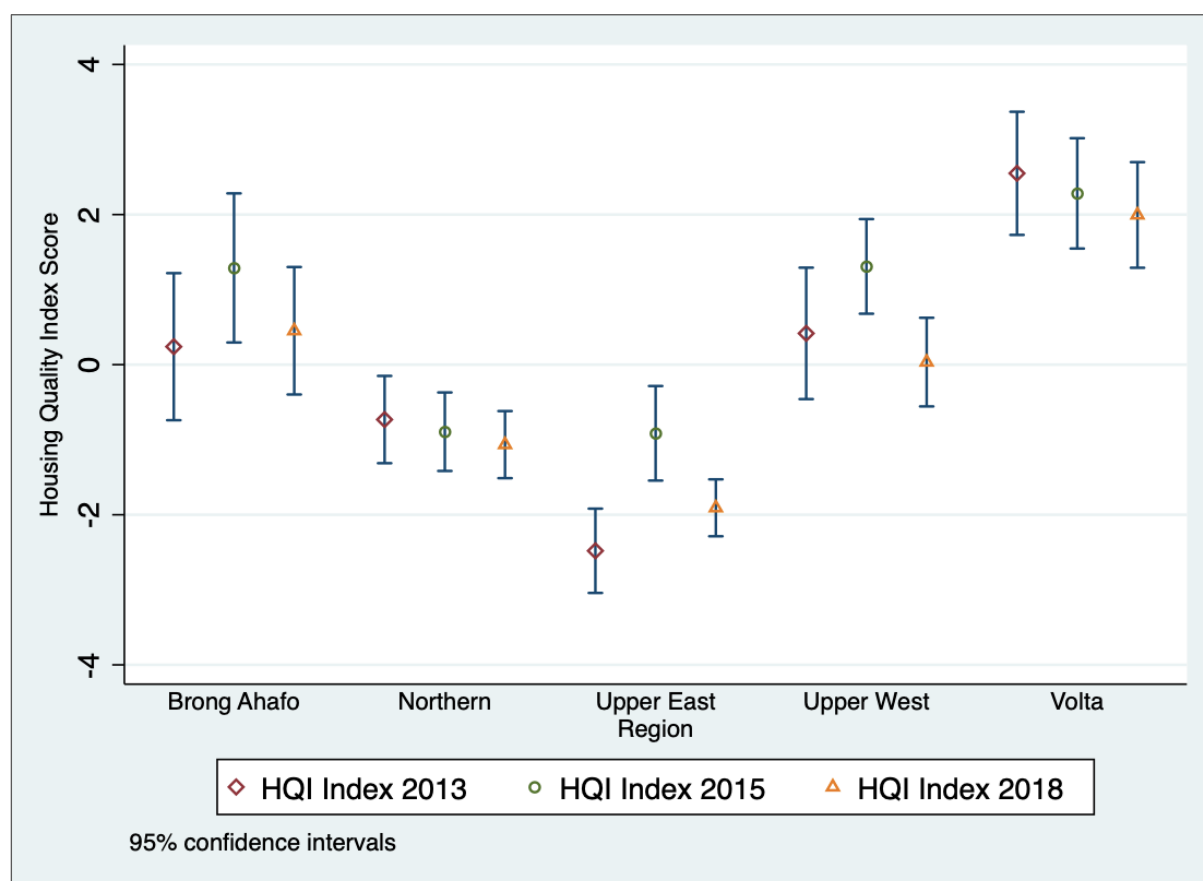


Figure 11: Housing Quality Index Scores in Ghanaian regions: 2013-2018

The Brong Ahafo and the Upper West region had very similar housing quality over the observation period and reported rather moderate scores compared to the other survey regions. Overall, there are no considerable trends in housing quality over the 5-year period. The Volta and Northern region recorded slight decreases in housing quality from 2013 to 2018, while all the other regions had no consistent increases or decreases. The Brong Ahafo, Upper East and Upper West region all had their highest mean housing quality in the second survey wave in 2015.

Housing quality in Ghanaian districts (2013-2018)

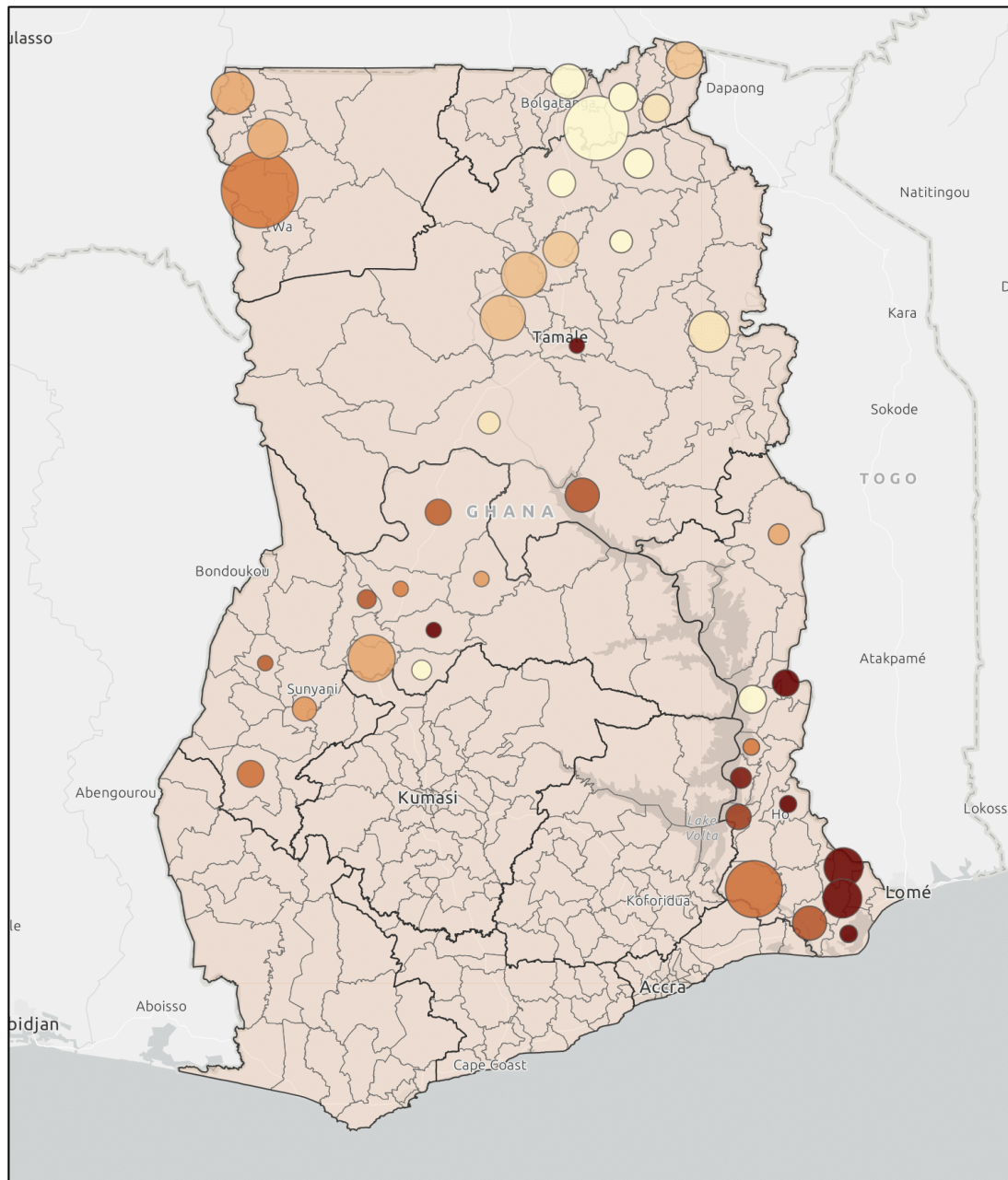


Figure 12: Housing quality in Ghanaian districts (2013-2018)

The differences in housing quality in Ghana become even clearer when comparing the mean HQI scores on the district level. Figure 13 visualizes the housing quality index scores for all surveyed districts, while simultaneously representing the number of households interviewed in each district. The Migrating out of Poverty data are not representative on the national, regional or district level, this is very important when interpreting the results and drawing conclusions. The range of surveyed households is very high at 77. Only two households were surveyed in the Nkoranza district in the Brong Ahafo region, while 79 households from the Nadowli district in the Upper West region are included in the sample.

Districts in the Volta region generally have very high housing quality scores, while districts in the Upper East region all rank in the lower end of the housing quality spectrum. While housing quality in the Upper East, Upper West and Volta region seems to be relatively homogenous, the Northern and Brong Ahafo region have a higher diversity in HQI scores. Housing quality in Tamale, the capital of the Northern region, is very high. Districts that are located in the north of the region on the other hand, have very low housing quality, similar to their neighbouring districts in the Upper East region. Housing quality in the Brong Ahafo region is moderate and HQI scores are rather heterogenous. It is important to note that the number of households surveyed in the Brong Ahafo region is very small in multiple districts, interpreting the index scores is thus more difficult. 4 out of 10 districts in the Brong Ahafo region have 5 or fewer surveyed households in the sample. When comparing the results on the national level, the Ghanaian north-east generally has the lowest housing quality. Ghana's south-east on the other hand, has high housing quality while the north-western and central areas are more difficult to interpret, mostly ranking in the middle of the housing quality scale.

To conclude, over the survey period there hasn't be a statistically significant trend in housing quality in the 5 Ghanaian regions that were surveyed in the Migrating out of Poverty programme. The findings on housing quality in my analysis are generally in line with the results of the latest Ghanaian Living Standards Survey, which were presented in chapter 3. Regions in Ghana's North tend to use organic or earth materials to construct the walls of their dwellings while southern regions rely on more robust materials like cement or stone. Robust construction materials massively reduce health and safety risks, as do clean and safe sanitary facilities and secure drinking water sources. (vgl. VON SEIDLEIN et al. 2019, 3) The north-south

discrepancy in housing quality, as reported in the GLSS 7 in 2019, is clearly visible when comparing HQI scores of north-eastern and south-eastern districts. While the North-East has consistently low housing quality index scores over the 5-year observation period, districts in the southern Volta region persistently take first place in the housing quality rankings. The Ghanaian Statistical Service found that many of the housing quality indicators were very low for the Upper West region as well. In my analysis, the results are not so straightforward. While the Upper West and Upper East region generally have very similar levels of housing quality in many of the variables used in the HQI, they distinguish themselves profoundly in exterior wall material. The extremely high amount of households with cement or stone walls in the Upper West region (85%) is one of the main reasons why its overall HQI scores are much higher than in the Upper East region. Another factor that might be important in this context is the proportion of households with toilets in their dwellings. In 2018, the proportion of households with toilets was almost twice as high in the Upper West region (31%) than in the Upper East region (17%). The Brong Ahafo region reported the highest proportion of households with toilets in 2018 with 54%. My analysis confirms that there are significant differences between housing quality in northern and southern Ghana, while areas in the central parts of the country have a more heterogenous distribution of HQI scores.

Housing quality variation rates in different wellbeing groups

In chapter 3 I explain the importance of housing quality for household wellbeing and establish that an index for housing quality can be used to assess the level of objective wellbeing. To create household groups with different baseline wellbeing levels, I divide the sample into 5 quintiles, based on their housing quality index score in the first survey year 2013. The five categories of housing quality range from “very low”, “low” and “moderate” to “high” and “very high”. I then calculate the variation rates in housing quality index scores for each group from 2013 to 2018. The formula used to calculate the housing quality variation rate is:

$$VR_i = ((HQI_{2018i} - HQI_{2013i}) / HQI_{2013i}) * 100$$

VR_i = Variation rate of housing quality (in percent) for household i

HQI_i = Housing Quality Index for household i

Table 9: Variation rate for housing quality

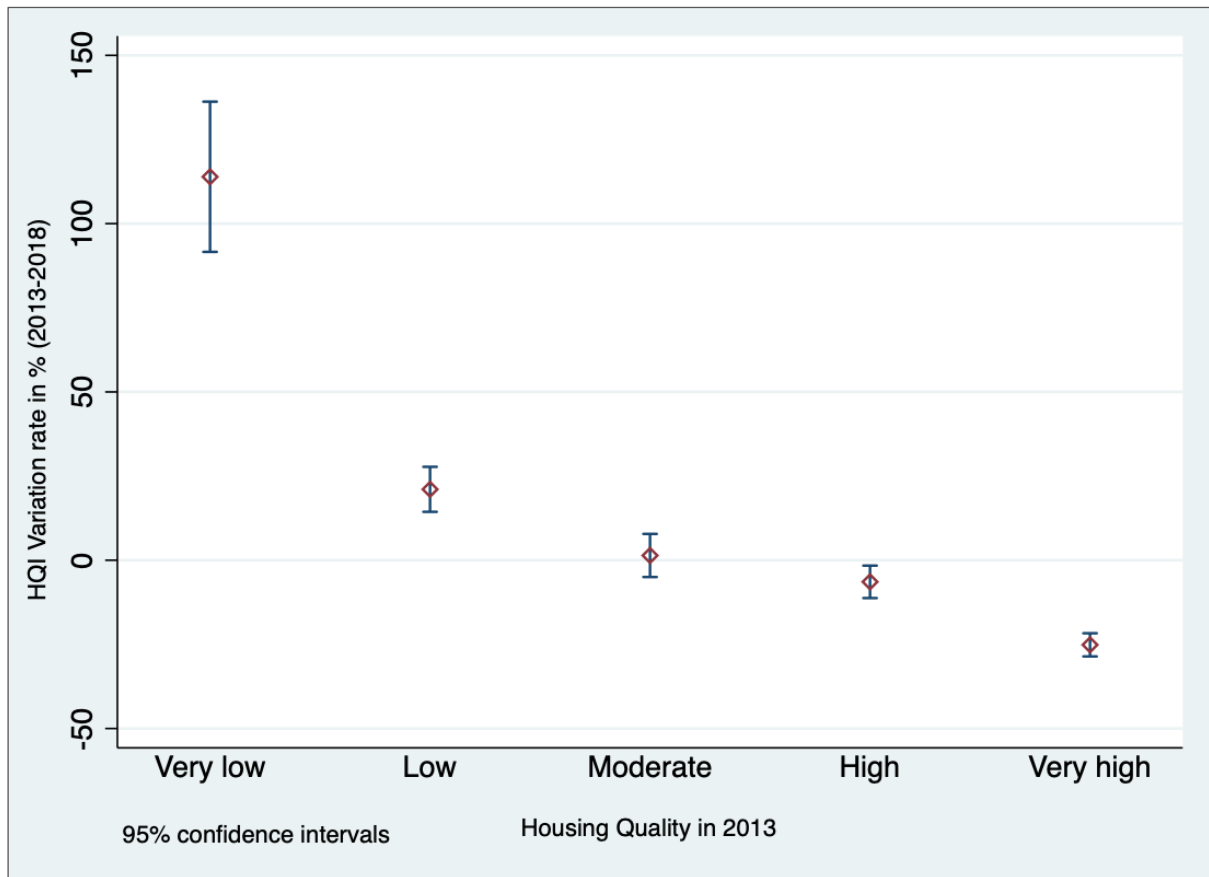


Figure 13: Variation rate of housing quality index scores (2013-2018) according to initial housing quality

Figure 13 shows that households with very low initial housing quality made the biggest improvements over the 5-year observation period. Households with low baseline wellbeing also saw improvements in housing quality, while HQI scores were pretty constant for households with moderate initial housing quality. Households with high, and especially with very high initial wellbeing levels, saw a reduction of housing quality over the survey period. When exploring the data and comparing variables over time, a reduction in access to specific services seems to be the main explanation for a decrease in housing quality of better-off households. The majority of these households lost access to services and resources such as garbage collection, sewerage system, natural gas or telephone. Some households did change their primary drinking water source, while the construction materials of dwellings almost unanimously remained the same. The increases in housing quality among those with the very lowest initial wellbeing levels are mostly related to three specific improvements. Households with very low HQI scores did invest in better construction materials, both for exterior walls and floors. Gaining access to electricity was another crucial aspect in improving the living conditions for households in the first quintile.

7.2 Migrants and remittances

Before being able to analyse the impact of migration on wellbeing levels of households at the place of origin, it's important to evaluate characteristics and changes of remittances and migration over the survey period. Figure 14 visualizes migrants per household for all three survey waves. Migrants are identified as such if they have lived away from the household for three months or more. In 2013 and 2018, more than half of all surveyed households had at least one migrant. The second survey wave registered the least amount of migrants per household in the observation period. 58% of all households didn't have a single migrant in 2015. The percentage of households having one migrant decreased from 2013 to 2018, while there were more households with 2 or 3 migrants in the last survey wave. Over all three survey waves, sending one household member away was the most popular choice among migrant households.

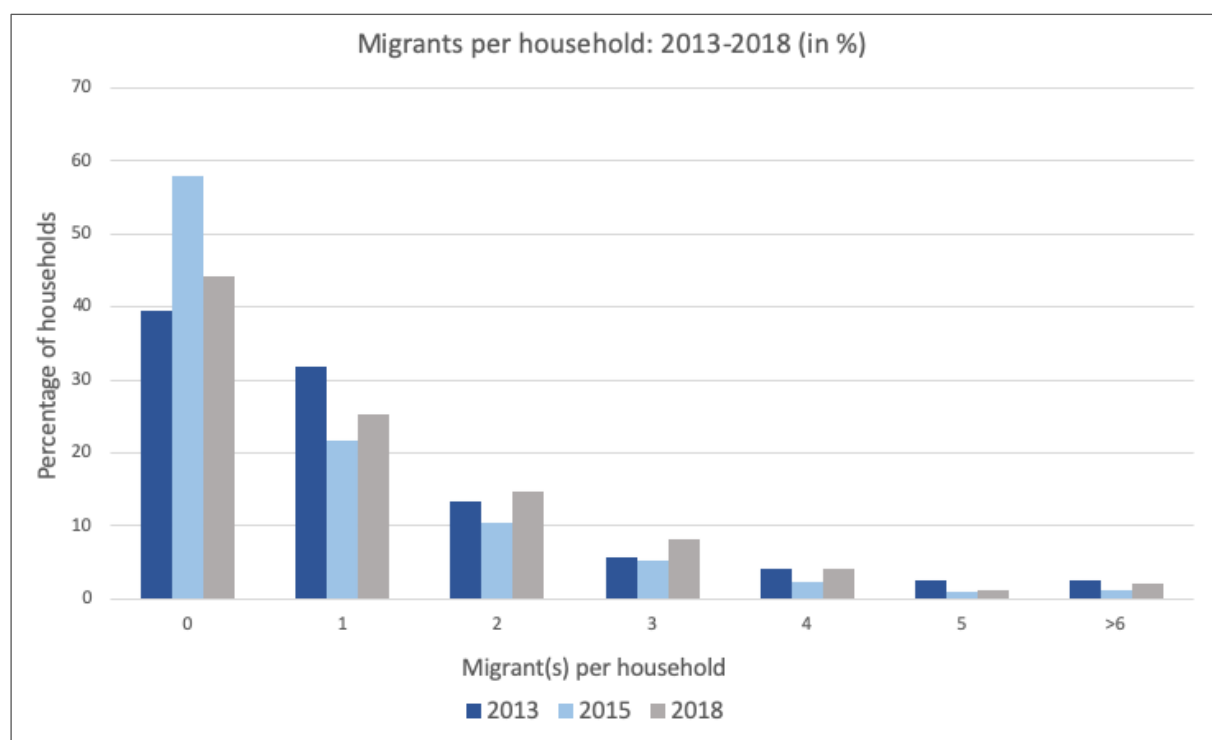


Figure 14: Migrants per household: 2013-2018

In 2013, 37% of all surveyed households mentioned that they received remittances during the previous 12 months. The share of remittances receiving households was slightly lower in 2018 at 30%. In 2015 however, the share of households with remittances registered a substantial decrease with only 18%. In 2015, the year where the share of non-migrant households was

largest, the share of households with remittances was smallest. The first survey wave simultaneously has the highest rates for migrant and remittances-receiving households. From the 831 surveyed households, only 30 non-migrant households received remittances at some point during the observation period. Remittances were thus almost exclusively reserved for migrant-households. In 2013, 61% of migrant-households received remittances compared to 46% in 2015 and 54% in 2018. The 7th instalment of the Ghanaian Living Standards Survey determined that remittances represent 1.4% of a household's annual income. (vgl. GHANAIAN STATISTICAL SERVICE 2019, 213) It is unclear how the importance of remittances varies for different income groups, Adams and Cuechuecha nevertheless found that the amount of remittances often determines the impact of migration on poverty in the Ghanaian context. 65% of households with remittances received monetary transfers of 1000 Ghanaian cedi or less during the five-year observation period. Only 4% of all surveyed households received more than 5000 GHS when combining remittances from all three survey waves. 8 households recorded particularly high sums of remittances, the most astonishing one came from the Upper West region, where one household indicated to have received 46.900 GHS during the survey period.

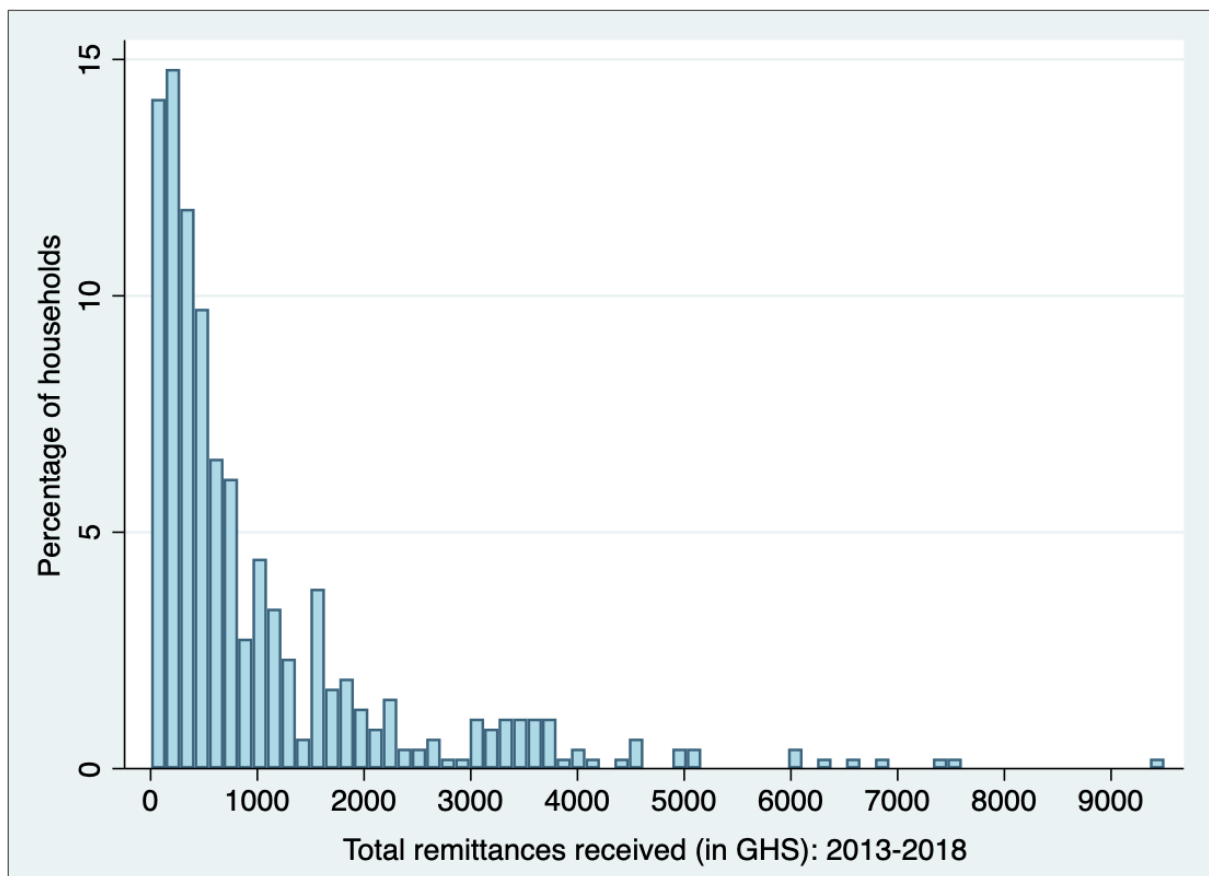


Figure 15: Total remittances received: 2013-2018

When comparing the means of total remittances received in the different survey regions, households in the Brong Ahafo (1362 GHS) and Volta region (1246 GHS) had substantially higher remittances than households in the Northern (752 GHS) and Upper East region (872 GHS). Since there were three households in the Upper West region that reported extremely high remittances (17.700 GHS, 22.700 GHS and 46.900 GHS), the mean value over the 5-year period (2755 GHS) is more than twice as high as in the Brong Ahafo region. When eliminating these three households from consideration, the mean total remittances in the Upper West region are very similar to the Northern and Upper East region. There is no way of actually verifying if these households received those extremely large sums of remittances, hence it is important to be careful when interpreting the results and drawing comparisons. Furthermore, there are no statistically significant differences between the mean total remittances of survey regions. Indications that households from the three most northern regions receive less remittances than other Ghanaian households are in line with previous empirical findings. The majority of migrants from northern Ghana migrate internally, only very few can finance a move abroad. International Ghanaian migrants predominantly stem from central and southern regions, characterized by substantially higher welfare levels. The observation that central and southern regions receive more remittances is not really surprising, since those regions have higher rates of international migrants than their northern counterparts. Adams and Cuechuecha already established in their research that international remittances flowing back to Ghana are up to 3.5 larger than internal monetary transfers. (vgl. ADAMS & CUECUECHA 2013, 38)

7.3 Impact of migration and remittances on wellbeing

The impact of migration and remittances on local development in migrant sending regions has been a topic of great controversy for many decades at this point. In this last part of the analysis I evaluate the development of wellbeing levels, measured by the housing quality index, for households with different levels of remittances. The central question is if remittances have impacted the propensity to invest in housing and if remittances receiving households were thus able to improve their wellbeing over a five-year stretch. In a first step, I look at the evolution of housing quality index scores for five different remittances groups. Households are divided into quintiles, separating the sample according to the total of monetary

remittances received during the three survey waves. The five different remittances groups range from “Very low” (<200 GHS), “Low” (201-400 GHS) and “Moderate” (401-800 GHS) to “High” (801-1700 GHS) and “Very high” (>1701 GHS). Figure 16 comprises housing quality index scores for the five remittances groups in the first and last survey wave. When comparing the 2018 to the 2013 scores, no significant changes are observable for the three lowest remittances groups. Housing quality seems to have taken a hit for households with high and very high remittances, similar to the decrease in housing quality observed when discussing dynamics of different wellbeing groups. When comparing the remittances groups with each other, some interesting differences can be observed. Households with very low, low and moderate remittances don’t significantly differ in housing quality scores over the observation period. Even households with high remittances have comparable housing quality, although their index scores are slightly elevated. Households with very high total remittances however, seem to have considerably higher housing quality than at least some of the other remittances groups. To determine if there are statistically significant differences between means of the five remittances groups, I first run a one-way analysis of variance (ANOVA) in Stata 16.1. The p-value for the first survey wave was 0.0007 and 0.0052 for the last wave. Since both values are below the 0.05 significance level I can reject the null hypothesis and assume that at least two of the five groups have significantly different mean values. To find out which remittances groups have different means you can for one, check the confidence interval plots. If the confidence intervals of groups overlap, their means are usually not statistically different from each other. Since the visual method is not always very exact, I run a Tukey’s range test in Stata 16 which compares each group with all the other groups, offering p-values for each comparison in the process. When looking at the results of said Tukey’s test I conclude, that the mean of the very high remittances group is statistically different to the mean of both the very low and the low remittances group. Households with very high remittances over the 5-year observation period have higher mean levels of wellbeing than households that receive low or very low amounts of remittances. Even after finding some statistically significant differences, I still don’t know if there is a tangible link between improvements in housing quality and the amount of monetary transfers received from migrants. To address this question, I calculate the variation rate of housing quality index scores from the first to the last survey wave and evaluated the same remittances groups.

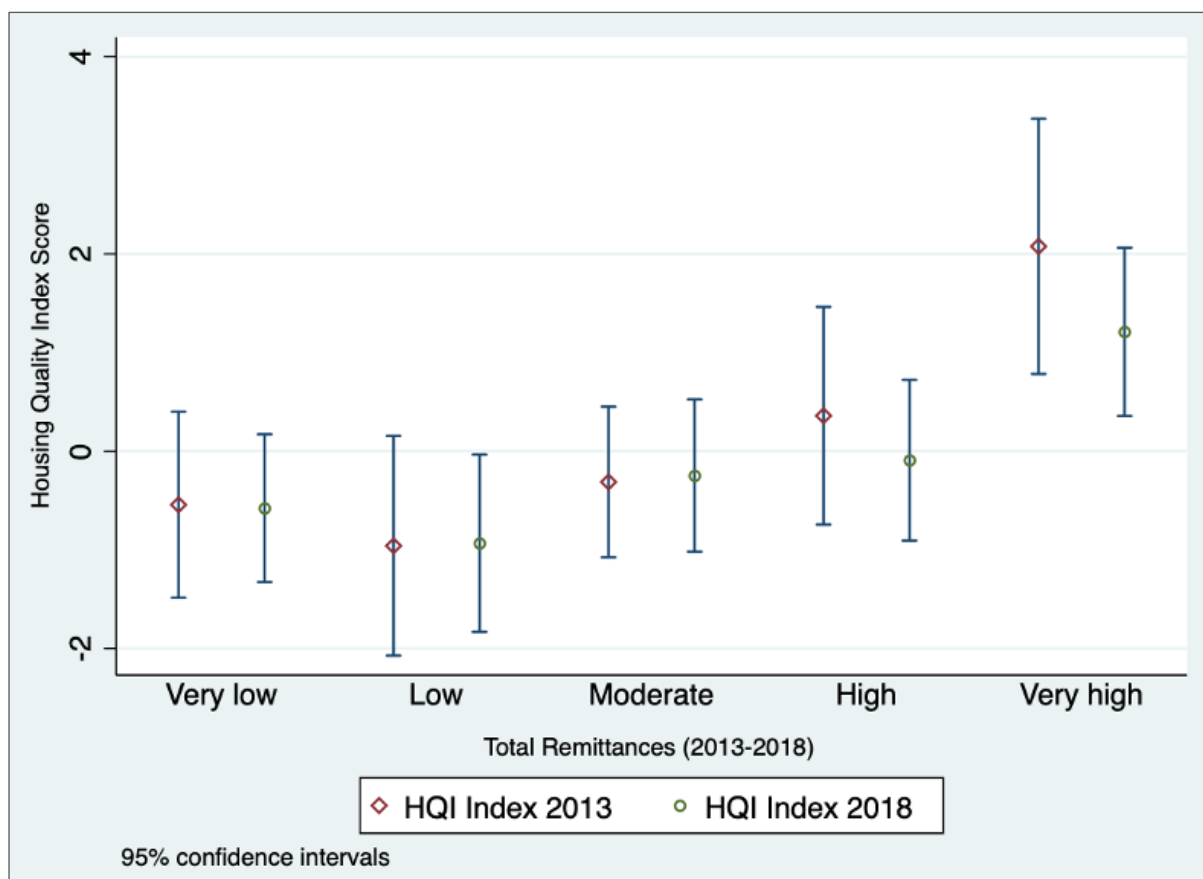


Figure 16: Housing Quality Index scores for 5 different remittances groups: 2013-2018

When running a one-way ANOVA for the housing quality variation rate and the quintiles of total received remittances, no statistically significant differences between means are observed. The p-value of the model is 0.3525, which is substantially larger than the 0.05 significance level. With the data at the hand I cannot say that the variation in housing quality was significantly different between remittances groups. The hypothesis, that households with high remittances levels are more eager to invest in housing and improve their wellbeing than low-remittances households, has to be refuted. Furthermore, no significant differences are found between households with and without remittances.

Seeing that households with very high remittances have significantly higher wellbeing levels than households with low remittances, an important question is if better-off households in fact receive more remittances than disadvantaged households. This notion is particularly important when discussing the inequality reduction potential of remittances in the Ghanaian context. To assess remittances levels of different wellbeing groups I once again use quintiles for the housing quality index scores in the base year 2013.

. oneway HQI_Variation_Rate Quintiles_New_Total_Remittances					
Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	136452.504	4	34113.1259	1.11	0.3525
Within groups	14605395.4	474	30813.0704		
Total	14741847.9	478	30840.6859		
Bartlett's test for equal variances: $\chi^2(4) = 15.0571$ Prob> $\chi^2 = 0.005$					

Table 10: Output table of the one-way ANOVA for housing quality variation rate and remittances groups

Figure 18 and 19 visualize the results of this analysis. Over the 5-year period, mean remittances were highest for households with very high initial wellbeing levels. Households with low and moderate housing quality in the first survey wave received similar amounts of remittances during the survey period. Households with low initial HQI scores received 910 GHS on average, mean remittances were slightly higher for the moderate group at 1046 GHS. Households with very low and high baseline wellbeing also had very similar mean remittances from 2013 to 2018; 1310 GHS for households with very low initial housing quality and 1283 GHS for households with high HQI scores. Households with very high initial housing quality recorded the largest mean remittances during the observation period with 2304 GHS. There are no statistically significant differences between means of wellbeing groups after analysing the results of the Tukey's range test, except "5 vs 2". Mean remittances of households with very high initial wellbeing are thus significantly larger than those of low-wellbeing households. The hypothesis, that better-off households receive more remittances than disadvantaged households, can partially be validated when comparing the fifth to the second quintile. Differences in means are however not significant when comparing households with very high housing quality to households with the lowest HQI scores. Over the 5-year period, remittances have been very similar for wellbeing groups. The only group that seems to receive substantially higher remittances than everyone else is the collection of households with very high baseline wellbeing. It is important to add that the range of the 95% confidence intervals is considerably larger for the fifth quintile, meaning that there is a relatively large margin of error when interpreting the results.

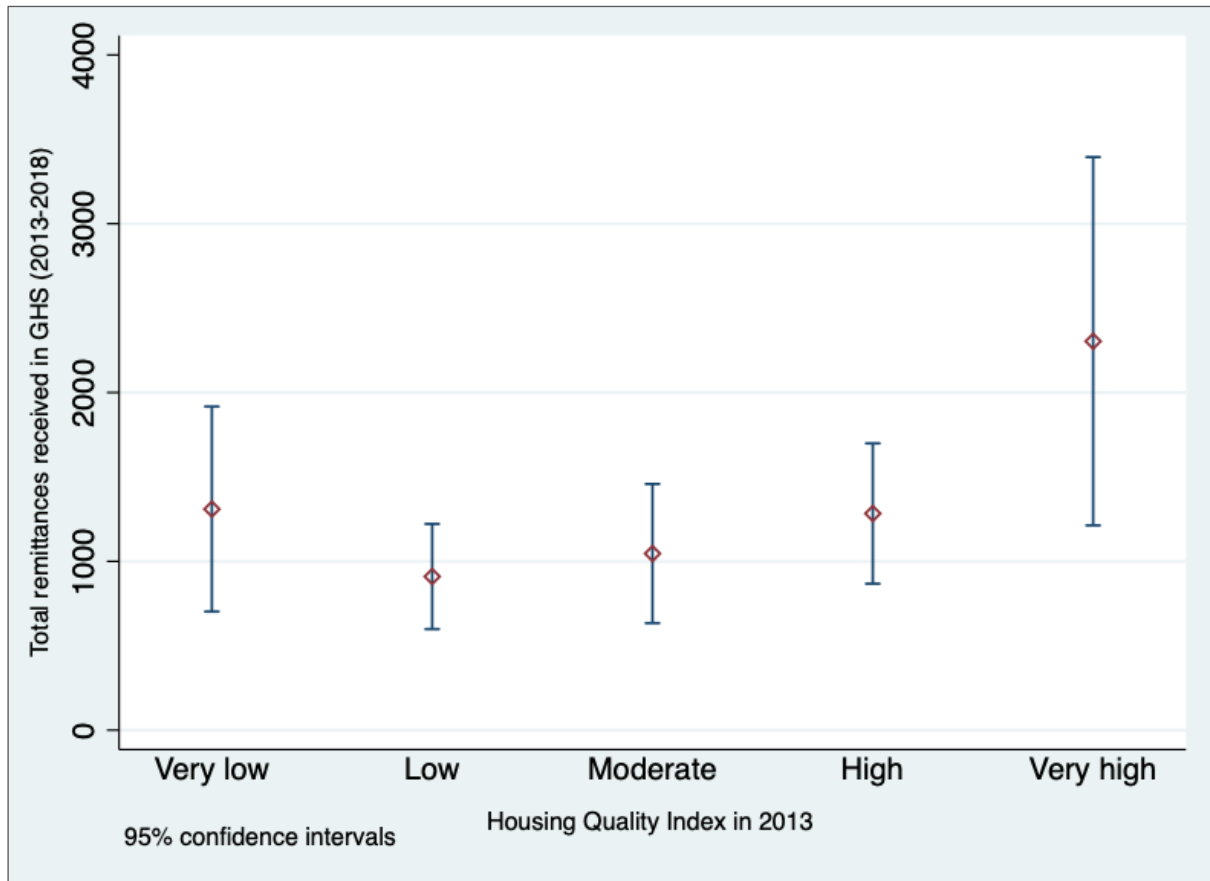


Figure 17: Total remittances received (2013-2018) for 5 different baseline wellbeing groups

```
. pwmean New_Total_Remittances, over(Index_2013_Quintile) mcompare (tukey) effects
```

Pairwise comparisons of means with equal variances

over : Index_2013_Quintile

	Number of Comparisons
Index_2013_Quintile	10

New_Total_Remittances	Contrast	Std. Err.	Tukey t	Tukey P> t	Tukey [95% Conf. Interval]
Index_2013_Quintile					
2 vs 1	-399.398	432.2266	-0.92	0.888	-1582.948 784.1523
3 vs 1	-263.4349	435.6256	-0.60	0.974	-1456.292 929.4225
4 vs 1	-26.32122	430.06	-0.06	1.000	-1203.939 1151.296
5 vs 1	994.3166	441.7272	2.25	0.163	-215.2489 2203.882
3 vs 2	135.9631	435.6256	0.31	0.998	-1056.894 1328.82
4 vs 2	373.0767	430.06	0.87	0.909	-804.5409 1550.694
5 vs 2	1393.715	441.7272	3.16	0.015	184.1491 2603.28
4 vs 3	237.1137	433.476	0.55	0.982	-949.8577 1424.085
5 vs 3	1257.751	445.0536	2.83	0.039	39.07749 2476.425
5 vs 4	1020.638	439.6075	2.32	0.140	-183.1232 2224.399

Table 11: Output table of the Tukey's range test for total remittances and baseline wellbeing

8. Discussion

The results from this explorative analysis of the “Migrating out of Poverty” data for five Ghanaian regions are very diverse. When discussing housing quality of the surveyed households, some universal observations can be made. First of all, all survey regions have registered significant increases in electricity access over the observation period. Another aspect of housing that seems to have been improved from 2013 to 2018 is the construction material of exterior walls of dwellings. The share of surveyed households with, what I classified as, “finished walls” increased substantially from 44% in 2013 to 56% in 2018. Households with very low baseline wellbeing have shown the largest increases in housing quality over the survey period. Electricity access and construction materials, both for floors and exterior walls, have been the main aspects that the most disadvantaged households improved from 2013 to 2018. The explorative data analysis has shown that households with very low wellbeing-levels have a tendency to invest in housing, much more so than the households with higher wellbeing-levels.

Divergences between northern and southern Ghanaian regions have developed with the presence of the British colonial regime from the late 19th to the middle of the 20th century. The colonial focus on natural resources in central and southern regions of the country and the simultaneous exploitation and relocation of labour force in the North have strongly contributed to unequal development rates. After independence, the Ghanaian government has largely continued to push the narrative, that was established during colonial times, that fertile agro-ecological zones, resource abundant areas and industrial centres have to be supported, while northern savannah regions don’t offer much for national growth. Differences between northern and southern regions are also visible when comparing wellbeing levels. The share of households with access to safely managed improved drinking water sources in the Upper West and Upper East region is significantly lower than in the other survey regions. The strongest discrepancies are observed between the two “Upper” regions and the Volta region in the South. The share of households with electricity access was significantly lowest in the Upper West and Upper East region during the first survey wave. Strong increases in electricity access have been registered in all regions over the survey period but the Volta region still recorded the highest share of households with electricity access in 2018. Construction materials used for exterior walls differ significantly between survey regions. 81% of household dwellings in

the Upper East region have walls made out of mud, adobe or cane wall. In the other four survey regions, at least 50% of the respective households have used more robust building materials like cement blocks, bricks or stones. When analysing housing quality index scores on the district level, differences in wellbeing are largest between Ghana's north-eastern and south-eastern territories. Ghanaian districts in the north-east of the country have the lowest housing quality while households from the south-east record the highest HQI scores. Southern Ghana has concentrated large parts of the national wealth over the 20th and 21th century, wellbeing levels of households seem to follow a similar pattern. Wellbeing levels are rather homogenous in both "Upper" regions, while HQI scores are more heterogenous in the Brong Ahafo, Northern and Volta region. Findings on housing quality in this thesis are generally in line with observations made by the latest Ghanaian Livings Standards Survey (GLSS 7). The north-south divergence in housing quality is clearly visible in both the GLSS and MOOP data. The observation that households in the Upper West region had higher HQI scores than the Northern and Upper East region, with whom they are usually associated with, is related to the fact that most Upper-West households surveyed in the Migrating out of Poverty programme have used very robust and durable building materials for their dwellings. Only three districts from the Upper West region were surveyed by the MOOP research team, this has to be taken into account when interpreting and comparing the results across regions.

81,5% of all sampled households had at least one migrant in one of three survey waves. Since the Migrating out of Poverty programme is tailored to the migration-development nexus, there was a strong incentive from my side to find potential impacts of migration on left-behind households at the places of origin. Remittances are usually seen as the most tangible link between migration and development in sending regions, which makes them a central unit of analysis in my research. There have been statistically significant differences in housing quality between households with very high remittances and households with low and very low remittances. Households with the highest remittances have substantially higher index scores than households in the two lowest quintiles. Nevertheless, this observation alone doesn't prove the existence of a causal link between the amount of remittances and the wellbeing levels of households. After calculating the variation rates for housing quality, I ran a one-way analysis of variance, comparing differences of means between remittances groups. No statistically significant differences between means were found during this analysis. My conclusion

is that remittances might be able to influence housing quality in migrant-sending regions, with the data at hand however, I wasn't able to establish any causal relationships between the amount of monetary remittances and increases in objective wellbeing of receiving households. The next step in the analysis was to check if there were links between initial wellbeing levels of households and the amount of remittances they received. Significant differences were found between households with very high baseline wellbeing and households with low initial wellbeing. Households with very high objective wellbeing levels in the first survey wave received, on average, more than twice the amount of remittances than households with low baseline wellbeing. Households with the very lowest wellbeing levels in the first survey wave had the second highest mean remittances during the observation period. Interpreting differences between wellbeing groups has proven to be difficult, mainly due to the fact that the majority of comparisons don't have any statistical significance.

Assessing the migration-development nexus along rigid neo-classical or structuralist lines is not possible when interpreting the results of my analysis, nor should it be the goal. Over the 5-year observation period, changes in housing quality of 831 sampled Ghanaian households could not be linked to the amount of migrant remittances they received. I am therefore not able to affirm nor deny the strong theoretical positions held by optimists or pessimists. As pluralist approaches have argued, the reality of the migration-development nexus probably lies somewhere in-between the extreme views of both sides. For one, I do have indications that better-off households tend to receive significantly higher remittances than at least some disadvantaged groups, which would be in line with the argumentation of structuralist thinkers. These findings are supported by Ackah and Medvedev (2010), who established in their research that wealthy Ghanaian households receive higher remittances than poor households. One of the most important arguments from development-optimists is based on the assumption that out-migration is able to reduce poverty and inequality in sending regions. If households with high initial levels of wellbeing are the ones receiving the highest remittances, as seen in my analysis, inequalities between households of the sending community are not reduced but even further aggravated. Myrdal's theory of cumulative causation comes to mind when talking about reinforcing inequalities in migrant-sending regions.

Where optimists believe that an initial increase of inequality might be necessary to assure a sustainable reduction in the long run, pessimists see migrant-sending households as trapped victims of exploiting institutions and structures. When exploring Ghana's migration history and peeling back the layers over the last 150 years, exploiting structures play an essential role in the country's development. Northern Ghana was part of large trading networks and transregional markets in the pre-colonial era but was subsequently neglected once British rulers took control. The lack of natural resources reduced the role of northern territories to providers of manual labour. The neo-classical idea of attracting workers from labour-rich regions to work in resource- and capital-rich areas was followed by the colonial administration, with the aim of growing the lucrative cocoa and gold industries. Where neo-classists like Kindleberger (1985) believe that migration triggers rapid economic growth in both sending and receiving regions, the reality in Ghana is that development was mostly reserved for urban centres and industrial hotspots. Neither the colonial administration nor the early Ghanaian governments were keen in investing in northern regions, since they weren't considered to be contributing factors for rapid growth or high export gains. The internal migration flow from north to south, that was jumpstarted when the colonial administration was in dire need for mine workers, is still very active in the 21st century. Even though many successful attempts have been made to reduce poverty and increase wellbeing in Ghana, inequalities between regions persist until today.

Pluralist approaches, such as the new economics of labour migration and the livelihood approach, identify the household as the central unit of analysis. During my analysis I have observed that households with remittances almost always have at least one migrant. Households that don't send at least one member away are in most instances excluded from receiving remittances. In the most recent survey wave in 2018, 54% of all migrant households did receive some form of financial assistance by a migrant member. According to Stark and Bloom (1985), who represent the new economics of labour migration, migrating can be conceptualized as an informal contract between households and members that move. Households pay for initial costs of moving and in return, expect some form of assistance from the migrant member once they have settled at their new place of dwelling. The fact that almost half of migrant households don't receive any remittances in the last survey wave could have different explanations. Egger and Litchfield (2019) find that the impact of migration on household

wellbeing depends on counteracting factors. Migration usually provokes gains and losses for migrant-sending households. However, those aspects usually don't materialize at the same pace. Detrimental effects of migration, like the loss of labour force or the expenses of moving, are felt immediately on the household level. Positive effects, most notably remittances, might take a while to actually effect migrant-sending households. Migrants need to settle in at their new place of dwelling and have to build up sustainable livelihoods before being able to send back financial assistance to their respective households.

Other researchers that have analysed the Migrating out of Poverty data for the Ghanaian context, like Awumbila et al. (2016), Teye et al. (2019a) and Egger and Litchfield (2019), have concluded that the short observation period might be one of the key reasons for not finding significant impacts of migration on household wellbeing and development in sending regions. Going into my analysis, the idea was to extend the observation period from 2 to 3 survey waves and use the full panel nature of the available data. I conclude that increasing the survey period from 3 to 5 years probably still isn't long enough to identify some of the most important impacts of migration. Remittances have proven to be rather small over the 5-year observation period. In order to make investments, such as improving the quality of dwellings, households probably have to save up before being able to carry out such expenses. How households spend their remittances has been a hotly debated topic over the last decades. Some empirical work suggest that remittances are mostly used for consumption purposes while other studies have proven the increased willingness of households to invest. Pluralist approaches, such as the new economics of labour, have concentrated on remittances as a safety net and risk diversification tool of households. In their eyes, remittances are more often than not used to maintain and secure wellbeing levels, rather than to improve them. The complexity and the lack of consistent empirical findings in migration research has left much room for interpretation when discussing the results of my analysis. To sum up the findings of my analysis and put them into context for a final time, I am revisiting the research question and the hypotheses that were proposed in the introductory chapter of this thesis.

Answering the research question and hypotheses

Research question = Did the wellbeing of households in Ghanaian migrant-sending regions change from 2013 to 2018 and were these changes related to migrant remittances?

When looking at the overall development of housing quality scores, no statistically significant trends or changes were observed for the survey regions. When discussing individual housing quality variables, electricity access and construction materials for walls have improved, while other aspects such as the access to natural gas, telephones, sewerage systems and garbage collection, have seen considerable decreases. No causal link between changes in housing quality and the amount of remittances were found during my analysis.

H1 = The housing quality of sampled households has improved over the 5-year observation period.

When analysing changes within and across survey regions, housing quality index scores didn't improve from 2013 to 2018. When comparing household groups with different initial wellbeing levels, substantial improvements in housing quality have been recorded for households with low and very low baseline wellbeing.

H2 = Households in northern Ghana have significantly lower wellbeing levels than households in southern Ghana.

Households in the Upper East and Northern regions have recorded the lowest mean housing quality scores over the observation period. The most southern survey region, Volta, has had the highest mean housing quality from 2013 to 2018. Mean housing quality index scores for the Brong Ahafo and Upper West regions are rather moderate. Housing quality has been significantly lower in Ghana's north-east than in south-eastern areas.

H3 = Households with high baseline wellbeing levels receive more remittances than households with low initial wellbeing.

Households with the highest baseline wellbeing (5. Quintile) receive more than double the amount of remittances than households with low baseline wellbeing (2.Quintile). Differences in means are statistically significant. Households with very low initial wellbeing levels (1.Quintile) receive the second highest mean remittances of all wellbeing groups. However, differences in means are not statistically significant here.

H4 = Remittances increase investments in housing quality and improve wellbeing levels of left-behind households.

Investments in housing were highest for households with very low initial wellbeing levels but no causal link could be made between improvements in housing quality and the amount of remittances received by left-behind households.

Strengths, limitations and improvements

In this last section of the discussion I am presenting the strengths and limitations of my analysis and propose several possible improvements that could be made regarding further research. The thesis manages to combine empirical evidence from Ghana with theoretical frameworks and ideas from migration, development and wellbeing research. It successfully visualizes differences in wellbeing levels for household groups and regions and interprets these characteristics in the light of the complex historical context Ghana has had. The thesis links structure and agency by explaining which factors are in the way of equal development opportunities and assessing how households are trying to navigate this system.

The housing quality index has proven to be an effective tool for measuring objective household wellbeing, but it could be still improved. The index was constructed by using multiple correspondence analysis to generate weights for each indicator. MCA has not been a very prominent choice for generating indicator weights in migration research but is very effective and promising when dealing with categorical variables.

The index in my thesis is an advancement of the index built by Eva Maria Egger. Adding variables that measure access to specific services has probably reduced some of the rigidity and stable nature of the housing quality index as proposed by Egger. As currently constructed, my index is prone to give higher scores to urban than to rural regions. Drinking water quality and construction materials are usually significantly better in urban than in rural Ghana, both aspects are crucial determinants of housing quality in my analysis. During the construction process I tried adding a variable for overcrowding by calculating the number of people per room for each household. This variable had an important contribution in the first dimension of my model and would have been an important tool to reduce the urban favouritism of the index.

Unfortunately, the necessary data to construct this variable was not available in all three survey waves. Including some form of overcrowding measurement would be an important next step when trying to improve the housing quality index used in this thesis.

The inclusion of subjective elements in the wellbeing index would most likely add another important dimension that wasn't analysed in this thesis. Combining objective and subjective elements of wellbeing allows for a more complete understanding of living quality. The Migrating out of poverty data offer variables on subjective wellbeing, unfortunately they are only available for the second and third survey wave. Differentiating between households with internal and international remittances could further enhance the explanatory quality of the index. Differences in impacts of internal and international remittances have been substantial in Ghanaian empirical research. International migration variables weren't coded in the first survey wave, which eliminated the possibility of including them in my research.

I will join the other researchers that have used the Migrating out of Poverty data by saying that extending the survey period might enable studies to see more concrete impacts of migration. The lack of longitudinal data, not only in the Ghanaian but also in the African context, has hindered growth in understanding the complex interplays of migration and development. The uniformity of questionnaires and data in survey waves is another important factor that massively enhances the possibilities and the potential of migration research. A final limitation of this study lies in its (in)ability to interpret findings at different spatial levels. The Migrating out of poverty data are not representative on the district, regional or national level. Migration households were purposely oversampled and the number of sampled households varies between districts and regions. One thus has to be very careful when interpreting and comparing the results between different spatial entities.

9. Conclusion

This research aimed to identify impacts of migration and remittances on the wellbeing of households in migrant-sending communities. An exploratory analysis of Ghanaian panel data over a 5-year period didn't reveal any significant causal links between the amount of remittances and changes in wellbeing levels. However, the analysis has provided some other

interesting results that have been interpreted in the light of a diverse migration and development literature. This thesis has shown that, when interpreting wellbeing through housing quality, Ghanaian regions have very different wellbeing levels. Ghana's north East has had considerably lower wellbeing levels than its south-eastern territories. The initial wellbeing levels of households seem to have at least somewhat of an explanatory value when assessing the amount of remittances households receive. Households with very high baseline wellbeing receive significantly higher remittances than some of the most disadvantaged household groups. These findings could be interpreted along structuralist and pessimist thinking, arguing that migration and remittances don't reduce inequalities but rather increase them. This thesis has also shown that households with different initial wellbeing levels have different propensities to upgrade their living quality. The most disadvantaged households have proven to be the ones that have increased their housing quality substantially over the 5-year survey period. Even though I haven't been able to link remittances to this improvement of households with low wellbeing levels, they seem to have the capacity to invest in housing upgrades.

Learning about the importance and the particularities of human mobility in Ghana has helped frame some of the findings of my analysis. The north-south discrepancies in development levels, seen through the housing quality scores in my thesis, have clear historical connotations and date back to discriminatory colonial practices and structures in the 19th and 20th century. Analysing decades of literature on the migration-development nexus has helped me understand how heterogeneous migration effects can be and how easy it is to lose yourself in very rigid theoretical concepts. When discussing migration and its impacts, there isn't one universally applicable framework and we can't definitively say that migration is either good or bad for local development in migrant-sending communities. The local context is extremely important when discussing and interpreting migration impacts and the specific structures and policies have an incredible influence on the development potential of migration and remittances. Disadvantaged people and households haven't simply accepted the structural constraints and unfair systems that the capitalist expansion of the global north has created for them. These people are able to manoeuvre the difficult situations they have been put in and are able to play the cards they have been dealt. Today, migration is seen as an active way of diversifying risks and assets, rather than just a simple flight from poverty. This diversification process usually takes place on the household level, where some members leave and are

assigned an important role of providing assistance to their families back home. The importance of the household as a unit in migration has been proven in my analysis as well.

The housing quality index built in my thesis is probably its biggest asset and could be very interesting for research going forward. Combining traditional housing quality factors such as drinking water quality or construction materials with other variables, for instance some that measure the access to specific resources or services, reduces the rigidity of the housing quality index and increases the potential to analyse wellbeing changes over a shorter period. Using housing quality as a measurement for household wellbeing has proven to be an important alternative to other wellbeing measurements such as consumption. Further research should most definitively focus on building reliable panel datasets in developing regions and countries such as Ghana. Having consistent and comparable data will massively increase the knowledge on migration impacts and the role remittances play in that regard. Lastly, I would encourage future researchers to include both objective and subjective measurements when assessing household wellbeing.

This thesis has been extremely helpful in understanding the complexities that come with the migration-development nexus and has, in my opinion, been able to show the highly heterogeneous nature of migration and its impacts. The impacts of migration on migrant-sending and migrant-receiving communities will not only dictate the public opinion in the coming years and decades, they will also strongly influence future migration policies. Only when migration is investigated and understood by policy-makers, its full potential can be realised.

Sources

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