

Drivers of Inequality

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Vietnam

- Economic restructuring and trade liberalization further drives economy towards wage work, service work, the manufacturing sectors.
 - Structural changes drove poverty down in absolute terms, but leave those in vulnerable positions consistently at-risk of slipping into or worsening existing poverty.
 - Economic inequality in Vietnam intersectional between ethnic minorities, rural populations, regional and gendered dimensions.
 - Ethnic minorities increase in economic inequality, driven by worse returns on assets (human capital and land) and worse access to endowments (land and educational infrastructure).
 - Environmental degradation and environmental shocks consistently worsen within-sector inequalities for ethnic minority and female population.
 - Vietnam in vulnerable position to increasing exogenous shocks due to climate change, building capacity against which may require focus shift on risk management and preventative measures
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Vietnam's economy is now firmly in the third decade of ongoing economic reform (*Doi Moi*) as a market-based economy, which lead to remarkable growth phases through opening the economy to international trade while, seen over the bulk of its population, attempting to keep inequality rates managed through policies of controlling credit and reducing subsidies to state-owned enterprises (Bui & Imai, 2019).

Poverty in Vietnam is marked by a drastic reduction in absolute terms over this time with some of the decline directly attributable to the liberalization of markets over the country's growth more generally (N. V. T. Le et al., 2022; McCaig, 2011; World Bank, 2012). While the rate of decline slowed since the mid-2000s (VASS, 2006, 2011), it continued declining in tandem with small income inequality decreases. The overall income inequality decrease that Vietnam experienced from the early 2000s suggests that its growth has been accompanied by equity extending beyond poverty reduction (Benjamin et al., 2017). On the other hand, Le et al. (2021) suggest a slight increase in overall income distribution from 2010-2018. At the same time, the ones most affected by poverty through welfare inequalities stay unaltered, as do largely the primary factors accompanying it: There is severe persistent poverty among ethnic minorities in Vietnam (Baulch et al., 2012),

concomitant with low education and skills, more prevalent dependency on subsistence agriculture, physical and social isolation, specific disadvantages which become linked to ethnic identities and a greater exposure to natural disasters and risks (Kozel, 2014). The country's overall estimated Gini coefficient fluctuates between 0.42 and 0.44 between the years 2010 and 2018, with the highest inequality in the the Central Highlands in 2016, though absolute income may be rising, with the top quintile having 9.2 times the income of the lowest quintile in 2010 and 9.8 times in 2016 (Q. H. Le et al., 2021). Economic inequality and poverty in Vietnam thus underlies an intersectional focus, between ethnic minorities, regional situations, rural-urban divides and gendered lines, one which exogenous shocks can rapidly exacerbate as the example of the COVID-19 pandemic has recently shown (Ebrahim et al., 2021).

In the 1990s, as the initial stages of the Doi Moi reform bore fruit with economic growth, the first amplifications of inequalities along new rural-urban boundaries became equally visible. There are two complementary views on the primary dimensions of rural inequalities. On the one hand, the urban-rural divide may be driven by structural effects: the welfare returns to education and agricultural activities changed dramatically from, and with it the requirements on policy adaptations required for stemming inequality. Nguyen et al. (2007) argue this for the period of 1993-1998, with their findings that income returns to education improved dramatically over this time and arguing through this that suggested development policies had a strictly urban bias — on the whole they would benefit both from better education and vastly benefit from the restructuring of Vietnam's economy. This view was in turn confirmed when Theil Index decomposition found within-sector inequality remaining largely stable while between-sector inequality rose significantly (Fesselmeyer & Le, 2010). On the other, Thu Le and Booth (2014) argue that the urban-rural inequality continued to increase over the years due to both covariate effects and the returns to those covariate effects, primarily education age structures and labor market activities, but also geographic location.

The gap between urban and rural sectors grew, a gap which would continue to widen until 2002, when within-sector rural inequalities started to become more important for inequalities than those between the sectors (Fritzen et al., 2005; Thu Le & Booth, 2014). In the time of within-sector inequality becoming more pronounced many studies, while important contributions to continued inequality research, had a tendency to mask those inequalities in favor of continued analysis of between-sector trends — often to the detriment of the high degree of heterogeneity depending on geographic characteristics such as remoteness or cultural factors, as Cao and Akita (2008) note. In a recent study, Bui and Imai (2019) build on the insights of these viewpoints and also find access to basic education the linchpin of improving rural welfare while its lack combined with economic restructuring precluded many from equal opportunities toward human capital improvement. They found that, as within-sector became more pronounced again after 2010, the large proportion of uneducated heads of households in rural sectors and low social mobility of rural poor combine to increase within-sector inequality while the economy overall changing toward salaried work compounded within-rural and urban-rural disparities. Early income studies generally highlighted the important role of agricultural incomes in reducing, or at the very not exacerbating, income inequality (Benjamin & Brandt, 2004). Benjamin et al. (2017) expand on this over a longer time-frame by decomposing different household income sources underlying Vietnam's structural economic changes.

They find that, while there is an overall decrease in income inequality throughout Vietnam between 2002 and 2014 and the urban-rural divide also continued its downward trend, rural inequality indeed increased over this time. Wage income and family business income were the main drivers of overall inequality in 2002 (accounting for over 30% of income but 60% of inequality) and remittances add a small share on top, which, while decreased in effect (risen to 42% of total income), remain majorly correlated with income distributions and thus income inequality. Bui & Imai (2019) confirm this with a Gini coefficient of 0.36 to 0.39 between 2008 and 2010 which, decomposed into Theil indices for between rural and urban and within rural sectors show that rural-urban inequalities are smaller and decreasing, while within-rural inequalities are large and increasing. Thus, while the study points to both more prevalent and equally distributed labor markets and wage labor opportunities, these effects apply to the overall population and not just within-rural inequalities which are driven in large part by ethnicity, education and environmental factors.

Ethnic minorities in Vietnam are distinctly over-represented in poverty in addition to often being left behind in the development process, not least due to being extreme representatives of the economic situation of Vietnam's rural population. Ethnic minority households have a tenuous economic position - and it is deteriorating. In earlier studies on ethnic inequalities in Vietnam, a strong welfare gap between ethnic minorities and the majority was already visible. Van de Walle (2001) already views the situation of ethnic minorities inhabiting predominantly remote rural areas with lower living standards than the ethnic majority, a finding they suggest created due to environmental and structural differences (difficult terrain, poor infrastructure, less access to off-farm work and the market economy and inferior access to education) and compounded by social immobility and social isolation. Baulch et al. (2012) find that between 1993 and 2004, the welfare gap between the two groups had increased by 14.6%, two-fifths of which were due to endowments such as demographic structure and education while geographic variables make up less than one-fifth. They additionally suggest some drivers of the inequality being the lack of ability speaking the Vietnamese language or the distance to a commune or district center amplifying isolating effects, though a large part of the change was linked to temporal changes of unobservable factors - which the study conjectures to be due to negative ethnic stereotyping, a poor understanding of ethnic customs and culture and further (unobserved) variations in household-level endowments. While in 2002 the ethnic minority population living in rural areas was below 15%, it rose to over 18% in 2014 - both due to higher fertility among minorities and ethnic majority Kinh urbanizing at a higher rate - and the ratio of Kinh to minority incomes rose to more than 2.0 in 2014 (Benjamin et al., 2017). The same study finds that income inequality rose even more sharply *within* ethnic minorities, while that of rural Kinh, though increasing from 2002 to 2014, fell back to 2002 levels around 2014. These findings suggest that the primary drivers of rural income inequality are a growing gap between Kinh and minorities while at the same time a similar rising inequality develops among minority rural populations themselves. In the same vein as the urban-rural divide, Nguyen et al. (2007) thus argue for structural policy failures which essentially lowered the returns on ethnicity along sectorial dividing lines of education and primary income types.

While the effect of agriculture on inequality outcomes is an equalizing one, its future growth, and that of agricultural livelihoods, is threatened by vulnerability to risks such as natural disasters

and environmental degradation, exacerbated through climate change (Kozel, 2014). Kozel (2014) goes on to argue the continuous precarity of poor households against economy-wide shocks (such as the effect of climate change on rainfall and temperatures) but also highlights the danger of vulnerable households *falling* into poverty through generated inequalities. Looking at the particularities of flood risk management in the Ninh Binh province, Mottet and Roche (2009) find that most areas within the region are vulnerable. They find the strengths of current management lying in prevention with existing dykes designed to channel high waters, effective monitoring of weather conditions (rainfall or typhoons) and consolidation or elevation of existing residences, while the weaknesses are mainly centered around insufficient information given to inhabitants over flood risks, few compensation systems for flood victims and construction policies continuing to allow building in flood-endangered zones. Sen et al. (2021) estimate that the main barriers to better information are farmers' lack of trust toward formal climate-related services, their lack of perceived risk from climate change itself and difficulties in balancing both climate adaptation and economic benefits of interventions. They argue that, while ethnicity itself is not a barrier to information access with all farmers receiving information through informal channels — friends neighbors and market actors instead of agricultural departments or mass media — cultural issues such as language do come into play and act as a barrier. Reactionary economic mitigation efforts by households, such as reduced healthcare spending, selling of land or livestock assets, taking children out of school due to needing assistance at home can in turn lead to longer-term adverse consequences (thus, *mal-adaptation*) (Kozel, 2014).

The results are further intensification of inequality along existing social lines during extreme events such as flooding: The effects of inequalities mainly affecting ethnic minorities are illustrated by Son and Kingsbury (2020), with droughts impacting yield losses between 50% and 100%, cold snaps leading to loss of livestock and floods damaging residential structures but even more importantly disrupting livelihoods through landslides, crop destruction and overflowing fish ponds. Locally employed coping strategies, they argue, are always conditional on the strength and foresight of institutions and implemented preventative policies along local but also regional and central levels. Similarly, Ylipaa et al. (2019) analyze impacts mainly across the gender dimension to find that, resulting inequalities may be exacerbated with differentiated rights and responsibilities leading to unequal opportunities and, especially, decreased female mobility in turn increasing their vulnerability to climate impacts with a reduced capacity to adapt. Hudson et al. (2021) along the same dimension find that, while the set of relevant variables is largely similar with age, social capital, internal and external support after the flood and the perceived severity of previous flood impacts having major impacts, women tend to show longer recovery times and psychological variables can influence recovery rates more than some adverse flood impacts.

While the quantitative evidence for impacts of such shock events are relatively sparse, Jafino et al. (2021) lament the overuse of aggregate perspectives, instead disaggregating the local and inter-sectoral effects to find out that flood protection efforts in the Mekong Delta often predominantly support large-scale farming while small-scale farmers can be harmed through them. They find that measures decrease the aggregate total output and equity indicators by disaggregating profitability indicators into inundation, sedimentation, soil fertility, nutrient dynamics, behavioral land-use in

an assessment which sees within-sector policy responses often having an effect on adjacent sectors, increasing the inter-district Gini coefficient. Adaptation during these catastrophic events reinforces the asset and endowment drivers of non-shock event times, with impacts levels often depending on access to non-farm income sources, access to further arable land, knowledge of adaptive farming practices and mitigation of possible health risks such as water contamination (Son & Kingsbury, 2020). Karpouzoglou et al. (2019) make the point that, ultimately, the pure coupling of flood resilience into infrastructural or institutional interventions needs to take care not to amplify existing inequalities through unforeseen consequences ('ripple effects') which can't be escaped by vulnerable people due to their existing immobility.

Inequality in Vietnam, then, is slowly rising across the whole population distribution, runs the danger of increasing due to schisms opening within individual sectors of vulnerable groups. Rural populations experience a trend towards increasing inequality within their sector, driven primarily by the social exclusion and geographic isolation of ethnic minorities, its most precarious population. Ethnic minorities' inequality is slowly increasing due to receiving worse returns to their existing assets (especially human capital and land) and generally worse access to endowments in the first place (land and educational infrastructure). The restructuring of the economy, turning the labor force toward urban areas and within them wage work in manufacturing and service industries, leaves behind immobile rural populations whose ability to be employed for non-farm shrink further. All these factors are at risk of experiencing large negative shocks as climate change exacerbates existing extreme environmental conditions, which in turn threaten to increase economic inequalities for both the rural population at large, ethnic minorities and women especially. Women in rural areas experience worse mobility and fewer economic opportunities and are thus less able to adapt to environmental degradation. While inequality as an aggregate is kept relatively low Vietnam's growth rate, both ethnic minorities and the rural female population are thus at risk of being left behind economically.

Uganda

- Poverty and inequality in Uganda are at a fluctuating level in Uganda, with relative poverty staying roughly stable and inequality slowly trending upward.
 - National poverty line set very low, potentially hiding additional households in states of deprivation and those in danger of reverting to poverty.
 - Inequality, poverty and informal economy in close circular relation in Uganda, presenting a vicious circle for those captive within.
 - Education levels of poor people are consistently low, with those of rural population more so.
 - Inadequate access to clean water can exacerbate these inequalities, directly influencing food security, rural child education and gender inequalities.
 - The district of Isingiro especially is dramatically below national average of clean water access, and in danger of exacerbation through climate change.
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Uganda generally has a degree of inequality that fluctuates but over time seems largely unchanged, as does the share of people below its poverty line in recent years. The overall level of welfare inequality in the country had a slight upward trend, with a Gini coefficient of 0.36 calculated for the 1992/93 census and a World Bank calculation of 0.43 for the year 2019, with the coefficient rising significantly in the years 2002/03 and 2009/10 during its fluctuation (Lwanga-Ntale, 2014; World Bank, 2022d). However, the overall aggregation masks several important distinctions: Rural inequality on the whole is lower than urban inequality, with Lwanga-Ntale (2014) finding coefficients of 0.35 and 0.41 for 2012/13 respectively. Additionally, he sees quintile inequalities primarily driven by the highest quintile (0.25) with the middle-incomes less affected (0.05-0.07), also finding a significantly higher coefficient for the first quintile (0.14), however. These inequality levels remain mostly unchanged from 2012/13 to 2019/20 but hide qualitative dimensions such as the shift out of a lower-income agricultural livelihood predominantly taking place among older men who have at least some level of formal education and are from already more well-off households (World Bank, 2022d).

The World Bank (2022d) report goes on to examine the share of people below the poverty line in Uganda: around 30% of households are in a state of poverty in 2019/20, which once again fluctuated but roughly reflects the share of 30.7% households in poverty in 2012/13. Two surges in rural household poverty in 2012/2013 and 2016/17 can be linked to droughts in the country, with an improvement in 2019/20 conversely being linked to favorable weather conditions. Ssewanyana & Kasirye (2012) find that in absolute terms poverty fell significantly (from 28.5% in 2005/06 to 23.9% in 2009/10) but there are clear relative regional differences emerging, with Western Ugandan households increasing in poverty while Northern and Eastern households reduced their share of households below the poverty line. Additionally they find, while transient poverty is more common than chronic poverty in Uganda, nearly 10% of households continue to live in persistent or chronic poverty. Lastly, for a long time it has been seen as an issue that Uganda puts its national poverty line too low with the line being put between 0.94 USD PPP and 1.07 USD PPP depending on the province (lower than the international live of 1.90 USD PPP), while van de Ven et al. (2021) estimate a living income of around 3.82 USD PPP would be required for a national poverty line that meets basic human rights for a decent living.

Esaku (2021, 2021) finds a somewhat circular driving relationship between Ugandan inequality, poverty and working in what calls the shadow economy: inequality increases the size of the informal economy, as a large subsistence sector creates revenue tax shortfalls, undermines the governments efforts to attain equitable income distributions in the economy and the creation of social safety nets for the poor, who, in turn, have to turn to the informal economy to secure their livelihoods, increasing its size both short- and long-term and feeding back into the cycle. Cali (2014) finds that, already, one of the primary determinants of income disparity in more trade-exposed markets of Uganda in the 1990s were the increasing education differences leading to more disparate wage premiums. Additionally, slow structural change — further impeded by the onset of the COVID-19 pandemic, which pushed both urban and rural residents back into poverty — leaves a low-productivity agricultural sector which becomes, in combination with a lack of education, the strongest predictor of poverty: the poverty rate in households with an uneducated household head (17% of all households) is 48%

(2019/20), while already households with a household head possessing primary education (also 17% of all) nearly cuts this in half with 25% poverty rate (2019/20) (World Bank, 2022d). The World Bank (2022) calculated a Learning Poverty Indicator for Uganda which finds that 82% of children at late primary age are not proficient in reading, 81% of children do not achieve minimum proficiency level in reading at the end of primary schooling, and 4% of primary school-aged children are not enrolled in school at all. Datzberger (2018) argues these problems primarily exist in Uganda due to choosing an approach to education that is primarily assimilation-based, that is, intended to effect change at the individual-level through fostering grassroots education throughout society at large, instead of looking into more transformative policy approaches which would operate on a more systemic level, removing oppressive structures of inequality in tandem with government institutions at multiple levels.

Such personal circumstances as access to a timely education play decisive role in life and human capital development — circumstances to which decent housing as well as access to clean water are equally fundamental building blocks (World Bank, 2022d). In 1990 a policy initiative to shift from a supply-driven to a demand-driven model for rural drinking water provision was enacted which, over time, improved rural safe water coverage slightly but also made operation and maintenance of improved water sources pose a challenge that could impede long-term access to safe water. In the country, access to improved water sources rose from 44% in 1990 to 60% in 2004 and 66% in 2010 (Naiga et al., 2015). In 2019, access to improved sources of drinking water in the country is at a level of 87% in urban areas and 74% in rural areas, with relatively little inequality in rural regions between poor and non-poor households (World Bank, 2022d). Health care facilities in rural areas are generally well connected to improved sources with 94% of facilities having access to public stand posts, protected spring technology, deep boreholes and some to rain harvesting tanks, gravity flow schemes or groundwater-based pumped piped water supplies (Mulogo et al., 2018). Thus, individual households are generally less well connected than health care facilities, and rural households in turn less well than urban households.

The same study found for the Isingiro district in Western Uganda on the other hand, in 2010, only 28% of households had access to improved water (Mulogo et al., 2018). Naiga et al. (2015) investigated the characteristics of improved water access in the Isingiro district, finding that whereas the national average distance to travel for a water source is 0.2km in urban and 0.8km in rural locations, in Isingiro it is 1.5km, and of the fewer existing improved water sources, only 53% were fully functional, with 24% being only partly functional (having only low or intermittent yield) and 18% not being functional at all. Additionally, they found blocked drainage channels in some of the sources which could in turn lead to a possible health risk due to contamination of the source. Naiga (2018) sees some reasons for the low access to working improved water sources in the absence of many of the organizational characteristics prescribed by the design principles of its community-managed water infrastructure management — unclear social boundaries, missing collective-choice arrangements and a lack of sanctions or conflict resolution mechanisms — in other words, a policy failure resulting in lack of sufficient self-governance arrangements.

Such inequalities in water access often stand in direct relationship with other inequalities such as along gender, geographic or income dimensions, with fetching water traditionally being a fe-

male care role, the cost of user fees to gain access to improved water being prohibitive to poorer households, while the remoteness of many households' location makes the trek to the source more time-consuming and replacement parts for repairs difficult to source in an adequate time (Naiga et al., 2015).

Looking into the effects of climate change and its accompanying increase in climate shock events, especially droughts, on such gender roles, Nagasha et al. (2019) find that it gender roles adapt while gender inequalities tend to increase, with men participating more in firewood collection and water fetching but generally focused on assuming a single reproductive role while women played multiple roles simultaneously. Two effects they found of this exacerbation were the women often being forced to engage their children in work activities to manage the simultaneous workload, and women, due to their exclusion from landownership in the region, being brought further into a state of dependence and thus made even more vulnerable to future climate change effects. Water supply use seems to experience little change during emergency situations, and people's willingness (or ability) to pay for water is also too small to maintain water revenue without addressing the disparity in socio-economic attributes of households (Sempewo, Kisaakye, et al., 2021; Sempewo, Mushomi, et al., 2021). Taken together, this hints at one possibility of subsequent health disparity increases due to prior income inequalities and poverty during emergency situations such as climate shocks.

Access to water is also one of the primary reasons for both real and perceived food insecurity vulnerabilities, even more so during climate shocks. In Uganda, Cooper & Wheeler (2016) investigate the vulnerability of rural farmers to climate events and find that, while most farmers implement anticipatory and livelihood coping responses (54.7%), many responses only protect against very specific events (45.4%) and most had no response at all to coping with rainfall variability: while farmers with more land, education, access to government extensions and non-farm livelihoods have more capacity to buffer the shock, both wealthier farmers (droughts as highest perceived risk) and poor farmers (extreme rainfall as highest) perceive themselves most vulnerable to rainfall-based events. In the Isingiro district, Twongyirwe et al. (2019) find that most farmers (68.6%) perceive food insecurity as a problem with the overwhelming majority seeing droughts as the major contributory issue to this food insecurity (95.6%). They also find that mainly higher-income and larger farms see it as less of a problem, while 13% of all farmers report that they did not, or could not, do anything to respond to the drought effects. Lastly, even for inhabitants of wetland areas, droughts can pose problems. Yikii et al. (2017), looking at the prevalence and determining factors of food insecurity in wetland adjacent areas in the district, find that 93% of households within wetlands are already food insecure due to poverty, low levels of labor productivity and low levels of education, which they argue would worsen in droughts unless the government finds ways of promoting food and nutrition education, alternative income generating activities, drought resistant crop varieties and ways of water conservation.

Thus, while Uganda's poverty and inequality are trending towards drastically worsening over the last years, hidden disparities bring its issues in focus once disaggregated: Nationally, poverty is a looming transient affair for many households, more if increasing the country's very low national line of poverty. Inequality derives itself partly from this poverty, making it necessary for many to accept

informal work which, taken at large, in turn fosters further national inequality. The role education plays in Uganda's allocation of poverty cannot be overstated, with especially many rural children not having adequate opportunity to access timely education. This disparity could be exacerbated by poor quality access to clean water through improved water sources, which in turn worsens food securities, retrenches gender role inequalities and precludes more children from their education. In the district of Isingiro in West Uganda access to water is considerably below the national average, with policy failures during implementation now leading to partly or non-functional water sources. The problem runs danger of deteriorating with an increased amount of climate shocks such as droughts threatening to exacerbate existing inequalities and drive further households into poverty.

Benin

- A stable and increasing real GDP growth rates but slow decrease in relative poverty levels.
 - Poverty affects households in poorly educated households in rural areas to much higher levels than urban areas.
 - Education disparities happen mainly along community-level dimensions through high socio-economic segregation of schools and different access to resources.
 - Large disparity of access to electricity between urban and rural households, which directly negatively affects the environmental conditions of individual rural households.
 - No access to electricity due to both lacking rural infrastructure and electrical grid connection costs being too high.
 - Rapid electrification will require both infrastructure expansion and policy commitment to finding ways of lowering grid connection costs.
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Benin in recent years has seen fairly stable real GDP growth rates and downward trending poverty levels in absolute terms. Its growth rate averaged 6.4% for the years 2017 to 2019 and, with a decrease during the intermittent years due to the Covid-19 pandemic, has recovered to a rate of 6.6% in 2021 (World Bank, 2022b). There only exists sporadic and highly fluctuating data on the country's overall inequality, with the World Bank Development Index noting a Gini coefficient of 38.6 for the year (2003) before rising to 43.4 (2011) and up to 47.8 (2015), though decreasing below the 2003 level to 37.8 (2018) in its most recent calculation. At the same time, the country's poverty rate, even measured based on the international line, only decreased at a very slow rate in its most recent years, from a relative rate of households in poverty at 18.8% in 2019, to 18.7% in 2020 and 18.3% at the end of 2021, with the reduction threatened to be slowed further through increased prices on food and energy (World Bank, 2022b).

Based on its national poverty line, Benin's overall poverty rate is 38.5%, though it hides a strong spatial disparity between rural and urban households with 44.2% to 31.4% households in poverty respectively (World Bank, 2022b). Looking at the effect of income growth on the time to exit poverty, Alia (2017) finds a general negative correlation with stronger growth indeed leading

to shorter average exit times (7-10 years for a household at a per capita growth rate of 4.2%), though this aggregate also hides a large heterogeneity primarily determined by a household's size, its available human capital and whether it is located rurally. So while the study does conclude for an overall equitable pro-poor growth in Benin, rural households, beside already being relatively more poverty stricken, are in danger of being left further behind during periods of overall growth. Djossou et al. (2017) find similar pro-poor growth with spatial disparities but surprisingly see urban households potentially benefiting less than rural households from additional growth, with efforts to open up communities to harness the benefits of growth often primarily targeted at rural communities.

For the household-level factor of education for this disparity, the Learning Poverty index shows that in Benin 56% of children at late primary age are not proficient in reading, 55% do not achieve minimum proficiency levels at the end of primary school and 3% of primary school-aged children are not enrolled in school at all. Looking purely at attendance rates, McNabb (2018) finds that the primary household-level determinants of attendance are the wealth of a household, its religion, as well as the education level of its household head. Here, gender disparities persist, however, with girls continuously less likely to attend and adopted girls being at the greatest disadvantage, while boys tend to face higher opportunity costs than girls due to often working in the fields in which case the distance to a school begins to play an important role. While the household-level variables do play a role — through the availability of educational resources at home, differences in schooling quality and overall health and well-being — Gruijters & Behrman (2020) find that most of the disparity stems from the community-level: the difference in school quality is large, marked by high socio-economic segregation between schools, and primarily determined through an unequal distribution of teaching resources including teachers and textbooks.

Thus, while growth is generally pro-poor in Benin, its primary determinants do not cluster only at the household level, but are comprised of partly household-level but especially community-level differences. One of the foremost examples of the effects of unequal endowments can have is brought by Van De Poel et al. (2009) when they look at the determinants of rural infant death rates in Benin among others and find that environmental factors — such as access to a safe water source, quality housing materials and electricity — are the primary determinants, ahead even of access to a health facility in the community. Access to electricity in the country especially underlies a large heterogeneity based on location. The overall level of electrification of Benin has been rising slowly — though outpacing population growth — from 22% in 2000 to 26% in 2005, 34% in 2010, a regression to 30% in 2015 and a faster increase to 40% in 2019, however, there is a broad difference of electrification levels between urban (65%) and rural (17%) regions remaining (World Bank, 2021). In rural areas there are generally three approaches to electrification that work outside of a connection to the main grid, individual installation of solar panels or generators for smaller electric appliances, collective solutions like kiosks offering electric charging for some cost, or autonomous mini-grids powering a portion of a more densely populated rural area (though often requiring permits or licenses if above certain sizes) (Jaglin, 2019).

Rateau & Choplin (2022) see one of the primary reasons for off-grid electrification in either physical unavailability in rural areas or a prohibitively high cost for connection to the grid. However,

these more individualized solutions are often only targeted at credit-worthy customers and can lead to a further increase in inequalities between income percentiles, leaving behind households which are already neglected within the field of energy access (Barry & Creti, 2020). The former, physical access, is argued by Djossou et al. (2017) as well, emphasizing the need for continued infrastructure expansion to more households, in order to provide access to more durable goods (fridges, mobile phones and internet) which can help decrease the inequality gap. The latter, prohibitively high costs, should not be disregarded in such an infrastructure expansion as well, however. One of the major obstacles to main grid connection remains the high charge a customer is expected to pay with solutions requiring continued political commitment to identify, examine and implement more low-cost electrification processes as well as financing solutions. Golumbeanu & Barnes (2013) point out the main obstacles that need to be addressed here: the lack of incentives to increase electrical affordability, a weak utilities commitment toward providing broad electricity access with focus often lying more on high-consumption urban markets, often overrated technical specifications for low loads, too great distances between households and distribution poles in an area, and an overall lack of affordable financing solutions.

Thus, though having a relatively stable and growing real GDP, Benin suffers from slow decreases in its relative poverty rates coupled with a relative stagnation in the inequality of its wealth dispersion. Additionally, the country's poverty rates have a high heterogeneity with relatively more rural households and households with poor education in poverty. A large part of education disparities happens at the community-level, with schools marked by high socio-economic segregation, but household-level disparities, especially environmental ones, playing a role. One of those determinants is a household's access to electricity, of which there is an enormous disparity between urban and rural households. The primary reasons for not having access to electricity are simple physical non-availability with no infrastructure being available in rural areas, as well as connection costs to the main electrical grid being too high. To decrease the effects of this driving force of inequality, both infrastructural expansion as well as policy commitments toward affordable connections to electrical grids are thus of vital importance.

Djibouti-Ethiopia

- Stable average GDP growth rates recently greatly reduced through local and global economic instabilities.
- Enormous poverty rate with much disparity between Djibouti city and other country regions and country set to miss many future poverty rate goals.
- High levels of deprivation for rural poor, little participation in labor force and lacking rural infrastructure.
- Labor market highly dependent on trade and internal dichotomy of public administration sector and large informal sector comprised of predominantly unskilled workers.
- Women facing fewer opportunities for upward educational mobility, less labor market participation, higher unemployment rates, a persisting (but closing) literacy gap.

- Rural nomadic and pastoralist people highly vulnerable after droughts and regional instability, leading many to flee country or become sedentary and greatly reducing their numbers.

Djibouti occupies a somewhat singular position, being a tiny country with an economy focused primarily around its deep-water port, trying to establish itself as a regional hub for trade and commerce. The country's GDP has averaged roughly 6% per year before the Covid-19 pandemic greatly reduced those growth rates (World Bank, 2022c). However, the country's inequality levels are some of the highest in the world and its poverty rates are extreme. Additionally in many cases there is a lack of data or the data itself are lacking in several dimensions which hinders creating a cohesive picture or plan.

Poverty in Djibouti is both very high and marked by high deprivation. Using the national poverty line of around 2.18USD (2011 PPP) the poverty rate for the overall country by consumption is estimated at 21.1% in 2017, while 17% live in extreme poverty under the international poverty line of 1.90USD (2011 PPP) and 32% of the population are still under the international lower middle income poverty line of 3.20USD (2011 PPP) (World Bank, 2019, 2022c). Furthermore, there is an enormous spatial disparity between poverty rates. World Bank (2020) estimate only 15% of Djibouti's overall population living in rural areas, with 45% of the country's poor residing in rural areas while 37% reside in the Balbala¹ area (World Bank, 2020). The report goes on to describe the high levels of deprivation for the rural poor, with the country's highest dependency ratios, lowest participation in the labor force, very low levels of employment in the households' heads and very low school enrollment, and while urban poor face similar restrictions they have better access to public services and higher school attendance rates. Over half the working-age population does not participate in the labor force with employment being estimated at 45% in 2017, lower than the 46.3% estimated for 1996, despite the country's economic growth (World Bank, 2019). Emara & Mohieldin (2020) look at the overall impact of financial inclusion on poverty levels but find that, first, Djibouti is way above its targeted poverty levels, second, it is not only one of the only countries in the region (together with Yemen) to not achieve a 5% poverty level target yet, but not even on track to achieve this target by 2030 solely through improvements in financial inclusion.

Inequality in Djibouti is high, with the lowest decile only making up 1.9% of total consumption while the richest decile enjoy 32% of the total consumption, 16 times as much (World Bank, 2019). The country has an estimated Gini coefficient of 41.6 in 2017, making it one of the most unequal countries in the region (World Bank, 2022c). More of its inequality hides in a large spatial and gendered heterogeneity. Urban poor face high deprivation but higher access to public services and schooling compared to the rural poor, who have only 41% access to improved water sources, 10% access to sanitation, 3% access to electricity, and with only one third living close (under 1km) to a primary school (World Bank, 2020). While in general over half the working-age population does not participate in the labor force, the makeup is 59% of men and only 32% of women who participate, mirroring unemployment rates with an estimated third of men and two thirds of women being unemployed (World Bank, 2019). World Bank (2019) also find the labor market itself highly

¹The Balbala area comprises the 4th and 5th district out of the five districts of Djibouti city.

unequal, with its dichotomy of a public administrative sector (drawing mainly highly skilled workers) and informal private sector making up 90% of the overall labor market, the majority of women working in the informal sector and almost half of the jobs for women in this sector consisting of one-person ‘self-employed’ enterprises. Nearly 41% of working-age women find themselves in positions of vulnerable employment (World Bank, 2022a).

Djibouti’s economy is primarily, and within its formal sector almost exclusively, driven by its strategic location and possession of a deep-water port so it can act as a regional refueling, trading and transport shipment center (World Bank, 2022c). At the same time, this interconnected economic nature and the country’s heavy reliance on food and energy imports marks a key vulnerability and makes it immediately dependent on the stability of global trade and export markets, a stability which was recently (World Bank, 2022c). Likewise, Djibouti depends on more regional stability, since its economic growth is tightly coupled with the Ethiopian economy, sourcing around 70% of its port trade from this landlocked neighbor (World Bank, 2019). A series of droughts in the country threatened the livelihood of its nomadic and pastoralist population, with many fleeing to neighboring countries, some becoming sedentary in village or city outskirts, and the overall nomadic population decreasing by nearly three quarters from 2009 to 2017 (World Bank, 2019, 2020). Additionally, during the early waves of Covid-19 Djibouti had one of the highest infection rates in the region, and though it had a high recovery rate, it also had one of the highest fatality rates, possibly due to deficiencies in its healthcare system (El Khamlichi et al., 2022). The country’s rising costs of now fast-maturing debts made the government leave social spending behind, leaving a budget of 5% for health and 3% for social expenditures, spendings which looks diminutive compared to its over 30% expenditures on public infrastructure (World Bank, 2022c). Only 10% of rural poor inhabitants live close (under 1km) to a health facility (World Bank, 2020).

While still facing reduced rates of labor market participation, the country has expended effort on increasing women’s opportunity for education: Having overall lower literacy rates for women still, the overall literacy rates in younger cohorts (10-24 years old) is significantly higher compared to older ones, and the gaps have decreased from 24% difference between the genders (40-60 years old) to 10% (15-24 years old) and 2% (10-14 years old) (World Bank, 2019). Women’s lower secondary completion rate grew from 28.6% in 2009 (compared to 35.2% men) to 56.3% in 2021 (54.0% for men) (World Bank, 2022a). However, for 2017, women’s upward educational mobility was still significantly worse than men’s, with non-poor men having an upward mobility of 53%, non-poor women 29%, poor men 19% and poor women only 10% against the national average of 36% (World Bank, 2019). Such differences reflect themselves in firm team and ownership structures and on the labor market, where 22.3% of all firms have female participation in ownership and only 14.2% a female top manager, and both salaried employment and agricultural employment are male-dominated (though agricultural work only with a slight and shrinking difference of 4%) (World Bank, 2022a). Overall it seems, however, that past growth in the country’s GDP is likely not favorable for an inclusive growth path, with its large-scale infrastructure investments mostly creating demand for skilled workers and neglect of social spending not allowing the buffers and social safety nets that prevent further drift into inequality. Brass (2008) argues even that the country leadership’s policy decisions carry increased weight in this, towards a path of ever increasing economic dependence and

into a predicament of economic diversification requiring a more educated population, but a more educated population without already accompanying diversified economy likely enacting a successful policy or governmental opposition.

Thus, Djibouti represents a country with an overall solid growth rate but accompanying high inequalities and poverty rates, from which path it does not seem to detach without more policy intervention. It is a country with one of the highest poverty rates in the region and an enormous spatial disparity in poverty between the prime sectors of Djibouti city and the rest of the country. The rural sectors face high levels of deprivation, economic disparity and largely lacking infrastructure, and the majority of its population not participating in the labor force. The country's labor market is to the largest degree dichotomized in the public administrative sector, comprised of mostly skilled workers, and a large private informal sector comprised mostly of unskilled workers, many of which are women. The overall economy is dependent on high levels of regional and global stability which was recently undermined by droughts, Ethiopian conflict and the Covid-19 pandemic. Nomadic and pastoralist people in the country's rural regions were hit especially hard, with the nomadic population decreasing by nearly three quarters and many fleeing or becoming sedentary. Women face less opportunity in the country with worse upward educational mobility, less participation in the labor force, higher unemployment rates, and a continuing, if closing, gender literacy gap. Djibouti is set to miss most of its poverty target levels and move along a growth pathway that does not lend itself to inclusion unless active policy measures changing its economic investment and growth strategies are examined.

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