Genocide, female empowerment and domestic violence in Cambodia

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Abstract

The paper investigates the long-term impacts of Khmer Rouge genocide on female empowerment and domestic violence in Cambodia. Between 1975 and 1979, the Khmer Rouge killed about 1.8 million people, nearly a quarter of Cambodia's population, with men more likely to be killed, leaving a severe shortage of young men in the early 1980s. Utilising a wide range of geo-coded datasets and a spatial regression discontinuity design, I find that this brutal reign significantly shapes female empowerment and domestic violence in Cambodian households at present. In areas with high repression intensity, women at present are less empowered in households, signified by a lower rate of full-time employment, limited decision-power and a higher likelihood of being controlled by their partners. In addition, they are more likely to experience domestic violence, especially emotional violence. The mechanisms behind these findings include post-genocide skewed sex ratios, higher fertility, lower household wealth, and changes in gender-related characteristics. Both men and women tend to marry at a younger age and attain less education. Women are more likely to work, but mostly in part-time rather than full-time jobs, while men are more likely to have multiple marriages. Overall, this study provides evidence that mass violence not only caused short-term devastation but also left lasting legacies that continue to undermine women's empowerment and reinforce gender inequality for generations.

Keywords: Cambodia, conflict, genocide, female empowerment, domestic violence, gender inequality
JEL-Codes: J12, J13, J16

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1 Introduction

While mass atrocities such as war and state repression are known to significantly influence long-term development (Davenport et al. 2019, Lichter et al. 2021, Grasse 2024), their effects on female empowerment and experiences of gender-based violence remain less understood. Conflicts and violence reshape household dynamics by disrupting demographic structures and redefining traditional gender roles (Buvinic et al. 2013, Ekhator-Mobayode et al. 2022). One of the most immediate consequences is a disproportionately high mortality rate among men, which increases female participation in the workforce (Boehnke & Gay 2022, Gaikwad et al. 2023). However, these changes do not always translate into greater gender equality. Instead, altered sex ratios and evolving household roles may affect women's bargaining power and decision-making capacity, potentially increasing their vulnerability to control or abuse by male partners (Bhalotra et al. 2021, Guarnieri & Rainer 2021). In this context, intimate partner violence (IPV) or domestic violence becomes a critical issue. IPV or domestic violence, which refers to behaviours by a current or former partner that cause physical, sexual, or psychological harm, remains a global public health concern with nearly one in three women worldwide affected (WHO 2021).[1] Although violence may create opportunities for changes in gender roles, it can also deepen existing inequality and increase women's vulnerability to domestic violence. This duality raises an important research question: how do violence and repression shape women's empowerment[2] and their exposure to domestic violence in the long term?

To answer this question, I examine the Cambodian genocide, which took place from 1975 to 1979 under the Khmer Rouge regime led by Pol Pot.[3] During this period, the regime carried out mass executions, resulting in the deaths of 1.6 - 1.8 million people, roughly a quarter of the country's population (Kiernan 2003). Mortality during the genocide was highly selective with adult men being disproportionately targeted for political executions, as they were more likely to be educated and to hold government positions (De Walque 2005). Gender imbalance caused by the genocide led to a shortage of young men in the early 1980s (De Walque 2006), which reduced women's chances of marriage, increased remarriage opportunities for men (Heuveline & Poch 2006), and resulted in a significant number of families being headed by widows (Chandler 2018). After several decades, however, an open question remains regarding the long-term effects of this gender imbalance on women's empowerment, household dynamics, and exposure to domestic violence. Although the immediate demographic consequences are well established,

[1] Recognizing its severity, the 2030 UN Sustainable Development Agenda established Goal 5.2, which calls for the elimination of all violence against women and girls in both public and private settings (Assembly et al. 2015).

[2] Female empowerment is defined as enhancing their ability to access key dimensions of development, including health, education, employment, rights, and political participation (Duflo 2012). In this paper, female empowerment specifically refers to women's economic power within the household and their autonomy in making household decisions.

[3] *Khmer Rouge* is the common name for the Communist Party of Kampuchea (CPK) and, more broadly, the Democratic Kampuchea (DK) regime that ruled Cambodia from 1975 to 1979.

there is limited understanding of how these disruptions have influenced gender roles and power dynamics within families over time. Traditionally in Cambodia, men were seen as breadwinners and superior to women, while women were expected to run households, raise children, manage domestic finances, and serve their husbands (Ovesen et al. 1996, Gorman et al. 1999). These expectations reinforced women's lower social status and restricted their autonomy within households. In this context, domestic violence was widely accepted, as it was often justified as punishment for not fulfilling wifely duties, and even condoned by the community (Gorman et al. 1999). This paper, therefore, examines how the genocide influences existing gender inequality by focusing on women's decision-making power, their economic role within households, and their vulnerability to domestic violence.

In this paper, I leverage various geo-coded datasets, including Demographic and Health Survey (DHS), Cambodian Genocide Database by Yale University, General Population Census of Cambodia and other historical and contemporary data on geographic, demographic and economic characteristics.[4] I employ a spatial regression discontinuity design (RDD), similar to the specifications in Gonzalez (2021) and Lehner (2024), to compare individuals residing in the formerly high-repression region with those in a comparatively moderate region. I borrow the RDD border from Grasse (2024), which divides the Southwest and West Zones, to examine how variation in genocide intensity influences long-term outcomes in female empowerment and domestic violence. I use the distance to this zone border as a running variable.

The border between the Southwest and West Zones represents a meaningful division in the intensity of Khmer Rouge violence, shaped by the contrasting leadership of Ta Mok, who was an extremist loyalist in the Southwest, and Sy, who governed the West with relatively more moderate policies.[5] Although both regions experienced repression, extensive historical and quantitative evidence highlight significantly greater brutality in the Southwest (Gaikwad et al. 2023, Grasse 2024). In Section 5, I use data from the Cambodian Genocide Database, which documents 309 geo-coded sites containing 18,953 Democratic Kampuchea (DK) mass graves, to empirically assess the difference in violence across this border. The analysis shows that households in the extremist Southwest Zone are over 11 percentage points more likely to be located near a DK mass grave compared to those in the moderate West Zone, an increase of more than 40% relative to the mean. This highlights a sharp difference in genocide repression along the Southwest–West Zone border and confirm the validity of this border.

The baseline results, in Section 6, show that after several decades, the genocide still has lasting negative effects on female empowerment and domestic violence. In areas where genocide was intense, women at present are less empowered in households and more vulnerable to domestic violence, especially emotional violence. Particularly, they

[4] See Section 3 for more details.
[5] See Section 2 for more details.

are 4.2 percentage points less likely to work full-time (a 6% decline), 7.2 percentage points less likely to participate in important household decisions (a 12.8% decrease), and 5.8 percentage points more likely to be controlled by their partners (a 46% increase). Regarding domestic violence, I do not find any significant effects on the likelihood of women experiencing physical violence. However, women in the brutal Southwest Zone are significantly more likely to experience emotional violence, with an increase of 8.6 percentage points (over 50% above the average), and also face higher risks of experiencing either or both emotional and physical violence. Additionally, they are also more likely to justify domestic violence, with acceptance rates rising by 4.1 percentage points, or 12.7% of the mean. Furthermore, these findings remain consistent across a wide range of sensitivity checks, reinforcing the credibility and reliability of the results.

In Section 7, I provide evidence for several mechanisms that can possibly explain the main findings. First, the decline in female empowerment and an increased vulnerability to domestic violence can be attributed to skewed sex ratios and higher fertility rates post-genocide. The extreme violence under the Khmer Rouge caused higher male mortality and skewed sex ratios, and although decades of demographic recovery have normalized these imbalances among younger cohorts, the overall sex ratio remains much lower than the world average, with women still outnumbering men. Additionally, in the previously high-intensity zone, fertility is significantly higher, which may strengthen women's traditional roles and undermine their empowerment. Furthermore, the genocide significantly affects household structure and household wealth, with those in high-repression areas having more children and lower wealth today. Finally, changes in gender-related characteristics can further explain the main results. In the more violent Southwest Zone, both men and women tend to marry at a younger age and achieve lower levels of education. Women are more frequently engaged in part-time or unstable employment, while men more often have multiple marriages or unions. Together, these factors reinforce gender inequality, limiting women's opportunities in education, work, and family life, and leading to lower female empowerment and greater risk of domestic violence.

This study sheds light on the puzzle of how violence and repression shape female empowerment and domestic violence in the long run. It underscores the persistent effects of mass violence on gender inequality, particularly through skewed sex ratios, higher fertility, and restricted opportunities for women. In the case of Cambodia, these legacies constrain women's decision-making power, reinforce unequal household roles, and increase their vulnerability to domestic violence. By investigating these long-term impacts, the paper shows that mass violence not only harms societies in the short run but also creates lasting barriers that hold back women's empowerment for generations.

Literature Review This paper contributes to the existing literature on how violence influences gender inequality, with a focus on female empowerment and domestic violence. Violence reshapes households by altering demographic structures and gender roles, with

men facing higher mortality rates and women more likely to participate in the labour market (Buvinic et al. 2013, Ekhator-Mobayode et al. 2022). Existing literature presents mixed evidence on the impact of violence and conflicts on female empowerment. A variety of studies have found that conflicts have detrimental impacts on female decision-making power, with evidence found in Russia after World War II (Brainerd 2017), in Rwanda after the 1994 genocide (La Mattina 2017) or in Nigeria after the Civil War (Ajefu & Casale 2021).[6] However, several other papers suggest that conflicts can also enhance female empowerment, characterized by increased women's civil liberty, political and social participation post-conflict (Hughes & Tripp 2015, Webster et al. 2019, Bakken & Buhaug 2021).[7]

Meanwhile, numerous papers exploring the impact of violence and conflicts on IPV found a consistent positive association. La Mattina (2017) explores how the 1994 Rwandan genocide significantly impacted gender inequality by altering marriage market sex ratios, which in turn increased domestic violence and reduced women's decision-making power. Ekhator-Mobayode et al. (2022) examines the Boko Haram insurgency in Nigeria and finds that insurgency increases the likelihood of women experiencing physical or sexual IPV. Kelly et al. (2018) examine the armed conflict in Liberia and find that living in a district affected by conflict fatalities was associated with a 50% higher risk of IPV. Gutierrez & Gallegos (2016) show that childhood exposure to civil conflict in Peru increases the risk of both experiencing and perpetrating domestic violence in adulthood, with women in heavily affected areas more likely to accept and remain in abusive relationships.

This paper also contributes to the broader research on the association between female empowerment and domestic violence. Several economic theories help explain this relationship, including the home bargaining model and male backlash theory (Meyer et al. 2024). Home bargaining theory states that greater economic opportunities for women can lower IPV by increasing their bargaining power within households and raising the costs for male partners to engage in domestic abuse (Meyer et al. 2024). This model is supported by a variety of papers drawing data from Rwanda (La Mattina 2017), the UK (Anderberg et al. 2016) and U.S counties (Henke & Hsu 2018, 2020). On the con-

[6] These papers indicate that conflict undermines women's empowerment. Using World War II–induced changes in sex ratios, Brainerd (2017) finds that male scarcity in Russia led to fewer marriages and births, more nonmarital births, and reduced bargaining power for women. La Mattina (2017) reports that the 1994 genocide in Rwanda drastically altered local sex ratios, and women who married after the conflict, particularly in areas with high genocide intensity, faced increased domestic violence and reduced within-household decision-making power. Ajefu & Casale (2021) examines the Nigerian Civil War and find that early-life exposure to the war reduced women's decision-making power in adulthood, likely through its negative effects on their education, health, employment, and marriage outcomes.

[7] Specifically, Hughes & Tripp (2015) illuminates how civil wars in Africa between 1985 and 2010 increased women's political representation post-conflict by creating opportunities for institutional and social change. Using cross-national data from 1900 to 2015, Webster et al. (2019) shows that war can temporarily increase women's empowerment by disrupting social institutions and shifting gender roles, with lasting change depending on post-conflict reforms and gender mainstreaming. Bakken & Buhaug (2021) also find that high-intensity civil conflicts, especially those ending in peace agreements with gender-specific provisions, are most likely to lead to post-conflict improvements in female empowerment, including individual civil liberties and political participation.

trary, male backlash theory suggests that positive changes in women's status and power, whether in the household or society, can lead to increased IPV. Men may feel threatened by women gaining power and status, using IPV as a way to reaffirm their control and authority (Meyer et al. 2024). A wide range of studies support this theory, with findings from Cameroon (Guarnieri & Rainer 2021), 30 Sub-Saharan African countries (Cools & Kotsadam 2017) and developing countries (Bhalotra et al. 2021).

The paper further adds to the limited research on the legacy of Khmer Rouge Genocide in Cambodia. Most of these studies show persistent negative effects. Grasse (2024) examines the long-term economic impacts of the genocide and finds that villages exposed to more extreme repression have persistently lower wealth and human capital. Islam et al. (2017) investigate how the Khmer Rouge genocide's intensity affects the educational and health outcomes of children born long after the conflict. They show that higher genocide exposure among parents reduces children's grade progression and height, with evidence suggesting the marriage market as a key channel of intergenerational transmission. A few studies reveal that enduring mental health impacts of the Khmer Rouge genocide, with both survivors and perpetrators experiencing high levels of stress, depression, and intrusive memories decades after the violence (Marshall et al. 2005, Nou 2024).

The paper most closely aligned with this research is that of Gaikwad et al. (2023) showing that intense Khmer Rouge violence, which disproportionately killed working-age men, led to long-term gains in women's economic autonomy and increased participation in local government. Different from this paper, which focuses on broader political or economic consequences of conflict, my study specifically examines how the Cambodian genocide has shaped intra-household decision-making power and the prevalence of domestic violence within households. By focusing on household-level outcomes, the study offers a novel perspective on the long-term impacts of mass violence on family structures and gender dynamics, especially how gender equality evolves post-violence.

The following section provides a historical overview of the Cambodian genocide. Section 3 describes the data used in the study, followed by Section 4, which outlines the empirical strategy and underlying assumptions. Section 5 provides a motivating analysis on the validity of the RDD border. Section 6 reports the main results, and Section 7 explores potential mechanisms that possibly shed light on our results. Section 8 concludes the paper.

2 Background

In the twentieth century, Cambodia experienced a series of French colonization, civil conflicts, political instability and devastating genocide (Slocomb 2010, Chandler 2018). The country gained independence from France in 1953, ending 90 years of colonial rule. In 1955, Prince Sihanouk, who was leading the country during that time, abdicated to pursue politics, founding the Sangkum party, which won unopposed elections. For 15

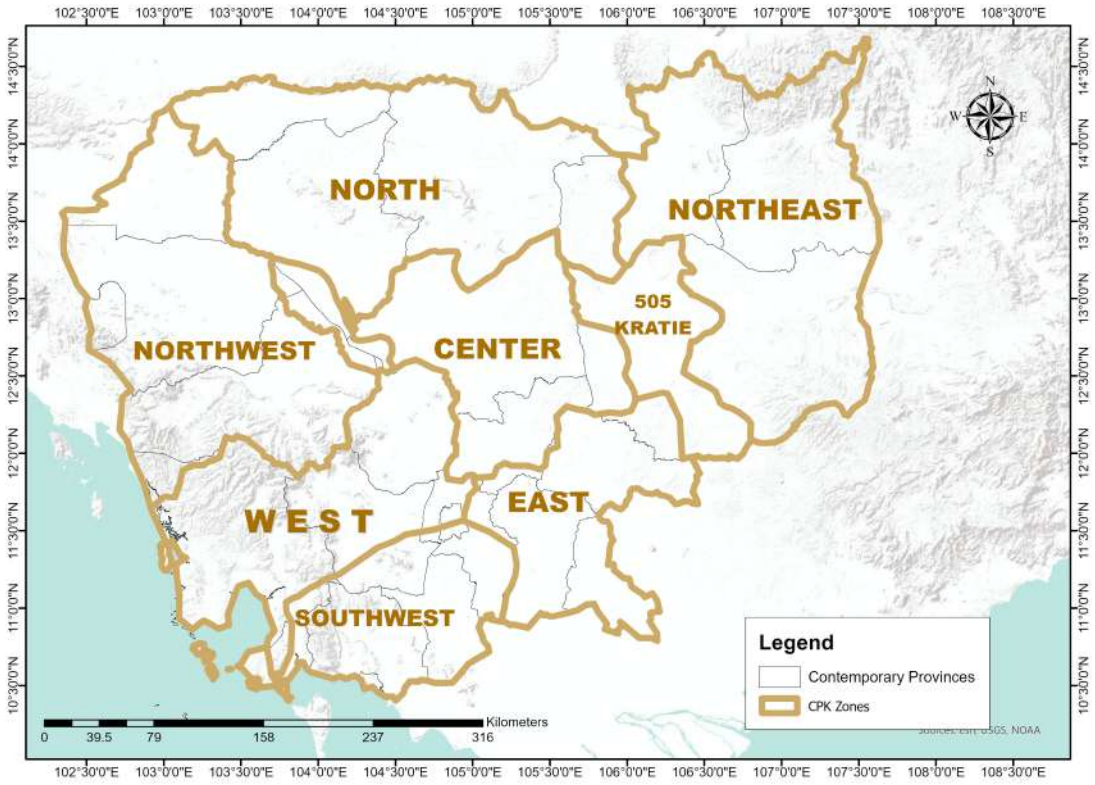
years, Sihanouk and the Sangkum party dominated Cambodia, but by 1966, his political control and confidence weakened due to the Vietnam War and internal pressures. In 1970, Sihanouk was deposed, and General Lon Nol's regime took power, leading to a civil war in the country. Sihanouk then allied with Communists, triggering heavy fighting and carpet US bombings in the country. The war ended in April 1975 when the Communist regime - the Khmer Rouge led by Pol Pot - seized the capital. The Democratic Kampuchea (DK) was then established and controlled the country from April 17, 1975, to January 7, 1979. This period is often referred to as the mass genocide when nearly two million people, or one in four, died from overwork, starvation, disease, or execution (Kiernan 2003, Chandler 2018).

After taking control, the Khmer Rouge emptied cities, hospitals and Buddhist monasteries. All schools, postal services, factories and newspaper publishers were shut down. They eliminated money and wages and even destroyed the National Bank (Kiernan 2023). The Khmer Rouge called urban population "new people" and displaced them to the countryside to live among the rural "base people". They were forced to work in labor camps without payment, rights or free time. At the same time, the regime hunted down and executed thousands of former Khmer Republic officials, army officers, soldiers, educated people like doctors, teachers, monks, bureaucrats and other protesters that they thought might pose a threat to the system (Kiernan 2002*a*, Slocomb 2010). Mortality was highly selective with adult men facing a higher risk of dying (De Walque 2005). Men, who were more likely to hold educated or government positions, were targeted more often for political executions, especially in the early months of this period (Vickery 1984, Gaikwad et al. 2023). The extreme and selective death rate during this period significantly shaped Cambodia's population structure (De Walque 2006). After the DK ended its rules, there was a noticeable shortage of young men in the marriage market in the early 1980s (De Walque 2006). The high mortality of young men led to a low sex ratio among the never-married, reducing women's chances of marriage. It also increased remarriage opportunities for men, potentially impacting marriage stability and raising divorce rates (Heuveline & Poch 2006). Because educated men often faced higher mortality rates under the regime, after 1979, fewer educated men were available for marriage, making male and female education levels more similar (De Walque 2005). Additionally, with so many men who had died or disappeared, over 60% of families in some districts were led by widows, who, in many cases, struggled to raise their children alone (Chandler 2018).

Forced marriages were a key tool for the Khmer Rouge in their vision of an agrarian utopia, where all citizens lived in village cooperatives. The regime took control of marriages and family structures, dictating where people lived, whom they lived with, and how they ate, slept, and interacted (Jacobs 2022). They used forced marriages to ensure loyalty to the regime, break down traditional families, and create new families aligned with the regime's ideals. In addition, these marriages were intended to secure the loyalty of the next generation through reproduction (Denov et al. 2022). Coercion

was involved in every aspect of marriages, with people accepting unions out of fear of punishment, participating in mass weddings due to violence threats, and engaging in sexual relations under surveillance by armed spies (Jacobs 2022). About one in three marriages in Cambodia between 1975 and 1979 was forced (Heuveline & Poch 2006). The Extraordinary Chambers in the Courts of Cambodia (ECCC) estimates that around 400,000 forced marriages took place during the KR regime (Denov et al. 2022). These cohorts of marriage also had the highest proportion of women who reported meeting their husbands for the first time on their wedding day (Heuveline & Poch 2006). Jacobs (2022) discovered that forced marriages were most common among groups seen as internal threats and in economically productive regions. In regions with high rice yields, the regime exerted tighter control to maintain high production. Moreover, internal security risks prompted the regime to enforce stricter social control measures, particularly through marriage, targeting populations seen as threats or enemies. As a result, some regions such as the Northwest and Southwest zones experienced the harshest treatment during the KR period, whereas the North and Central zones were comparatively more moderate (Jacobs 2022).

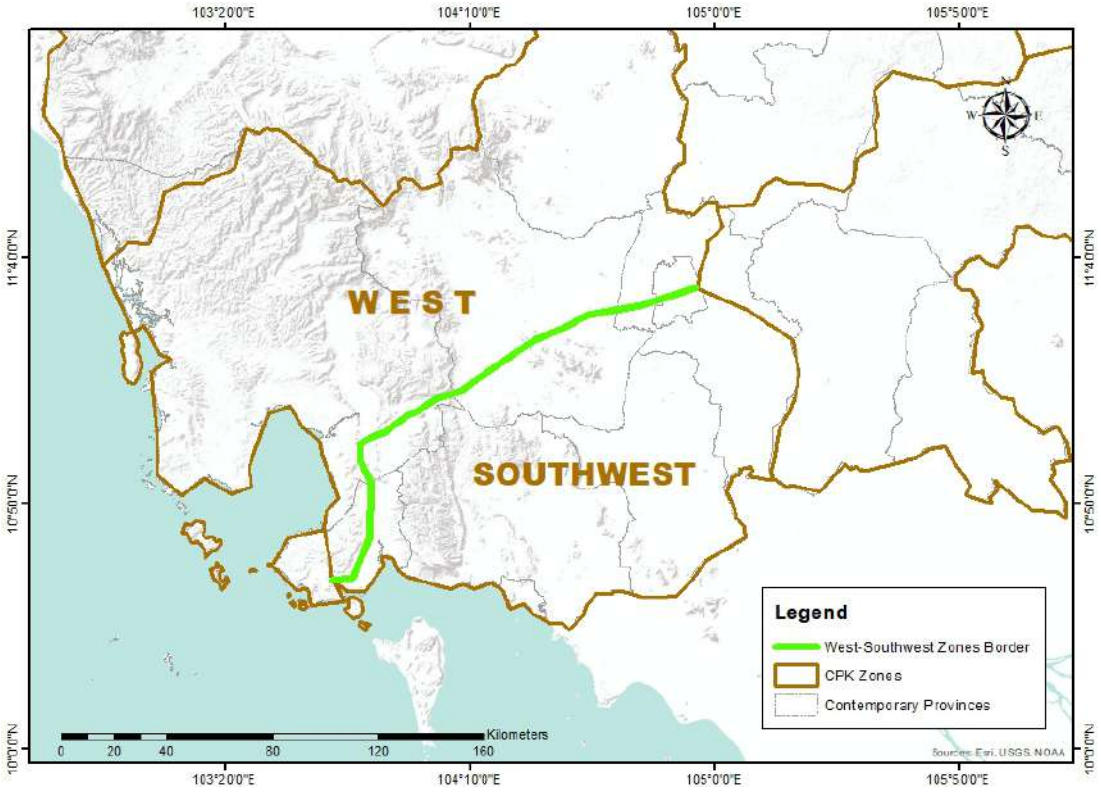
Figure 1: Administrative Zones during Democratic Kampuchea



Note: The map shows the administrative divisions during Democratic Kampuchea. The country was divided into seven administrative zones based on compass directions. Map overlaid on World Terrain Base map and drawn on ArcGIS.

Democratic Kampuchea was divided into seven administrative zones based on compass

Figure 2: West and Southwest Zones During Democratic Kampuchea



Note: The map highlights the border that separates West Zone and Southwest Zone. Map overlaid on World Terrain Base map and drawn on ArcGIS.

directions: North, Northeast, East, Southwest, West, Northwest, and Center – along with the Kratie Special Region (Table 1) and, until mid-1977, the Siem Reap Special Region . The zones were newly created and did not align with previous administrative divisions. Multiple provinces could be combined into a new zone but some provinces were split between different zones (Vickery 1984, p.66). Zones were led by zone secretaries, who were military commanders with different backgrounds and ideologies (Gaikwad et al. 2023). Zone leaders followed the general orders issued by Pol Pot from Phnom Penh but had great flexibility in deciding how to enforce these orders using their own resources and methods (Becker 1998). Each administrative zone operated autonomously and there was little coordination between regions. Refugee accounts confirm that conditions varied greatly, including food supply, work discipline, hardship levels, execution policies, and political education (Vickery 1984, p.68).

I borrow the RDD border from Grasse (2024) which separates the Southwest and West Zone to investigate how the difference in genocide intensity affects women's empowerment and domestic violence in the long-run. During the civil war, these two zones were a single operational area with Ta Mok and Chou Chet (or Sy) sharing jurisdiction. However, a dispute over Mok's brutal tactics led to the split of this area into two separate zones

along National Road 4 (NR4).[8] NR4 was cheaply built by the U.S. in the 1950s to connect the port city (Sihanoukville) and the capital (Phnom Penh), and it became a convenient dividing line for DK. While the road's construction was politically motivated, its precise location was determined for convenience rather than for economic factors (Grasse 2024). Figure 2 shows the Southwest and West Zone border. The border does not match with any previous administrative divisions (Vickery 1984) and also does not align with current provincial or district boundaries.[9] This is ideal for our set-up, ensuring that it is "as good as random".

Grasse (2024) highlights the stark contrast between the military commanders of the Southwest and West Zones. Ta Mok, who led the Southwest Zone, strictly adhered to Pol Pot's directives and was notoriously ruthless toward "new people". Coming from a peasant background, he embraced communism early and remained loyal to the Khmer Rouge, never surrendering or defecting like other commanders. He was called "The Butcher", notorious for executions, torture, and forced labor. Meanwhile, Chou Chet or Sy, who led the West Zone, was relatively less violent toward them. Coming from a privileged background, he was considered an intellectual within Pol Pot's inner circle. His zone resisted many Khmer Rouge's harsh policies, which ultimately led to his execution at S-21 prison due to suspicions about his loyalty (Gaikwad et al. 2023). Clearly, the West Zone still experienced repression, with policies on education and labor similar to those in the Southwest. However, the key difference between Mok and Sy was not the presence or absence of violence but rather the repression intensity (Grasse 2024).

3 Data

This section presents the datasets I employ in this study. I leverage diverse data sources to investigate the long-term impacts of genocide on female empowerment and domestic violence, including individual-level data from Demographic and Health Survey (DHS), Cambodian Genocide Database by Yale University, 2008 General Population Census of Cambodia 2008 and other historical and contemporary data on geographic, demographic and economic characteristics.

Cambodia Demographic and Health Survey. This study draws on five waves of the Cambodia Demographic and Health Survey (DHS) conducted in 2000, 2005, 2010, 2014 and 2021-22. Particularly, I rely on DHS individual women's data, which provides extensive information on female empowerment and domestic violence. The DHS data includes precise geographic locations of survey clusters, which are groups of 25-30 households participating in the surveys, allowing me to determine which Khmer Rouge zones house-

[8] Democratic Kampuchea used roads and natural landmarks as borders to divide rival zones, reducing conflicts over authority (Grasse 2024).

[9] See Figure E.1 for pre-genocide administrative divisions and Figure E.2 for contemporary district divisions.

holds currently reside in. Each DHS household cluster represents an enumeration area or village. To protect respondents' privacy, the GPS locations of these clusters are randomly displaced by up to 2 km in urban areas and up to 10 km in rural areas. This displacement process introduces classical measurement error, which leads to unbiased estimates.

I use several outcomes as measures of female empowerment. My first outcome of interest is employment: whether a woman is working full-time. The second is decision-making power: a woman is considered to have decision-making power if she independently makes at least one of the following decisions: her own health care, major household purchases, or visits to family or relatives. The third is partner control: a woman is considered controlled by her partner if her current or most recent husband or intimate partner exhibits more than 1 of the five specified controlling behaviours: (1) Is jealous or angry if she talks to other men (2) Wrongly accuses her of being unfaithful (3) Does not permit her to meet her female friends (4) Tries to limit her contact with her family (5) Insists on knowing where she is at all times.

I also use different measures to assess domestic violence. Violence is a binary variable coded 1 if a woman reports that she experienced any physical violence and/or emotional violence committed by her current or most recent husband or intimate partner, ever and in the 12 months preceding the survey. In addition, attitudes toward domestic violence are also measured by a dummy variable that takes the value of 1 if the woman agrees that a husband or partner is justified in beating his wife in at least one situation among the following: when she goes out without telling him, neglects the children, argues with him, refuses to have sex with him, or burns the food.

I also include household elevation data from the Cambodia DHS as a geographic characteristic in balance check, as elevation should not be affected by the genocide. This information is sourced from the Shuttle Radar Topography Mission (SRTM) Digital Elevation Model based on the coordinates of DHS clusters.

Alongside the women's dataset, I also utilize data on men and households to investigate potential mechanisms related to household structure, household wealth, and gender-related outcomes such as education and fertility.

Cambodian Genocide Databases I use Yale University's Cambodian Genocide Databases to obtain information on genocide repression across the country.[10] In particular, I employ the geographic database which provides geo-information on boundaries of Democratic Kampuchea (DK) administrative zones, and 309 geo-coded locations of 18,953 DK mass graves to examine genocide repression across the border between Southwest-West Zones. I am able to match this data with DHS data to measure genocide intensity at the household level. Specifically, I count the number of graves within 5km of DHS household locations and construct a binary outcome equal to 1 if there are any mass graves within a 5km

[10]These databases are compiled and developed by Yale University and the University of New South Wales. Data can be accessed via https://macmillan.yale.edu/gsp/cambodian-genocide-databases-cgdb

radius of households.[11]

Pre-genocide characteristics. I digitize three maps in the 1970 Indochina Atlas to extract location-specific information on transport infrastructure, agricultural patterns, and population density pre-genocide.[12] First, I geo-reference the Indochina Transportation map, which shows major roads and railways in Cambodia in 1970 (Appendix, Figure E.5), and calculate the distance from DHS household locations to 1970 main roads and railways. Second, the Indochina Agriculture map identifies regions engaged in farming activities in 1970. I match this data to DHS household locations to assess whether those areas were agriculturally active pre-genocide (Appendix, Figure E.6). Finally, I digitize the Indochina Population map to estimate population density at DHS household locations in the pre-genocide period (Appendix, Figure E.7).

In addition, I utilize agro-ecological zones (AEZ) classification developed by the Food and Agriculture Organization of the United Nations (FAO) and the International Institute for Applied Systems Analysis (IIASA) to evaluate climate and crop productivity at DHS clusters.[13] Specifically, I use GAEZ v4 Dominant AEZ classification dataset and match DHS household cluster to its corresponding agro-ecological zone (Appendix, Figure E.4). I then create a binary variable capturing whether a household is in a tropical lowland area.

General Population Census of Cambodia 2008. I use village-level data in 2008 General Population Census of Cambodia to examine post-genocide population structure and demographic characteristics. This census provides information on diverse population ratios, such as sex ratio, age dependency ratio and child-woman ratio and the share of female-headed households in 14,073 villages across the country. It also includes information on average age at first marriage, educational attainment, and employment status for both men and women. I use these indicators to explore possible mechanisms underlying the main findings.[14]

UN-Adjusted Population Density. I utilize UN-Adjusted Population Density provided by the University of Southampton to investigate post-genocide population density. The data is developed by the WorldPop research group, based at the University of Southampton's School of Geography and Environmental Sciences. WorldPop provides high-resolution

[11] See Section 5

[12] The Atlas was published in October 1970 by the Directorate of Intelligence, Office of Basic and Geographic Intelligence, U.S. Central Intelligence Agency and is available to download at https://maps.lib.utexas.edu.

[13] The AEZ map captures key environmental factors, such as climate, soil, terrain, and irrigation, and identify areas with major bio-physical constraints like deserts or steep slopes. Regions within the same AEZ share similar climate and agricultural potential. GAEZ data is commonly used in research to account for geographic and agricultural conditions. (e.g., Whatley & Gillezeau 2011, Cagé & Rueda 2016). Data can be accessed via https://gaez.fao.org.

[14] Data can be accessed via https://opendevelopmentcambodia.net.

gridded population datasets at 30 arc-second resolution, corresponding to approximately 1 kilometer at the equator. I use the annual data on UN-adjusted Population Density from 2000 to 2020, which reports the number of people per square kilometer based on country totals adjusted to match the official United Nations population estimates in Revision of World Population Prospects 2019 (United Nations 2019).[15]

Descriptive statistics Table E.1 reports the summary statistics of all variables in this study. We can see that there are noticeable differences in both female empowerment and domestic violence outcomes between the treated (Southwest Zone) and control (West Zone) groups. In particular, although the likelihoods of decision-making power are not significantly different between the treated and control groups, women living in the former Southwest Zone are less likely to work full-time and have a higher mean likelihood of being controlled by their husband compared to women living in the former West Zone. In terms of domestic violence, women in the treated group (Southwest Zone) face a higher average likelihood of experiencing all forms of domestic violence—physical, emotional, and the combination of both—compared to those in the control group (West Zone). We can also see that they are more likely to accept domestic violence with a higher mean compared to the control group.

About other geographic and pre-genocide characteristics, there are no significant differences in elevation between the two groups. However, locations in the Southwest Zone are more frequently situated in tropical lowland regions. Moreover, in 1970, this zone exhibited higher population density and a greater likelihood of agricultural activity compared to the West Zone. We also observe significantly shorter distances to 1970 main roads or railways for households living in the former Southwest Zone.

4 Empirical Strategy

4.1 Empirical Framework

I employ a spatial regression discontinuity design (RDD) to estimate the long-term effects of the Cambodian genocide on female empowerment and domestic violence. The spatial RDD leverages sharp changes at the zone border, comparing individuals living in the extremist Southwest Zone to those living in adjacent locations but in the moderate West Zone. Similar to designs in Gonzalez (2021) and Lehner (2024), the regression takes the form:

$$Y_{icgt} = \alpha + \beta \times Genocide_c + f(Geo_c) + \lambda \mathbf{X}_c + \gamma \mathbf{D}_c + \delta_g + \tau_t + \epsilon_{icgt} \tag{1}$$

where Y_{icgt} is the outcome variable of interest for a woman i in DHS cluster c, segment g in survey year t, and $Genocide_c$ is an indicator equal to 1 if a woman is currently located

[15] Data can be accessed via https://hub.worldpop.org.

in an area that was part of the extremist Southwest Zone during the Khmer Rouge era and equal to zero if she resides in an area formerly in the moderate West Zone. The function $f(Geo_c)$ is the RD polynomial controlling for smooth functions of geographic locations of cluster c. $\mathbf{X}_c$ is a vector of covariates, control for all pre-genocide characteristics.[16] $\mathbf{D}_c$ is a vector of geographic covariates, controlling for distance to the capital of Cambodia - the largest urban city, distance to Vietnam borders and distance to Thailand borders. δ_g is 15-km segment fixed effects which control for any systematic differences that might exist along the border itself. Finally, τ_t is survey-year fixed effects. Standard errors are clustered at the DHS survey cluster level.

The RD polynomial $f(Geo_c)$ uses a uni-dimensional measure, in particular, distance to the border between West Zone and Southwest Zone as a running variable. Following Gelman & Imbens (2019), I select a local linear RD polynomial for the baseline specification. I examine specifications with higher orders of RD polynomials in robustness checks. The local linear polynomial has a function as $f(Geo_c) = \eta dist_c + \theta Genocide_c \times dist_c$ with the forcing variable $dist_c$ denotes the Euclidean distance between a household location and the closest point on the border. Higher-order polynomials take the following form: $f(Geo_c) = \sum_{k=1}^{a} \eta_k dist_c^k + \theta_k Genocide_c \times dist_c^k$. The interaction term of the treatment variable ($Genocide_c$) with the distance to the border ($dist_c$) is included in all specifications, allowing for different slopes of the function on two sides of the zone border.

In all regressions, I employ a triangular kernel weighting function where the weight assigned to each observation decreases as the distance from the border increases.

In terms of bandwidth selection, Table 1 presents the data-driven optimal bandwidths for the main outcomes following Calonico et al. (2020). The bandwidths are estimated using either a local linear or a quadratic polynomial. I select the bandwidth roughly equal to the average of optimal bandwidths for all these outcomes. Particularly, the estimation sample is restricted to individuals falling within a bandwidth of 30 kilometers around the zone border. All tables in this paper report the estimates using a 30km bandwidth unless stated otherwise. I examine samples with other bandwidth restrictions in robustness checks.

In Appendix B, I use a multi-dimensional RDD to cross-verify the results. In the multi-dimensional RDD, RD polynomial includes demeaned x- and y-coordinates of household locations as running variables $f(Geo_c) = x + y$.

4.2 RDD Assumptions

Assumption 1: Continuity Assumption. The first key assumption for a valid RDD is the smooth variance of all covariates at the border. More precisely, if $E[c_1|dist]$ and $E[c_0|dist]$ represent the potential outcomes under treatment and control, respectively,

[16] Pre-genocide characteristics include geographic characteristics (elevation, tropics/lowland), demographic characteristics (population density in 1970) and economic characteristics (agricultural activities and distance to main roads/railways in 1970)

Table 1: Optimal bandwidths for RDD

Outcome	Linear	Quadratic
	(1)	(2)
Panel A: Women's empowerment		
Full-time Working	13.185	22.135
Decision Making	16.902	22.076
Partner Control	42.712	39.400
Panel B: Domestic Violence		
Physical Violence	44.747	29.368
Emotional Violence	26.745	37.100
Domestic Violence (Either)	24.838	31.782
Domestic Violence (Both)	43.862	36.243
Attitude (Consent)	24.209	21.883

Note: The table shows the mean square error optimal bandwidths of main outcomes following Calonico et al. (2020) – CCT bandwidths with a local linear polynomial or a quadratic polynomial. Column (1) presents the optimal bandwidth for each outcome with a local linear polynomial of distance to the border, while column (2) shows the results with a quadratic polynomial control.

and *dist* denotes distance to the border; then both $E[c_1|dist]$ and $E[c_0|dist]$ must change smoothly at the discontinuity. The characteristics of individuals must be continuous across the treatment boundary, allowing individuals in the moderate (control) zone to act as a valid counterfactual group for those in the extremist (treated) zone.

Table 2: Balance Check

	Dependent variable is:				
	Geography		Pre-genocide characteristics		
	(1) Elevation	(2) Tropics/Lowland	(3) Pop. Density	(4) Agriculture	(5) Dist. roads
Genocide	-0.296	0.066	-0.005	0.085	0.495*
	(1.564)	(0.065)	(0.012)	(0.055)	(0.253)
Mean	21.17	0.529	0.826	0.682	3.029
Observations	15153	15153	14975	15153	15153
Clusters	466	466	460	466	466

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of spatial coordinates with a triangular kernel weight. All regressions control for 15-km segment fixed effects and survey year fixed effects. *Tropics/lowland* is a dummy variable reflecting whether this location belongs to areas classified as "tropics, lowland" based on agro-ecological zones classification. I digitize three maps in Indochina Atlas, published in October 1970, to extract information on pre-genocide characteristics at household locations. *Pop. Density* is a binary variable reflecting if the population density in 1970 was at least fifty inhabitants per square kilometre. *Agriculture* indicates whether there were any agricultural activities in these areas in 1970. *Dist. roads* refers to distance (in km) to 1970 main roads/railways. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

I use regression 1 to assess the validity of the design by comparing pre-genocide geographic, demographic and economic characteristics across the boundary. Table 2 reports the results. All of these characteristics are measured at the DHS survey cluster level and serve as outcome variables in regression 1. I find no evidence of discontinuities in geographic, demographic, or economic characteristics at the border that separates West Zone and Southwest Zone. Particularly, the estimates for elevation and tropical/lowland areas are statistically insignificant, suggesting that geographic features vary smoothly across the boundary (columns 1–2). Additionally, there is no statistically significant difference in 1970 population density between the two sides of the border (column 3). Similarly, there is no discontinuity in pre-genocide agricultural activities across the border (column 4). In terms of distance to 1970 main roads and railways, I observe a weakly significant discontinuity at the 10% level, though the effect size is small (column 5). The distance to 1970 main roads and railways was just 0.5km longer for those in the extremist Southwest Zone.

Assumption 2: No manipulation. The second assumption for a valid RDD is no manipulation across the border, meaning that individuals could not sort themselves around the cut-off border. This assumption would be violated if individuals during the Khmer Rouge regime were able to sort themselves around locations where repression was more or less intense. Historical evidence indicates that during the genocide, people were forcibly relocated and had no freedom to decide where they lived. After the Khmer Rouge seized power, urban people were forced to migrate to the countryside, and rural peasants were also forcibly relocated to other places (Kiernan 2002*b*). In addition, Table 2 shows that pre-genocide population density was balanced across the border with no statistically significant differences (column 3).

Assumption 3: Stable Unit-Treatment Value Assumption (SUTVA). A violation of SUTVA at the boundary can introduce bias into spatial RD designs. SUTVA holds when a unit's outcome does not depend on the treatment status of nearby units (Rubin 1986, Keele & Titiunik 2015). In our case, SUTVA is violated if the outcomes of a woman residing near the border in the West Zone are influenced by the treatment status or outcomes of individuals living just across the boundary in the Southwest Zone. A potential concern is migration from treated areas (the high-repression Southwest Zone) to control areas (the moderate West Zone), which could bias the results. If individuals adversely affected by the genocide relocated to control regions, this may depress outcomes there and obscure the true effect of the genocide. Therefore, any potential violations of SUTVA in my RDD design would likely bias the estimated effects toward zero. Additionally, this spillover is unlikely, as post-genocide population density remains similar across the border (Table E.2). Moreover, in Section 6.2, donut exercises that remove observations close to the zone border show that the main results remain robust and become more efficient.

5 Genocide repression across Southwest-West Zones Border

I begin with some motivating analyses to examine the difference in genocide repression across the Southwest-West Zone Border. In Section 2, I outline historical evidence highlighting the sharp contrast in genocide intensity on two sides of the border. In this section, I use the Cambodian Genocide Databases with detailed information on 309 geo-coded locations of 18,953 mass graves during Democratic Kampuchea to provide empirical evidence for the validity of this border.

Table 3: Genocide repression across zone borders

	Graves within 5-km radius			
	Dummy (YES)		Number of graves	
	(1)	(2)	(3)	(4)
Panel A. Southwest-West Zone Border				
Genocide	0.145**	0.119**	16.275**	14.040**
	(0.057)	(0.055)	(6.880)	(6.855)
Mean	0.298	0.298	27.61	27.61
Observations	14935	14935	14935	14935
Panel B. Placebo test: Northwest-West Zone Border				
Genocide	-0.124	-0.077	-3.743	-2.472
	(0.084)	(0.069)	(2.542)	(1.789)
Mean	0.298	0.298	27.61	27.61
Observations	2556	2556	2556	2556
Dist. to border	Yes	No	Yes	No
Dist. to border × Genocide	Yes	No	Yes	No
x- and y-coordinates	No	Yes	No	Yes

Note: Dependent variable for columns (1) (2) is a dummy variable indicating whether there are any mass graves in a 5-km radius of households. Dependent variable for columns (3) (4) is the number of graves within a 5-km radius. The sample is restricted to those within 30km bandwidth from the Southwest-West border or Northwest-West border. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

In particular, I count the number of graves within a 5-kilometer radius from household locations and construct a binary variable which is equal to one if there are any mass graves within a 5km radius of households. Based on the main specification, I test whether graves are more commonly found in the extremist Southwest Zone compared to the moderate West Zone. Results are reported in Table 3, Panel A. I find that households in the extremist Southwest Zone are 14.5 (or 11.9) percentage points more likely to have mass graves in their vicinity than households in the moderate West Zone. This represents over 40% compared to the mean. Consistent with this, the number of graves

also increases significantly for those in the Southwest Zone, with 16 (or 14) more graves in their vicinity, a jump equal to half the average. These findings hold steady whether I control for households' distance to the border or their spatial coordinates.

I perform a placebo test by replicating the analysis using the border between the Northwest Zone and West Zone. Table 3 - Panel B reports the results. There are no significant effects on either the likelihood of having a mass grave or the number of mass graves in nearby areas. This placebo test provides evidence that genocide repression was not significantly different across the Northwest–West Zone Border, underscoring the stark contrast in the genocide repression across the Southwest-West Zone Border.

Overall, these empirical analyses clearly illustrate that the intensity of repression was significantly different across the border between Southwest and West Zones, potentially leading to long-lasting differences in other outcomes, including female empowerment and domestic violence. We now turn to the baseline results of this study.

6 Results

6.1 Baseline results

The main results of the spatial RD design are presented in Table 4 and 5. I examine the long-term impacts of genocide on female empowerment and domestic violence in Cambodia, two to four decades after the genocide ended. Across all specifications, I observe negative long-term effects of genocide on female empowerment and domestic violence. In areas where genocide was intense, women are less empowered and more likely to suffer from domestic violence, especially emotional violence, at present.

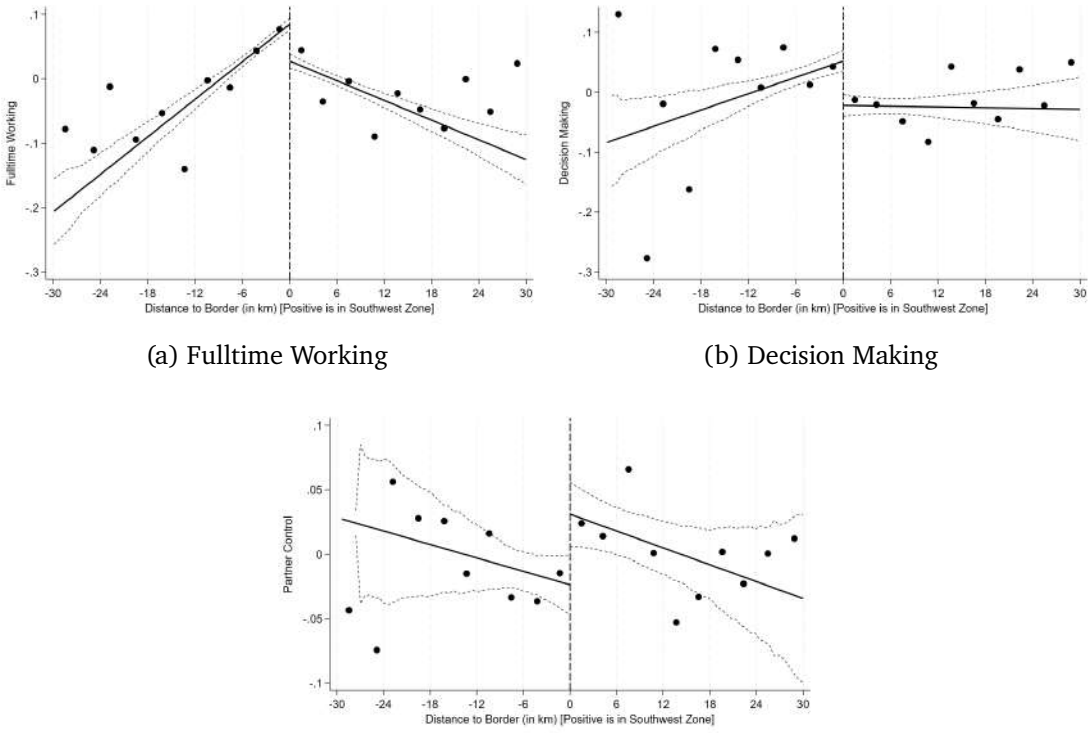
Table 4: The long-term impacts of Genocide on female empowerment

	Dependent variable is:		
	(1) Fulltime Working	(2) Decision Making	(3) Partner Control
Genocide	-0.042*	-0.072**	0.058**
	(0.023)	(0.030)	(0.023)
Mean	0.709	0.563	0.126
Observations	11723	7023	2173
Clusters	459	459	366

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table 4 reports the impacts of genocide on female empowerment. Overall, we can see that in the Southwest Zone with high repression intensity, women at present are

Figure 3: Female Empowerment: RD plots



(a) Fulltime Working

(b) Decision Making

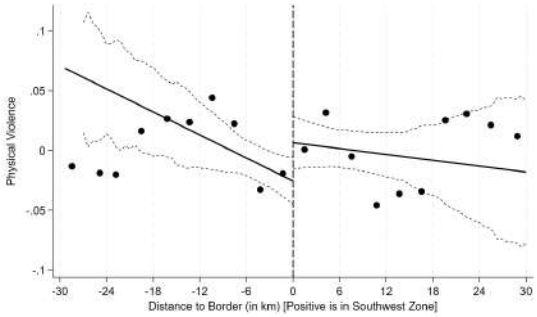
(c) Partner Control

Note: The points represent binned residuals derived from a main regression of the outcome variable on a linear polynomial in distance to the border and other control variables. Solid lines depict a local linear regression, separately estimated on each side of the threshold, while dashed lines represent 95% confidence intervals. "Positive" values of distance indicate locations in the Southwest Zone.

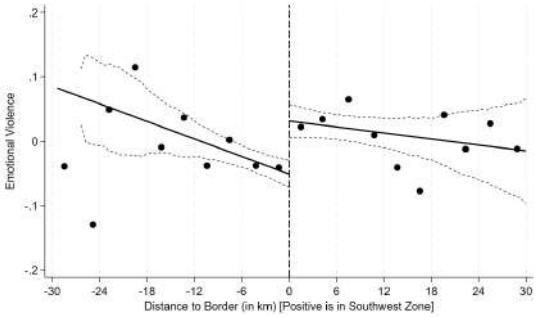
less empowered in households. They are 4.2 percentage points less likely to work full-time, a drop of 6% compared to the mean, though only statistically significant at the 10% level. These women are also 7.2 percentage points less likely to make important household decisions, representing a 12.8% reduction relative to the average. They are also 5.8 percentage points more likely to be controlled by their partner, an increase of 46% compared to the mean likelihood. Figure 3 illustrates these findings graphically. We can see a clear drop in full-time working and decision-making, and a significant jump in partner control for women residing in the Southwest Zone.

In terms of domestic violence, in the extremist Southwest Zone, women at present are more likely to experience domestic violence (Table 5). Although there is no significant effect on physical violence, women living in high-repression areas are 8.6 percentage points more likely to experience emotional violence - an increase of over 50% compared to the average rate. Their likelihood of experiencing either physical or emotional violence increases by 6.7 percentage points, equivalent to 34% of the mean, and the probability for them to face both types rises by 4.9 percentage points - representing an increase of 61% relative to the average. Especially, these women are more likely to justify domestic

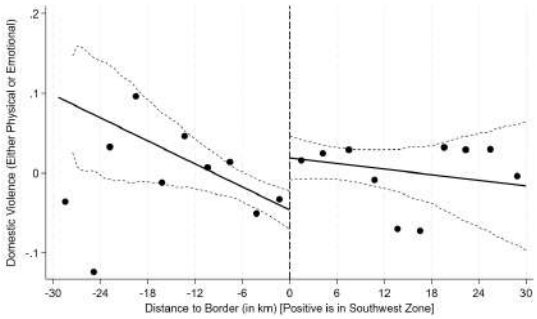
Figure 4: Domestic Violence: RD plots



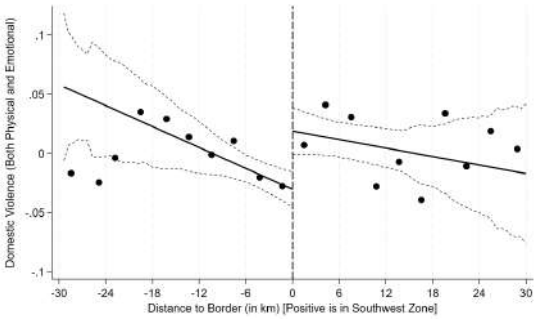
(a) Physical Violence



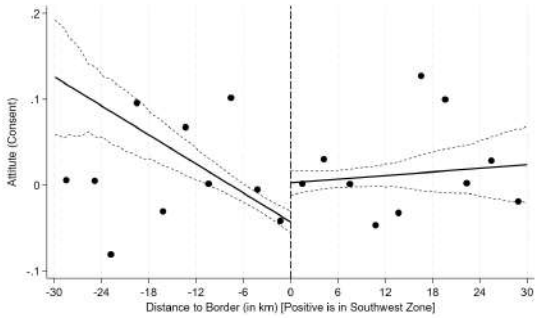
(b) Emotional Violence



(c) Violence (Either Physical or Emotional)



(d) Violence (Both Physical and Emotional)



(e) Attitude towards violence (Consent)

Note: The points represent binned residuals derived from a main regression of the outcome variable on a linear polynomial in distance to the border and other control variables. Solid lines depict a local linear regression, separately estimated on each side of the threshold, while dashed lines represent 95% confidence intervals. “Positive” values of distance indicate locations in the Southwest Zone.

Table 5: The long-term impacts of Genocide on domestic violence

	Dependent variable is:				
	(1) Physical Violence	(2) Emotional Violence	(3) Violence (Either)	(4) Violence (Both)	(5) Attitudes (Consent)
Genocide	0.031	0.086***	0.067**	0.049***	0.041**
	(0.022)	(0.026)	(0.029)	(0.018)	(0.021)
Mean	0.115	0.162	0.197	0.0802	0.322
Observations	2173	2173	2173	2173	10597
Clusters	366	366	366	366	459

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

violence with a 4.1 percentage point increase in acceptance rate, equal to 12.7% of the mean. Figure 4 shows clear discontinuities in the likelihood of experiencing emotional violence, both forms of violence, and either form of violence.

These results are consistent with household bargaining model, which suggests that women's increased access to resources reduces their exposure to domestic violence by enhancing their bargaining power within relationships (Meyer et al. 2024). In the case of Cambodia, genocide lowers women's relative economic power and increases their vulnerability to domestic violence by weakening their negotiating position and heightening financial dependence on male partners. The findings reinforce conclusions drawn in multiple studies, suggesting a robust relationship between women's intra-household power and the presence of domestic violence (Aizer 2010, Anderberg et al. 2016, Henke & Hsu 2020).

6.2 Robustness checks

I conduct a wide range of robustness checks to assess the sensitivity of the results and address potential concerns associated with my RD design. I show that my results remain robust to different bandwidths, polynomial orders, segment fixed effects, alternative specifications, and placebo tests that shift the border toward different directions. These robustness results are presented in Appendix A. Additionally, a multidimensional RD design also produces results consistent with the main analysis (Appendix B).

Multi-dimensional RD design. In Appendix B, I show that multi-dimensional RD design which controls for x- and y-coordinates of households instead of distance to the border yields similar results to my main design. All of the estimates are statistically significant and larger in magnitude. In high-repression areas, women are 5.4 percentage points less likely to work full-time, a larger and more significant effect than the 4.2 percentage point decrease found in the main analysis. These women are 7.1 percentage points less likely to make important household decisions, slightly smaller than 7.2 percentage points

observed in the main analysis. The impact on partner control remains the same with a 5.8 percentage point decrease. In terms of domestic violence, there is still no effect on physical violence; however, women in the Southwest Zone are 8.7 percentage points more likely to face emotional violence, 6.9 percentage points more likely to experience either emotional or physical violence, and 5.1 percentage points more likely to suffer from both. These effects are statistically significant and similar to the main results. Additionally, these women are 4.9 percentage points more likely to accept domestic violence. This estimate is greater in magnitude than the one reported in the main analysis.

Choice of polynomial orders. Figures A.1 and A.4 display the main coefficients for different orders of RD polynomial in distance to the border. For female empowerment (Figure A.1), results remain consistent when using quadratic polynomials, but the effects disappear when cubic or higher-order polynomials are applied. This likely reflects overfitting rather than a true absence of effect, and therefore may not be a concern. In terms of domestic violence (Figure A.4), the results are consistent when higher orders of polynomials are used in the main regression, showing a higher likelihood of experiencing domestic violence among women in the high-repression zone.

Bandwidth sensitivity. I conduct sensitivity checks on different choices of bandwidth ranging from 15km to 45km with 1km intervals. Figures A.2 and A.5 show that the results are robust to different choices of bandwidths. For female empowerment outcomes, we may not observe significant effects with very narrow bandwidths, likely due to smaller sample sizes that reduce statistical power. The lack of significance at too narrow bandwidths is not a concern, as it reflects a common trade-off between bias and variance in RD designs. Regarding domestic violence outcomes, the estimates for domestic violence remain stable and robust across all bandwidth choices.

Segment fixed effects. The main specification includes border-segment fixed effects to ensure comparisons are made between treated and control units within the same local border segment, thereby controlling for unobserved geographic or socio-economic differences that may vary along the border itself and could otherwise bias the estimated treatment effect. The main specification uses 15-km border segment fixed effects, and I conduct a sensitivity analysis by varying the segment length from 5 km to 30 km with 5-km increments. Figures A.3 and A.6 plot the main coefficients under different segment fixed effect specifications, showing that the results remain consistent across various segment fixed effects.

Different specifications. I conduct robustness checks by exploring alternative specifications. The first column excludes the interaction between the treatment variable and the running variable – distance to the border. Column (2) excludes the distance to the

capital in the main regression. Column (3) presents estimates without a triangular kernel weight. The last two columns conduct a *donut* exercise by excluding all observations within 1 km and 3 km of the border, respectively, and the model is estimated using the remaining observations. This approach helps address potential concerns about systematic differences between populations living close to the border and those farther away.

Table A.1 reports the results on female empowerment. Across all specifications, the estimates remain consistently significant and stable, highlighting the robustness of the findings. Especially, in the more restrictive *donut* models (columns 5–6), the effects remain strong and significant. Women are 7.2 and 10.5 percentage points less likely to work full-time in the 1-km and 3-km *donut* exercises, exceeding the 4.2-point drop in the main analysis. While decision-making is not significant in the 1-km *donut* model, the 3-km *donut* exercise shows a significant 11.7 percentage point decline. Estimates for partner control are also larger and statistically significant compared to the main results. The findings on domestic violence are also robust to diverse specifications (Table A.3). In particular, the estimates for emotional violence, either type of violence and both types of violence remain stable and statistically significant across all specifications. However, we can only see marginal effects in accepting domestic violence, and these effects become insignificant in *donut* exercises.

Placebo tests. I perform placebo tests by shifting the border towards two directions: Northwest and Southeast to verify that the observed treatment effect is not the result of random variation or underlying bias.

Table A.2 presents the results of placebo tests for different female empowerment outcomes. I find some significant effects on full-time working when shifting the border northwest and southwest, but the direction and magnitude of these effects are inconsistent and do not reveal a clear pattern. About decision making, there are no significant placebo-boundary effects. In terms of partner control, placebo tests shifting the border southeast shows some significant effects but only at 10% level. I find these significant results are not concerning as they lack a clear pattern and are expected by chance, given the number of placebo tests.

Table A.4 shows the placebo results across different measures of domestic violence. There are no significant placebo-boundary effects in all placebo tests, except positive effects on emotional violence and both types of violence in a 30-km northwest shift. Again, I do not find these significant estimates concerning, as they are isolated cases without a consistent pattern and are likely due to random variation given the number of placebo tests conducted.

6.3 Heterogeneous effects

In this section, I examine the heterogeneous effects of the genocide by marital status and generation cohorts.

I disaggregate the effects by women's marital status, dividing the sample into two groups: (1) women who are currently married or living with a partner, and (2) women who are never married, widowed, divorced, or separated.[17] I expect that the impacts on female empowerment and domestic violence may differ depending on whether a woman is currently living with a partner.

Table 6: Female Empowerment: Heterogeneous effects by marital status

	Dependent variable is:		
	(1) Fulltime Working	(2) Decision Making	(3) Partner control
Panel A. Married or cohabiting women			
Genocide	-0.053**	-0.077**	0.044*
	(0.025)	(0.032)	(0.022)
Mean	0.671	0.557	0.112
Observations	7277	6439	1899
Clusters	459	459	366
Panel B. Other marital statuses			
Genocide	-0.023	-0.011	0.139*
	(0.025)	(0.062)	(0.084)
Mean	0.770	0.631	0.219
Observations	4445	584	273
Clusters	457	152	178

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table 6 and 7 reports the results. The effects on full-time employment and household decision-making are statistically significant among women who are married or living with a partner (columns 1-2 in Table 6). Specifically, these women are 5.3 percentage points less likely to be employed full-time and 7.7 percentage points less likely to participate in major household decisions. In contrast, no significant effects are observed for women with other marital statuses. However, this group is more likely to experience controlling behaviours from male partners, although this finding should be interpreted with caution as it is based on a small sample and is only statistically significant at the 10 % level.

Concerning domestic violence, there are notable differences between the two groups (Table 7). We find no effects on the likelihood of experiencing physical violence among married or cohabiting women, but there is a marginally significant positive effect for women with other marital statuses. Women in both marital groups show increased like-

[17] Previously, the DHS domestic violence module focused only on ever-married women and their current or most recent partners. Starting with surveys implemented in 2021, the module has expanded to include never-married women if they report ever having had an intimate partner.

Table 7: Domestic Violence: Heterogeneous effects by marital status

	Dependent variable is:				
	(1) Physical Violence	(2) Emotional Violence	(3) Violence (Either)	(4) Violence (Both)	(5) Attitudes (Consent)
Panel A. Married or cohabiting women					
Genocide	0.016	0.072***	0.054*	0.034*	0.035
	(0.023)	(0.026)	(0.030)	(0.018)	(0.023)
Mean	0.104	0.150	0.182	0.0726	0.349
Observations	1899	1899	1899	1899	6413
Clusters	366	366	366	366	459
Panel B. Other marital statuses					
Genocide	0.125*	0.176**	0.151	0.150***	0.052**
	(0.072)	(0.081)	(0.092)	(0.057)	(0.026)
Mean	0.187	0.245	0.299	0.133	0.282
Observations	273	273	273	273	4184
Clusters	178	178	178	178	438

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

lihood of experiencing emotional violence, as well as experiencing both physical and emotional violence. However, the effects are bigger in magnitude for those with other marital statuses. As before, we interpret these effects with caution due to a small sample of women with other marital statuses.

I also split the effects by those born before and after the genocide ended. Table 8 shows the impacts of the genocide on female empowerment for different generations. The effect on full-time working is larger in magnitude for women born by 1979, but more significant for those born after. In terms of household decision-making power, women born by 1970 are 10.7 percentage points less likely to participate in important household decision-making. In contrast, no significant effects are observed among those born after the genocide. About partner control, the effects are only significant for those born after the genocide, with the likelihood of being controlled by partner increasing by 6.2 percentage points, over 50% relative to the mean.

In terms of domestic violence (Table 9), we can observe significant effects only among individuals born after the genocide. Individuals born by 1979 who experienced the genocide show a modest increase in the likelihood of experiencing emotional violence and both forms of violence, with effects only statistically significant at the 10% level. Meanwhile, those born after the genocide exhibit statistically significant increases in the likelihood of suffering from emotional violence, either physical or emotional violence and both forms of abuse. They are also more likely to accept domestic violence. These results show that the impact of the genocide varies across cohorts, with those born after the conflict facing greater risks of domestic violence, while less effects are observed for those directly ex-

Table 8: Female Empowerment: Heterogeneous effects by age cohorts

	Dependent variable is:		
	(1) Fulltime Working	(2) Decision Making	(3) Partner Control
Panel A. Born by 1979			
Genocide	-0.061*	-0.107***	0.042
	(0.033)	(0.033)	(0.037)
Mean	0.583	0.638	0.136
Observations	5107	2894	970
Clusters	455	454	327
Panel B. Born after 1979			
Genocide	-0.039**	-0.054	0.062**
	(0.019)	(0.037)	(0.026)
Mean	0.805	0.511	0.117
Observations	6616	4129	1203
Clusters	458	443	270

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table 9: Domestic Violence: Heterogeneous effects by age cohorts

	Dependent variable is:				
	(1) Physical Violence	(2) Emotional Violence	(3) Violence (Either)	(4) Violence (Both)	(5) Attitudes (Consent)
Panel A. Born by 1979					
Genocide	0.046	0.081*	0.065	0.062*	0.045
	(0.040)	(0.041)	(0.046)	(0.033)	(0.032)
Mean	0.152	0.191	0.236	0.108	0.414
Observations	970	970	970	970	3338
Clusters	327	327	327	327	456
Panel B. Born after 1979					
Genocide	0.027	0.088***	0.074**	0.040**	0.041*
	(0.024)	(0.028)	(0.033)	(0.020)	(0.021)
Mean	0.0843	0.139	0.165	0.0581	0.280
Observations	1203	1203	1203	1203	7259
Clusters	270	270	270	270	435

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

posed to the genocide. This divergence may reflect underlying mechanisms such as shifts in demographic structures, particularly changes in sex ratios and household composition,

as well as the long-term disruption of gender roles caused by the genocide. These findings lead me to the following investigation of mechanisms that can possibly explain the story.

7 Mechanisms

In this section, I explore several possible mechanisms that can explain the long-term impacts of genocide on female empowerment and domestic violence. First, decreased female empowerment and increased domestic violence may be partially attributed to skewed sex ratios and increased fertility rates following the genocide. Second, I provide evidence that the genocide significantly affects household structure and household wealth, with households in high repression areas having more children and poorer today. Finally, changes in gender-related characteristics further help explain reduced female empowerment and increased vulnerability to domestic violence. Both men and women are more likely to marry at a younger age and have lower educational attainment. Women are more likely to participate in the labor force, though predominantly through part-time or irregular employment. In addition, men are more likely to engage into multiple marital unions.

Change in Sex Ratios and Population Structure I investigate post-genocide population ratios using the 2008 Population Census. Table 10 presents the results. First of all, average sex ratios across most age groups in Cambodia are much lower than the world average,[18] indicating fewer men than women in the country. Sex ratios are comparable on two sides of the West–Southwest Zone border (columns 1-2), except for the population older than 65 years old (column 3). This divergence in the older age group aligns with our broader narrative, suggesting that the more extreme violence in the Southwest Zone resulted in higher male mortality during the Khmer Rouge period. However, after several decades, its effects on population structure have diminished over time, and demographic recovery has contributed to a normalisation of sex ratios among younger cohorts.

Second, column 4 shows that the percentage of female-headed households is lower for villages in the high repression zone. In Cambodia, men are often traditionally listed as the head of the household. A woman may be the main decision-maker but still report a male as the head due to cultural norms or social expectations (Ovesen et al. 1996, Gorman et al. 1999). This pattern is also consistent with the demographic recovery following the genocide, as villages in the extremist zone exhibit slightly higher sex ratios (columns 1-2).

Third, for villages in the extremist Southwest zone, the dependency ratio, which is defined as the ratio of dependents (individuals under 15 and over 64 years old) to the working-age population (ages 15–64), increases by 1.405, which represents 2.4% rise compared to the mean (column 5). Similarly, the child-woman ratio, measured as the

[18] Sex ratio is the number of males per 100 females. According to the 2024 Revision of the World Population Prospects (United Nations, Department of Economic and Social Affairs, Population Division 2024), the global average sex ratio is approximately 101 males for every 100 females, while in Asia, the ratio is higher at around 104 males per 100 females.

Table 10: Mechanism: Population Ratios (2008 Population Census)

	Dependent variable is:					
	Sex Ratio			Other ratios		
	(1) Total	(2) 15-64	(3) 65+	(4) Female-headed	(5) Dependency	(6) Child-woman
Genocide	2.240*	2.741*	-5.042**	-2.937***	1.405**	10.559*
	(1.189)	(1.425)	(2.316)	(0.601)	(0.619)	(5.517)
Mean	93.83	91.16	70.58	27.07	58.21	355.3
Observations	2793	2793	2786	2793	2793	2793

Note: The unit of analysis is villages. The sample is restricted to villages within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. *Sex ratio* is the ratio of males to females in the population (normalized to 100). *Female-headed* indicates the percentage of female-headed households. *Dependency ratio* represents the number of individuals who are economically inactive for every 100 economically active individuals in a population. *Child-woman ratio* measures the number of children under age 5 per 1,000 women of reproductive age. Standard errors are reported in parenthesis. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table 11: Mechanism: Household Characteristics (DHS)

	Dependent variable is:			
	(1) Female-headed	(2) Household size	(3) Kids ≤5	(4) Wealth quintile
Genocide	-0.011	0.006	0.047**	-0.157**
	(0.017)	(0.083)	(0.024)	(0.067)
Mean	0.287	4.911	0.576	3.772
Observations	11923	11923	11923	9873

Note: The unit of analysis is households. The sample is restricted to households within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. *Female-headed* is a binary variable indicating whether the household is headed by a woman. *Household size* denotes the number of household members. *Kids ≤5* indicates the number of children aged 5 and under. *Wealth quintile* indicates a household's relative economic status based on a wealth index derived from DHS data on assets (e.g, type of floor, water source, electricity, and ownership of durable goods). Households are ranked and divided into five equal groups, from the poorest 20% (first quintile) to the richest 20% (fifth quintile). Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

number of children under the age of five per 1,000 women aged 15 to 49, also increases by 10.559, equal to 3% of the mean (column 6). Together, these indicators suggest that villages in the high-repression Southwest Zone have experienced a relatively higher birth rate, reflecting a period of increased fertility following earlier population disruptions due to the genocide.

Household structure and household wealth I use DHS data to empirically investigate how the genocide affects household structure and household wealth in the long run. Table 11 reports the results. Although I do not see significant effects on the likelihood of a household being female-headed or overall household size (columns 1-2), households in the high-repression Southwest Zone have more children aged 5 and younger, suggesting a higher fertility rate in this region (column 3). This is consistent with the effects observed at the village level in Table 10 above. In Cambodian culture, women have traditionally been expected to take care of children, and this norm continues to shape gender roles (Gorman et al. 1999). Higher fertility rates may contribute to women's lower likelihood of working full-time, reduced decision-making power within households, and increased exposure to domestic violence, as caregiving responsibilities limit their economic and social autonomy.

In addition, households are poorer if they are located in the Southwest Zone (column 4). This finding aligns with evidence from Grasse (2024), which shows that villages in the more extremist Southwest Zone are poorer today than those in the adjacent West Zone. Poor economic conditions can partly explain the reduction in female empowerment by increasing women's financial dependence on male partners and restricting their access to education and employment. When household income is limited, families may prioritize boys' schooling, which reinforces traditional gender roles (Gorman et al. 1999, Brereton et al. 2004)

Change in gender characteristics The genocide also leads to significant changes in gender characteristics. To examine these changes, I utilize data from both the 2008 Population Census (Table 12) and the Demographic and Health Surveys (Table 13).

Table 12 presents gender characteristics at the village level based on data from the 2008 Population Census. First, both women and men get married at a younger age if they are in the high-repression zone (column 1). Second, while the genocide has no significant effect on the percentage of women completing secondary education (column 2 - Panel A), it has a significant negative impact on men's secondary education completion (column 2 - Panel B). Historical narrative reports that educated men were more likely to be killed during the genocide (Vickery 1984, Gaikwad et al. 2023), and this negative effect on men's education still persists decades after the regime ended. Table 13, based on DHS data, also reveals significant negative effects of the genocide on educational attainment for both males and females. Both genders are less likely to complete higher levels of education (columns 1-2 in Table 13), highlighting the long-term adverse impact of the genocide on human capital development.

Third, in terms of employment, Table 12 shows that females in the repression zone are more economically active and less likely to be unemployed (Panel A, columns 3-4). Meanwhile, although there is no significant effect on the percentage of economically active males, the male unemployment rate is also lower for villages in the high-intensity

Table 12: Characteristics by Gender: Village-level analysis (2008 Population Census)

	Dependent variable is:			
	(1) Marriage Age	(2) Secondary	(3) Economic Active	(4) Unemployment
Panel A. Females				
Genocide	-0.291**	-0.003	1.596***	-1.350***
	(0.139)	(0.004)	(0.615)	(0.337)
Mean	23.60	0.0288	62.05	2.324
Observations	2793	2793	2793	2793
Panel B. Males				
Genocide	-0.334***	-0.015**	0.589	-0.503**
	(0.121)	(0.006)	(0.429)	(0.215)
Mean	25.65	0.0696	61.72	1.707
Observations	2793	2793	2793	2793

Note: The unit of analysis is villages. The sample is restricted to villages within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. *Marriage Age* is the Singulate Mean Age at Marriage (SMAM) - an estimate of the average age of women or men before first marriage (Hajnal 1953). *Secondary* indicates the percentage of population who has completed secondary education. *Economic Active* is the percentage of population who is economically active. *Unemployment* indicates unemployment rate. Standard errors are reported in parenthesis. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

zone (Panel B, columns 3-4). These effects become clearer in Table 13, which shows the empirical evidence from the DHS data. In the extremist Southwest Zone, women are less likely to engage in full-time employment but more likely to participate in part-time, seasonal, or occasional work (columns 4-5). I also observe a similar pattern among men. Overall, the shortage of men post-genocide has increased women's participation in the labor force, which aligns with evidence found in Buvinic et al. (2013), Gaikwad et al. (2023). However, this participation is more often in part-time, seasonal, or occasional employment rather than full-time work.

Finally, genocide also has long-term effects on union and marital patterns (Table 13). In terms of marital status, women residing in the Southwest Zone are 3.7 percentage points less likely to have never been married (column 6), implying they are more likely to enter a union, potentially due to post-genocide demographic imbalances and economic pressures that encouraged earlier or more widespread union formation. Regarding the number of unions, men in the high repression zone are 4.3 percentage points, equivalent to over 50% of the mean, more likely to have more than one marital or cohabiting union (column 7). In contrast, there are no statistically significant effects on the number of unions among women. The total number of children also increases for both genders, indicating higher fertility (column 8). Briefly, men in the extremist Southwest Zone are more likely to have multiple unions, whereas women typically have only one. These pat-

Table 13: Characteristics by Gender: Individual-level analysis (DHS)

	Dependent variable is:							
	Education		Employment			Family		
	(1) Secondary	(2) High Edu	(3) Work	(4) Fulltime	(5) Seasonal	(6) Never-Married	(7) Union	(8) Children
Panel A. Females								
Genocide	-0.011	-0.024**	0.006	-0.042*	0.042*	-0.037**	0.005	0.104*
	(0.021)	(0.012)	(0.015)	(0.023)	(0.023)	(0.014)	(0.010)	(0.053)
Mean	0.442	0.0662	0.785	0.709	0.291	0.329	0.0791	1.689
Observations	14935	14935	14932	11723	11723	14935	10003	14935
Panel B. Males								
Genocide	-0.030	-0.053**	-0.003	-0.054*	0.054**	0.000	0.043**	0.125*
	(0.027)	(0.025)	(0.021)	(0.028)	(0.028)	(0.026)	(0.019)	(0.075)
Mean	0.639	0.133	0.838	0.760	0.240	0.414	0.0842	1.355
Observations	4742	4825	4742	3125	3125	4742	2771	4825

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. *Work* is a binary variable capturing an individual's employment status. *Fulltime* indicates whether an individual is employed full-time. *Seasonal* denotes individuals engaged in seasonal, part-time, or occasional work. *Secondary* denotes whether an individual has completed secondary education. *High Edu* represents attainment of education beyond the secondary level. *Never-Married* is a binary variable denoting whether a woman is never married. *Union* is a binary variable indicating whether an individual has had more than one marital or cohabiting union. *Children* refers to the total number of children an individual has. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

terns undermine women's autonomy and heighten their dependency, since men's ability to remarry strengthens their leverage in relationships, while women's restricted options diminish their bargaining power.

In Appendix C, I empirically investigate forced marriage during the genocide. I found that women getting married during the genocide are more likely to know their husband on their wedding day and less likely to participate in choosing their spouse. Additionally, these women are more likely to be absent from their husbands' household books. However, I do not see statistically significant effects across the zone border. This can be due to the uniform implementation of marriage policies across different zones and limited sample sizes.

In summary, there are several mechanisms that can possibly explain how the genocide leads to decreased female empowerment and increased domestic violence in Cambodia. First, the genocide resulted in notable demographic changes, including altered sex ratios and higher fertility rates. Second, the genocide appears to have lasting effects on household structure and economic conditions, as evidenced by higher numbers of children and lower household wealth in the high-repression zone. Third, the genocide brought about significant shifts in gender-related outcomes. Individuals of both sexes tend to marry at younger ages and attain lower levels of education. Women are more likely to participate in

the labor force, though primarily in part-time rather than full-time employment. Men are more likely to have multiple marital unions. Together, these factors contribute to persistent gender inequality, with women facing lower empowerment and greater vulnerability to domestic violence after the genocide.

8 Conclusion

This paper answers the question of how violence and repression influence female empowerment and domestic violence in the long run, using evidence from the Khmer Rouge genocide in Cambodia. Drawing on multiple geo-coded datasets and a spatial regression discontinuity design, I show that the genocide had significant lasting negative effects on female empowerment and vulnerability to domestic violence. In high-repression areas, women today are less likely to work full-time, have reduced decision-making power, and are more often controlled by their partners. They are also more vulnerable to domestic violence, particularly emotional abuse.

I interpret these results as evidence that mass violence creates enduring gender inequality, which can be explained by a set of underlying mechanisms. First, decreased female empowerment and increased domestic violence can stem from skewed sex ratios and higher fertility rates following the genocide. The Khmer Rouge's violence caused high male mortality, and although younger generations are more balanced today, the sex ratio still remains much below the world average. At the same time, higher fertility reinforces women's traditional role as primary caregivers. Second, households in the more violent areas remain poorer today, which may restrict women's access to education and reduce their overall decision-making power within the household. Additionally, the genocide leads to significant changes in gender characteristics, including earlier marriage and lower educational attainment for both men and women. Women are more likely to work, though mainly in part-time rather than full-time positions. Men often enter multiple unions or marriages, whereas women generally have only one. All these factors together contribute to persistent gender inequality, which in turn leads to lower women's empowerment and greater vulnerability to domestic violence.

The paper contributes to the literature on the long-term consequences of mass violence on gender inequality, with a focus on female empowerment and domestic violence. We provide empirical evidence that mass violence has lasting negative effects, consistent with home bargaining theory and with findings from Aizer (2010), Anderberg et al. (2016), Henke & Hsu (2020). The paper also contributes to a limited research on the legacy of the Khmer Rouge Genocide in particular. Most of these papers focus on economic outcomes, education, and health in the aftermath of the genocide, emphasising broad socioeconomic consequences (Islam et al. 2017, Grasse 2024, Marshall et al. 2005, Nou 2024). Limited attention has been given to how the genocide shapes gender inequality. The study most closely related to this research is the work of Gaikwad et al. (2023), which

demonstrates that the intense violence of the Khmer Rouge, which disproportionately killed working-age men, resulted in lasting increases in women's economic autonomy and greater participation in local government. However, unlike that study, my focus is on women's bargaining power within the household and their vulnerability to domestic violence. Even if women seem more empowered in society through greater labor force participation, they remain less empowered at home, with weaker decision-making power and higher exposure to violence.

My findings have important implications for how mass violence shapes societies in the long run and for policies that aim to reduce gender inequality, strengthen women's empowerment, and address domestic violence. With nearly one in three women worldwide experiencing domestic violence (WHO 2021), the 2030 UN Agenda for Sustainable Development set a global target (SDG 5.2) to eliminate all forms of violence against women and girls (Assembly et al. 2015). My results show that post-conflict recovery must go beyond rebuilding the economy to address the social and institutional legacies of violence that limit women's opportunities in education, work, and family life. Any efforts to reduce gender inequality must ensure that women's empowerment extends beyond labor market participation to encompass greater autonomy and safety within households. Future research should investigate whether similar patterns of gender inequality emerge in other post-conflict settings. It would be valuable to examine how the legacies of violence are transmitted across generations, shaping gender norms and household dynamics over time. Another key direction is to evaluate how post-conflict recovery programs, such as those focused on education, labor market participation, or legal reforms, contribute to reducing gender inequality and protecting women from domestic violence.

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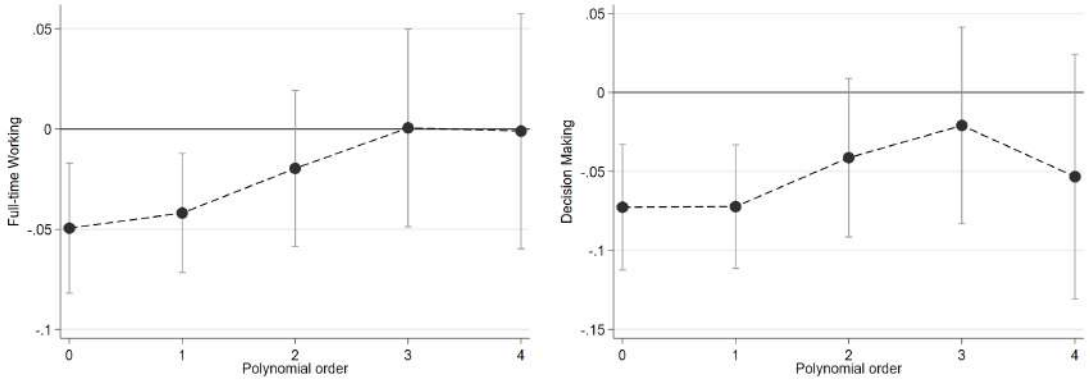
Appendix

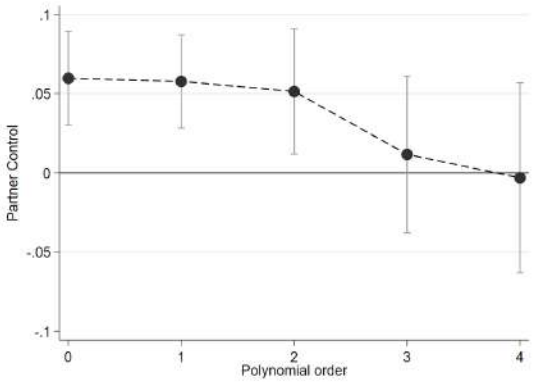
A Robustness

Figure A.1: Female Empowerment: Sensitivity of results to different orders of polynomial



(a) Fulltime Working

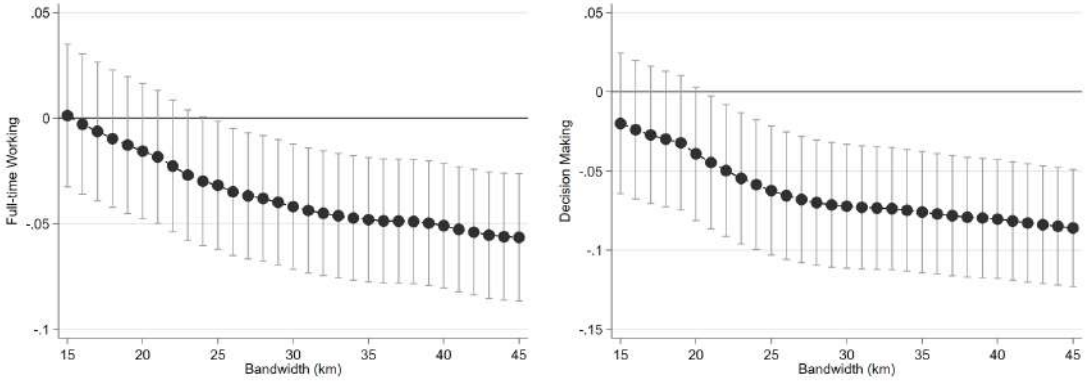
(b) Decision Making



(c) Partner Control

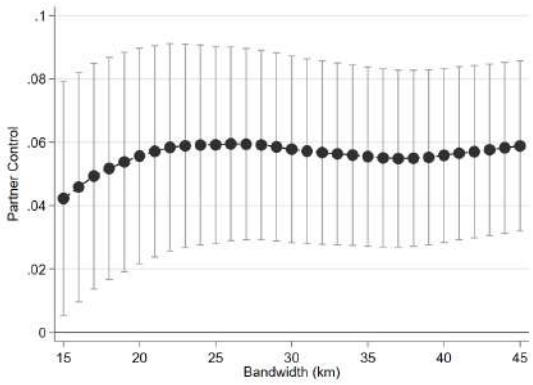
Note: Each dot represents the RD estimate using the specified order of RD polynomial in distance to the border. Capped spikes represent 90% confidence intervals of the estimates.

Figure A.2: Female Empowerment: Sensitivity of results to bandwidth choices



(a) Fulltime Working

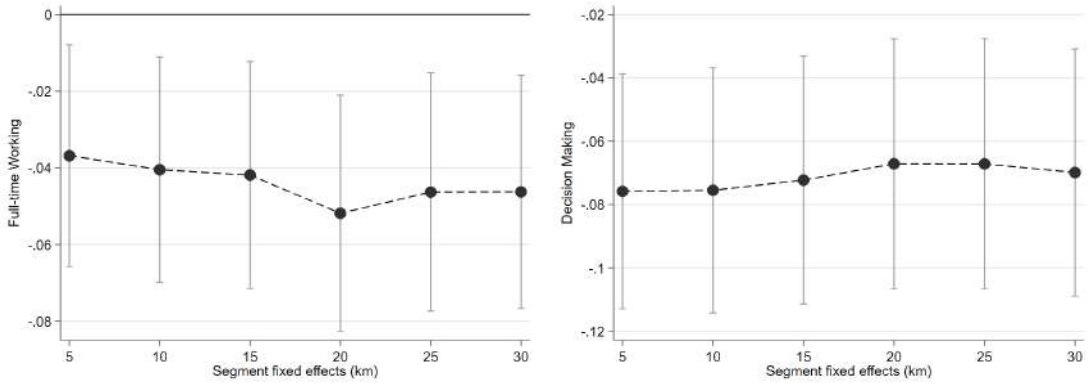
(b) Decision Making



(c) Partner Control

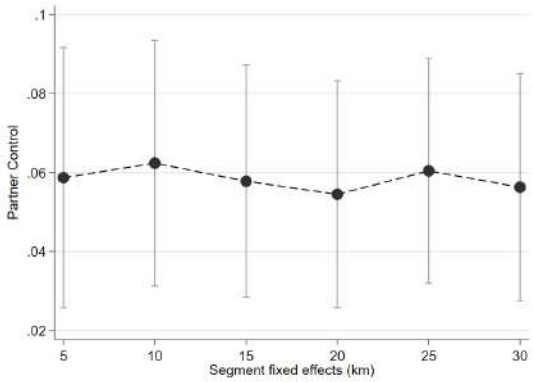
Note: Each sub-graph reports coefficient estimates and confidence intervals for different bandwidth levels ranging from 15 to 45 kilometers (horizontal axis) with 1km intervals. Each dot indicates the RD estimate using the specified bandwidth. Capped spikes represent 90% confidence intervals of the estimates.

Figure A.3: Female Empowerment: Sensitivity of results to different segment fixed effects



(a) Fulltime Working

(b) Decision Making



(c) Partner Control

Note: Each dot represents the RD estimate using the specified border segment fixed effects. Capped spikes represent 90% confidence intervals of the estimates.

Table A.1: Female Empowerment: Robustness to different specifications

	No Interaction	No Dist. Capital	No weights	Province FE	1km Donut	3km Donut
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Dependent variable is: Fulltime Working						
Genocide	-0.050**	-0.048**	-0.054**	-0.051*	-0.072***	-0.105**
	(0.025)	(0.024)	(0.025)	(0.026)	(0.027)	(0.046)
Mean	0.709	0.709	0.709	0.709	0.689	0.600
Observations	11723	11723	11723	11710	10301	7694
Clusters	459	459	459	458	401	297
Panel B. Dependent variable is: Decision Making						
Genocide	-0.075**	-0.069**	-0.081***	-0.059*	-0.056	-0.118**
	(0.031)	(0.031)	(0.031)	(0.030)	(0.037)	(0.053)
Mean	0.563	0.563	0.563	0.563	0.559	0.535
Observations	7023	7023	7023	7009	6176	4585
Clusters	459	459	459	458	401	297
Panel C. Dependent variable is: Partner Control						
Genocide	0.058**	0.060***	0.051**	0.055**	0.067**	0.083**
	(0.023)	(0.023)	(0.022)	(0.022)	(0.026)	(0.036)
Mean	0.126	0.126	0.126	0.126	0.124	0.119
Observations	2173	2173	2173	2173	1955	1518
Clusters	366	366	366	366	322	243

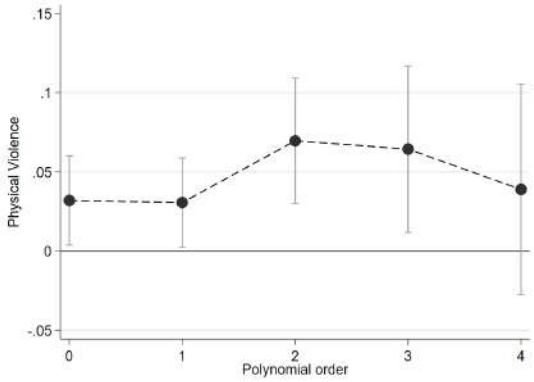
Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table A.2: Female Empowerment: Shifting border

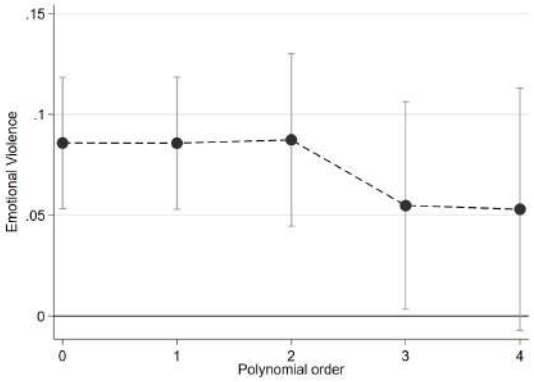
	Shift Northwest		Shift Southeast	
	10km	30km	10km	30km
	(1)	(2)	(3)	(4)
Panel A. Dependent variable is: Fulltime Working				
Genocide	0.125**	-0.199***	-0.130***	0.090*
	(0.058)	(0.075)	(0.042)	(0.047)
Mean	0.727	0.707	0.706	0.648
Observations	10284	7459	12186	12442
Clusters	400	288	478	502
Panel B. Dependent variable is: Decision Making				
Genocide	-0.007	-0.074	-0.064	0.080
	(0.064)	(0.087)	(0.046)	(0.053)
Mean	0.547	0.522	0.564	0.597
Observations	6080	4458	7347	7644
Clusters	400	288	478	502
Panel C. Dependent variable is: Partner Control				
Genocide	-0.060*	0.083*	-0.067*	0.068**
	(0.034)	(0.045)	(0.035)	(0.030)
Mean	0.124	0.115	0.128	0.126
Observations	1826	1353	2260	2287
Clusters	313	225	379	393

Note: The table shows the results of placebo tests which shift the border by 10 and 30 kilometers to different directions: east, west, north, south, northwest or southeast. The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the placebo border. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

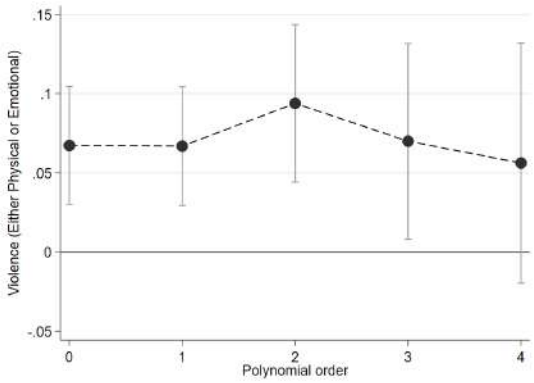
Figure A.4: Domestic Violence: Sensitivity of results to different orders of polynomial



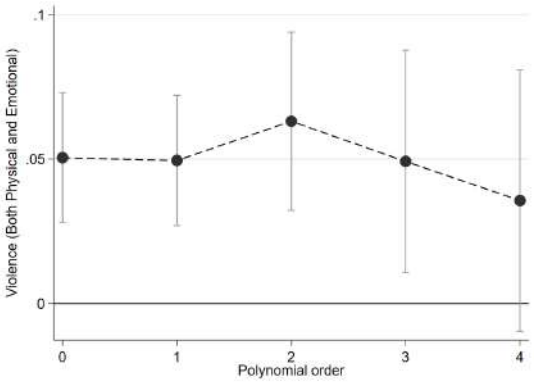
(a) Physical Violence



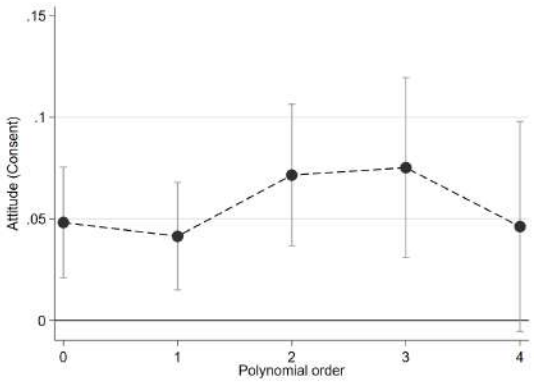
(b) Emotional Violence



(c) Violence (Either Physical or Emotional)



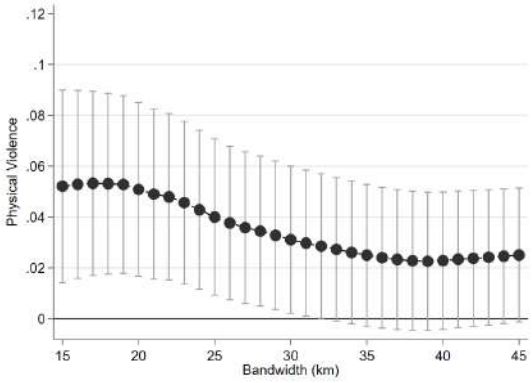
(d) Violence (Both Physical and Emotional)



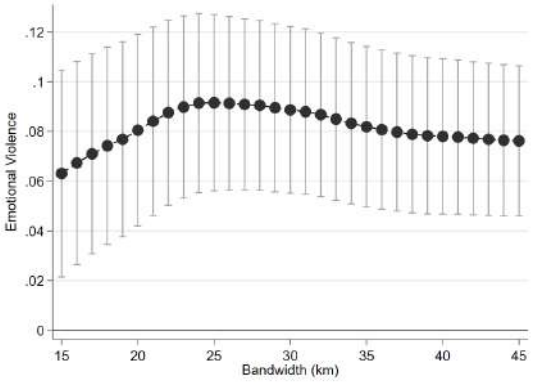
(e) Attitude towards violence (Consent)

Note: Each dot represents the RD estimate using the specified order of RD polynomial in distance to the border. Capped spikes represent 90% confidence intervals of the estimates.

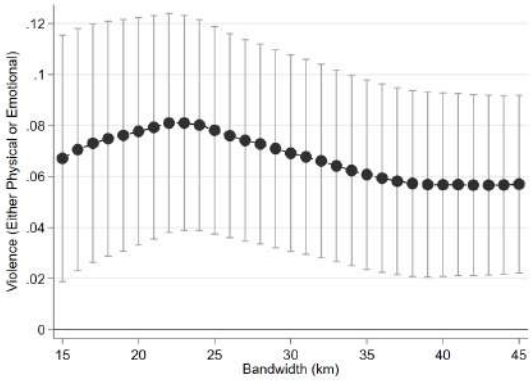
Figure A.5: Domestic Violence: Sensitivity of results to bandwidth choices



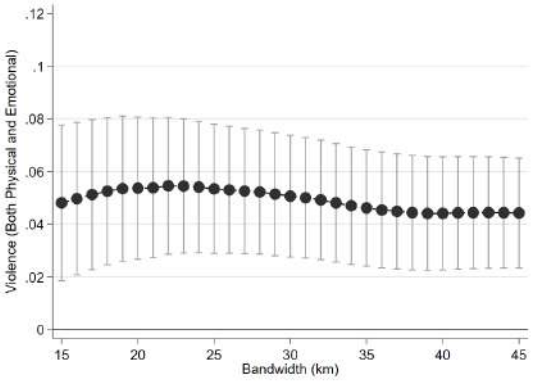
(a) Physical Violence



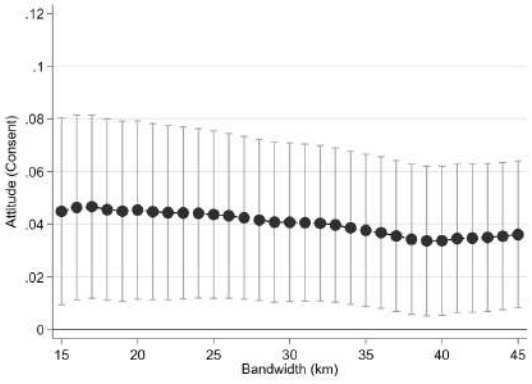
(b) Emotional Violence



(c) Violence (Either Physical or Emotional)



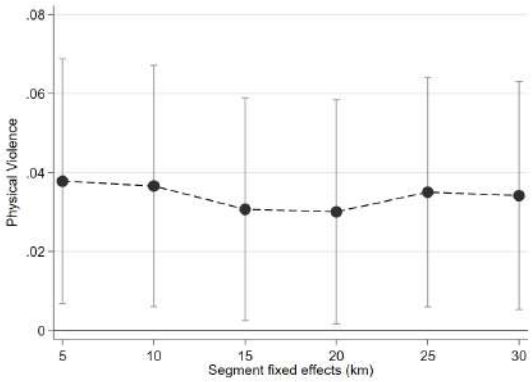
(d) Violence (Both Physical and Emotional)



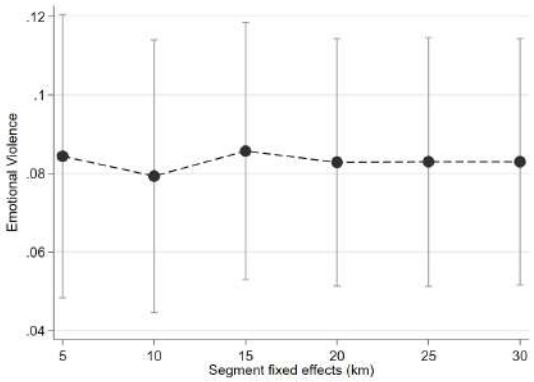
(e) Attitude towards violence (Consent)

Note: Each sub-graph reports coefficient estimates and confidence intervals for different bandwidth levels ranging from 15 to 45 kilometers (horizontal axis) with 1km intervals. Each dot indicates the RD estimate using the specified bandwidth. Capped spikes represent 90% confidence intervals of the estimates.

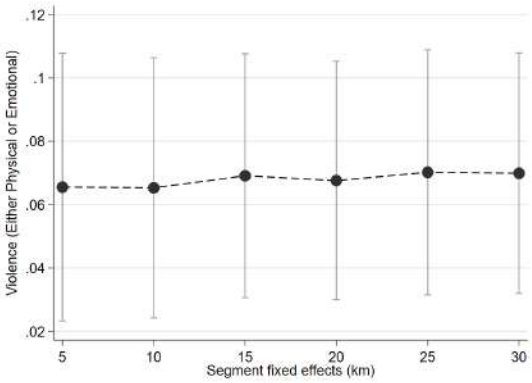
Figure A.6: Domestic Violence: Sensitivity of results to different segment fixed effects



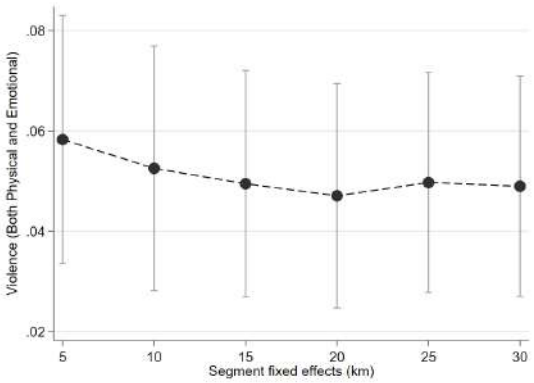
(a) Physical Violence



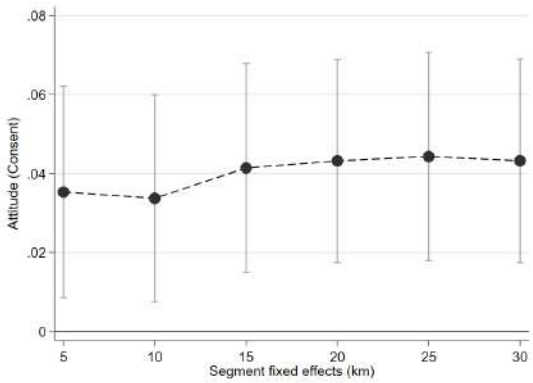
(b) Emotional Violence



(c) Violence (Either Physical or Emotional)



(d) Violence (Both Physical and Emotional)



(e) Attitude towards violence (Consent)

Note: Each dot represents the RD estimate using the specified border segment fixed effects .Capped spikes represent 90% confidence intervals of the estimates.

Table A.3: Domestic Violence: Robustness to different specifications

	No Interaction (1)	No Dist. Capital (2)	No weights (3)	Province FE (4)	1km Donut (5)	3km Donut (6)
Panel A. Dependent variable is: Physical Violence						
Genocide	0.031	0.032	0.013	0.040*	0.024	0.043
	(0.022)	(0.022)	(0.022)	(0.023)	(0.025)	(0.033)
Mean	0.115	0.115	0.115	0.115	0.116	0.126
Observations	2173	2173	2173	2173	1955	1518
Clusters	366	366	366	366	322	243
Panel B. Dependent variable is: Emotional Violence						
Genocide	0.086***	0.086***	0.077***	0.085***	0.087***	0.111***
	(0.025)	(0.025)	(0.025)	(0.025)	(0.032)	(0.043)
Mean	0.162	0.162	0.162	0.162	0.169	0.179
Observations	2173	2173	2173	2173	1955	1518
Clusters	366	366	366	366	322	243
Panel C. Dependent variable is: Violence (Either)						
Genocide	0.067**	0.068**	0.049*	0.071**	0.058	0.083*
	(0.029)	(0.029)	(0.029)	(0.029)	(0.036)	(0.046)
Mean	0.197	0.197	0.197	0.197	0.204	0.216
Observations	2173	2173	2173	2173	1955	1518
Clusters	366	366	366	366	322	243
Panel D. Dependent variable is: Violence (Both)						
Genocide	0.050***	0.050***	0.040**	0.054***	0.052**	0.070**
	(0.018)	(0.018)	(0.017)	(0.017)	(0.021)	(0.027)
Mean	0.080	0.080	0.080	0.080	0.082	0.089
Observations	2173	2173	2173	2173	1955	1518
Clusters	366	366	366	366	322	243
Panel E. Dependent variable is: Attitude (Consent)						
Genocide	0.048**	0.045**	0.032	0.044**	0.018	0.001
	(0.021)	(0.021)	(0.021)	(0.020)	(0.025)	(0.044)
Mean	0.322	0.322	0.322	0.322	0.333	0.365
Observations	10597	10597	10597	10573	9118	6658
Clusters	459	459	459	458	401	297

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table A.4: Domestic Violence: Shifting border

	Shift Northwest		Shift Southeast	
	10km	30km	10km	30km
	(1)	(2)	(3)	(4)
Panel A. Dependent variable is: Physical Violence				
Genocide	-0.043	0.044	-0.021	0.000
	(0.041)	(0.057)	(0.030)	(0.038)
Mean	0.109	0.103	0.122	0.125
Observations	1826	1353	2261	2289
Clusters	313	225	379	393
Panel B. Dependent variable is: Emotional Violence				
Genocide	-0.040	0.244***	-0.045	-0.017
	(0.042)	(0.050)	(0.041)	(0.041)
Mean	0.156	0.142	0.170	0.180
Observations	1826	1353	2261	2288
Clusters	313	225	379	393
Panel C. Dependent variable is: Violence (Either)				
Genocide	-0.070	0.238***	-0.024	-0.013
	(0.050)	(0.061)	(0.044)	(0.048)
Mean	0.187	0.178	0.203	0.210
Observations	1826	1353	2261	2289
Clusters	313	225	379	393
Panel D. Dependent variable is: Violence (Both)				
Genocide	-0.012	0.050	-0.042*	-0.004
	(0.032)	(0.040)	(0.025)	(0.034)
Mean	0.0785	0.0671	0.0895	0.0949
Observations	1826	1353	2261	2289
Clusters	313	225	379	393
Panel E. Dependent variable is: Attitude (Consent)				
Genocide	-0.080**	0.080	0.006	0.013
	(0.040)	(0.053)	(0.034)	(0.053)
Mean	0.322	0.315	0.344	0.369
Observations	9341	6827	10992	11412
Clusters	400	288	478	502

Note: The table shows the results of placebo tests which shift the border by 10 and 30 kilometers to different directions: east, west, north, south, northwest or southeast. The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the placebo border. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

B Multi-dimensional RD design

This section employs a multi-dimensional RDD to validate the main results. I retain the baseline specification, but the RD polynomial uses a multi-dimensional measure, particularly, demeaned x- and y-coordinates of household locations $f(Geo_c) = x + y$. The results of the multidimensional RDD, which are reported in Table B.1 and Table B.2, are consistent with those obtained in the main analysis.

Table B.1: Multidimensional RDD: Impacts on female empowerment

	Dependent variable is:		
	(1) Fulltime Working	(2) Decision Making	(3) Partner Control
Genocide	-0.054**	-0.071**	0.058**
	(0.025)	(0.031)	(0.023)
Mean	0.709	0.563	0.126
Observations	11723	7023	2173
Clusters	459	459	366

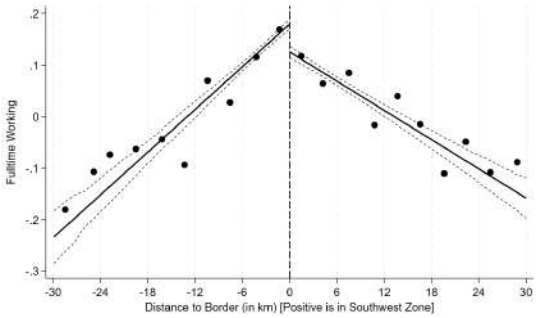
Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of spatial coordinates with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table B.2: Multidimensional RDD: Impacts on domestic violence

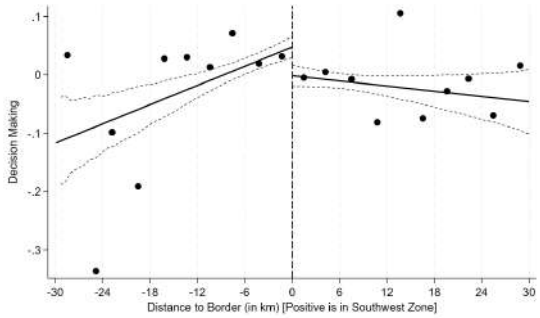
	Dependent variable is:				
	(1) Physical Violence	(2) Emotional Violence	(3) Violence (Either)	(4) Violence (Both)	(5) Attitudes (Consent)
Genocide	0.033	0.087***	0.069**	0.051***	0.049**
	(0.022)	(0.025)	(0.029)	(0.018)	(0.021)
Mean	0.115	0.162	0.197	0.0802	0.322
Observations	2173	2173	2173	2173	10597
Clusters	366	366	366	366	459

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of spatial coordinates with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

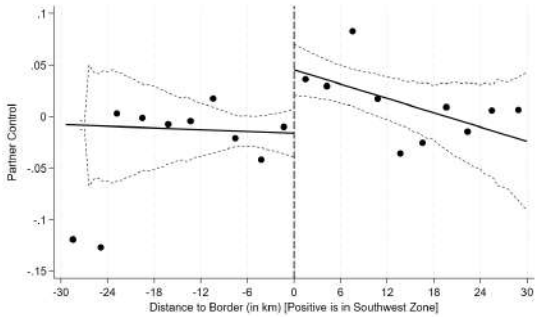
Figure B.1: Female Empowerment: Multidimensional RDD plots



(a) Fulltime Working



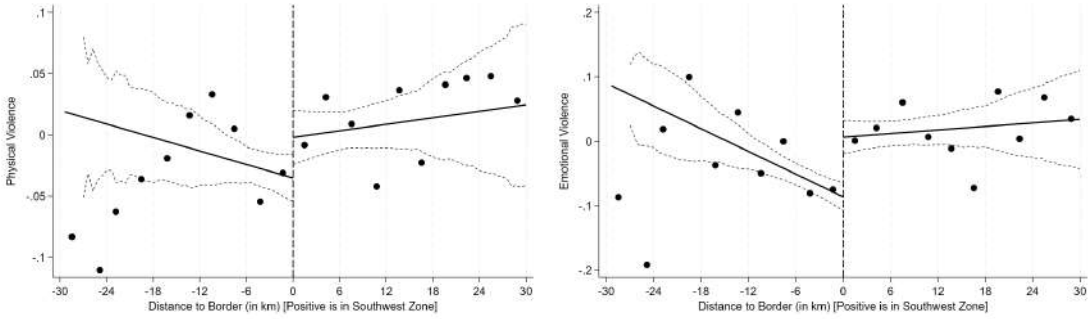
(b) Decision Making



(c) Partner Control

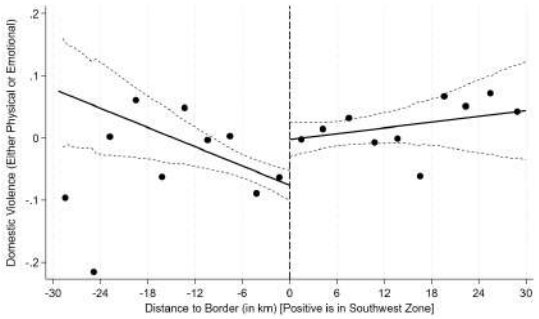
Note: The points represent binned residuals derived from a main regression of the outcome variable on a linear polynomial in x- and y-coordinates of household locations and other control variables. Solid lines depict a local linear regression, separately estimated on each side of the threshold, while dashed lines represent 95% confidence intervals. "Positive" values of distance indicate locations in the Southwest Zone.

Figure B.2: Domestic Violence: Multidimensional RDD plots

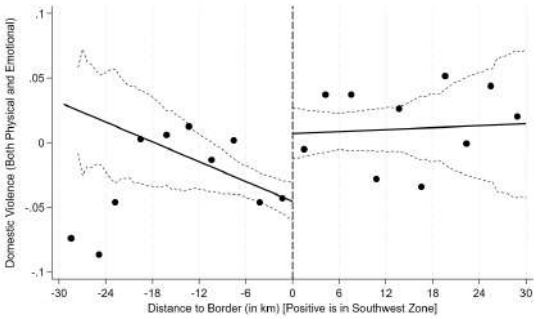


(a) Physical Violence

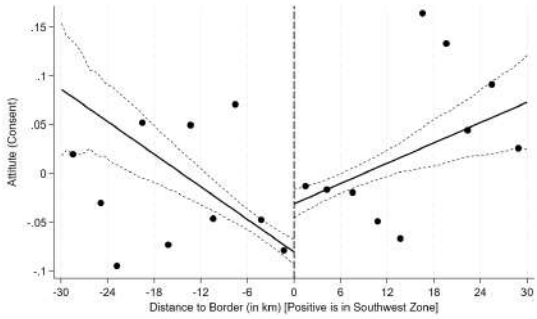
(b) Emotional Violence



(c) Violence (Either Physical or Emotional)



(d) Violence (Both Physical and Emotional)



(e) Attitude towards violence (Consent)

Note: The points represent binned residuals derived from a main regression of the outcome variable on a linear polynomial in x- and y-coordinates of household locations and other control variables. Solid lines depict a local linear regression, separately estimated on each side of the threshold, while dashed lines represent 95% confidence intervals. “Positive” values of distance indicate locations in the Southwest Zone.

C Forced marriage during the genocide

Between 1975 and 1979, the Khmer Rouge used forced marriages to promote regime loyalty and dismantle traditional family structures, with about one in three marriages during this period being forced (Heuveline & Poch 2006, Jacobs 2022). To investigate forced marriage during this period, I use a basic difference-in-differences (DID) design and examine the following three outcomes: (1) whether women knew their husbands on the day of marriage, (2) whether they chose their husbands, and (3) whether their names are absent from their husbands' household book. However, data on these variables are only available in the 2000 DHS. The regression takes the following form:

$$\begin{aligned} Y_{icd} = \alpha + \beta \times Genocide_c + \eta Marriage_c + \theta Genocide_c \times Marriage_c \\ + f(Geo_c) + \lambda \mathbf{X}_c + \gamma \mathbf{D}_c + \zeta_d + \epsilon_{icgt} \end{aligned} \tag{2}$$

where Y_{icgt} is the outcome variable of interest for a woman i in DHS cluster c, district d , and $Genocide_c$ is an indicator equal to 1 if a woman is currently located in an area that was part of the extremist Southwest Zone during the Khmer Rouge era and equal to zero if she resides in an area formerly in the moderate West Zone. $Marriage_c$ is a binary equal to 1 if her first marriage is between April 1975 and January 1979. The function $f(Geo_c)$ controls for smooth functions of geographic locations of cluster c, particularly, distance to the Southwest-West zone border. $\mathbf{X}_c$ is a vector of covariates, control for all pre-genocide characteristics.[1] $\mathbf{D}_c$ is a vector of geographic covariates, controlling for distance to the capital of Cambodia - the largest urban city, distance to Vietnam borders and distance to Thailand borders. ζ_d is district fixed effects. Standard errors are clustered at the DHS survey cluster level.

Table C.1 presents the results. Women getting married during the genocide are 16.1 percentage points more likely to know their husband on their wedding day and 20.7 percentage points less likely to choose their husband. They are also more likely to be unregistered in their husbands' household book. No statistically significant effects are observed for the interaction between marriage during the genocide and residence in the extremist Southwest Zone. This suggests that while forced marriage practices were widespread during the Khmer Rouge regime, their intensity or impact may not have varied substantially between the Southwest and West Zones. It is possible that the regime's marriage policies were centrally coordinated and consistently applied across different zones, regardless of their level of repression. Additionally, the lack of significant findings may be partly attributed to limitations in sample size, which could reduce the statistical power to detect regional variation.

[1] Pre-genocide characteristics include geographic characteristics (elevation, tropics/lowland), demographic characteristics (population density in 1970) and economic characteristics (agricultural activities and distance to main roads/railways in 1970)

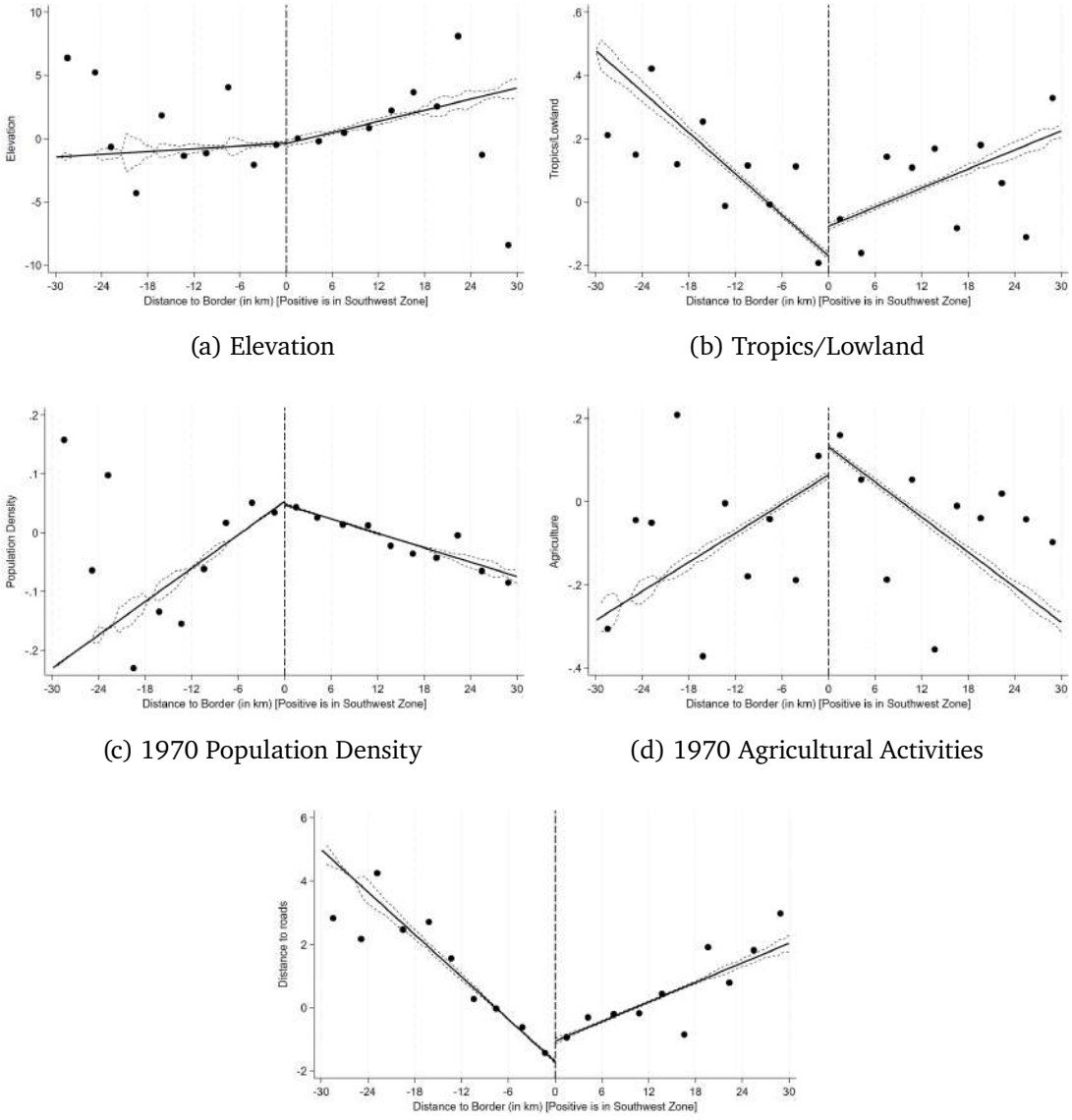
Table C.1: Mechanism: Marriage during Genocide

	Dependent variable is:		
	(1) Knew Husband	(2) Chose Husband	(3) No Register
Genocide	-0.057	-0.012	-0.142**
	(0.051)	(0.043)	(0.062)
Marriage	0.161***	-0.207***	0.137*
	(0.060)	(0.057)	(0.071)
Genocide × Marriage	0.058	0.066	-0.142
	(0.084)	(0.082)	(0.089)
Mean	0.296	0.759	0.185
Observations	1932	1931	1006

Note: The unit of analysis is survey respondents. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, and district fixed effects. *Knew Husband* is a binary variable indicating whether a woman knew her husband on their wedding day. *Chose Husband* is a binary variable indicating whether the woman chose or participated in choosing her husband. *No Register* refers to whether a woman is not registered in husband's household book. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

D RD plots

Figure D.1: Covariates: RD plots



(a) Elevation

(b) Tropics/Lowland

(c) 1970 Population Density

(d) 1970 Agricultural Activities

(e) 1970 Distance to Main Roads/Raiway

Note: The points represent binned residuals derived from a main regression of the outcome variable on a linear polynomial in distance to the border. Solid lines depict a local linear regression, separately estimated on each side of the threshold, while dashed lines represent 95% confidence intervals. “Positive” values of distance indicate locations in the Southwest Zone.

E Additional Tables and Figures

Table E.1: Descriptive statistics

	All observations				Within 30km distance			
	All	West	Southwest	Diff	All	West	Southwest	Diff
Panel A: Female Empowerment								
Fulltime Working	0.57	0.60	0.55	0.05***	0.71	0.72	0.69	0.03***
	(0.49)	(0.49)	(0.50)	(8.35)	(0.45)	(0.45)	(0.46)	(3.47)
Decision Making	0.55	0.47	0.61	-0.14***	0.56	0.57	0.56	0.01
	(0.50)	(0.50)	(0.49)	(-17.56)	(0.50)	(0.50)	(0.50)	(0.99)
Partner Control	0.13	0.13	0.13	-0.00	0.13	0.10	0.14	-0.04***
	(0.33)	(0.33)	(0.33)	(-0.01)	(0.33)	(0.31)	(0.35)	(-2.80)
Panel B: Domestic Violence								
Physical Violence	0.12	0.11	0.13	-0.02**	0.11	0.10	0.13	-0.03**
	(0.33)	(0.31)	(0.34)	(-2.06)	(0.32)	(0.30)	(0.34)	(-2.32)
Emotional Violence	0.17	0.15	0.19	-0.04***	0.16	0.14	0.19	-0.05***
	(0.38)	(0.36)	(0.39)	(-3.50)	(0.37)	(0.34)	(0.39)	(-3.23)
Domestic Violence (Either)	0.21	0.19	0.22	-0.03***	0.20	0.17	0.22	-0.04***
	(0.41)	(0.39)	(0.42)	(-2.89)	(0.40)	(0.38)	(0.41)	(-2.65)
Domestic Violence (Both)	0.09	0.07	0.10	-0.02***	0.08	0.06	0.10	-0.04***
	(0.28)	(0.26)	(0.30)	(-2.93)	(0.27)	(0.24)	(0.30)	(-3.25)
Attitude (Consent)	0.38	0.32	0.42	-0.10***	0.32	0.29	0.35	-0.05***
	(0.48)	(0.47)	(0.49)	(-16.20)	(0.47)	(0.46)	(0.48)	(-6.09)
Panel C: Other characteristics								
Elevation/Altitude (meters)	21.60	23.90	19.82	4.07***	21.18	21.02	21.32	-0.30
	(25.23)	(27.49)	(23.17)	(14.01)	(18.15)	(17.22)	(18.95)	(-1.02)
Tropics, lowland	0.49	0.54	0.44	0.10***	0.53	0.51	0.55	-0.04***
	(0.50)	(0.50)	(0.50)	(17.50)	(0.50)	(0.50)	(0.50)	(-4.93)
Population density (1970)	0.71	0.56	0.81	-0.25***	0.83	0.75	0.89	-0.14***
	(0.46)	(0.50)	(0.39)	(-48.49)	(0.38)	(0.43)	(0.31)	(-22.43)
Agricultural activities (1970)	0.64	0.50	0.74	-0.23***	0.68	0.58	0.78	-0.20***
	(0.48)	(0.50)	(0.44)	(-43.50)	(0.47)	(0.49)	(0.42)	(-26.41)
Distance (km) to								
Main roads/railways (1970)	4.49	5.51	3.69	1.82***	3.03	3.26	2.83	0.43***
	(6.27)	(8.08)	(4.20)	(24.10)	(4.10)	(4.38)	(3.82)	(6.38)
Capital	52.82	56.28	50.13	6.15***	26.69	30.89	22.90	7.99***
	(49.17)	(57.24)	(41.64)	(10.65)	(42.15)	(45.76)	(38.22)	(11.58)
Vietnam borders	74.09	112.82	43.97	68.85***	73.32	83.46	64.19	19.27***
	(45.54)	(38.23)	(21.84)	(189.43)	(15.12)	(13.21)	(10.08)	(99.98)
Thai borders	192.17	172.93	207.12	-34.19***	195.71	187.32	203.28	-15.96***
	(44.65)	(56.41)	(23.61)	(-66.97)	(33.23)	(37.65)	(26.47)	(-29.85)
Observations	31720	13874	17846	31720	15113	7166	7947	15113

Note: The table provides the mean/standard deviation of the corresponding variables. "All" means the whole sample, "West" means the control group includes observations located in the moderate West Zone, and "Southwest" means the treated group includes observations located in the extremist Southwest Zone. "Within 30 km distance" means the sample is restricted to observations located within 30km of the border. "Diff" shows the mean difference between treated and control groups. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table E.2: Post-genocide Population Density

	(1) Post-genocide Population Density
Genocide	-2.559
	(1.795)
Mean	5.808
Observations	313635
Clusters	459

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table E.3: Non-migrants: The long-term impacts of Genocide on female empowerment

	Dependent variable is:		
	(1) Fulltime Working	(2) Decision Making	(3) Partner Control
Genocide	-0.041	0.018	0.173***
	(0.042)	(0.060)	(0.033)
Mean	0.588	0.564	0.116
Observations	4025	2055	999
Clusters	257	245	221

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Table E.4: Non-migrants: The long-term impacts of Genocide on domestic violence

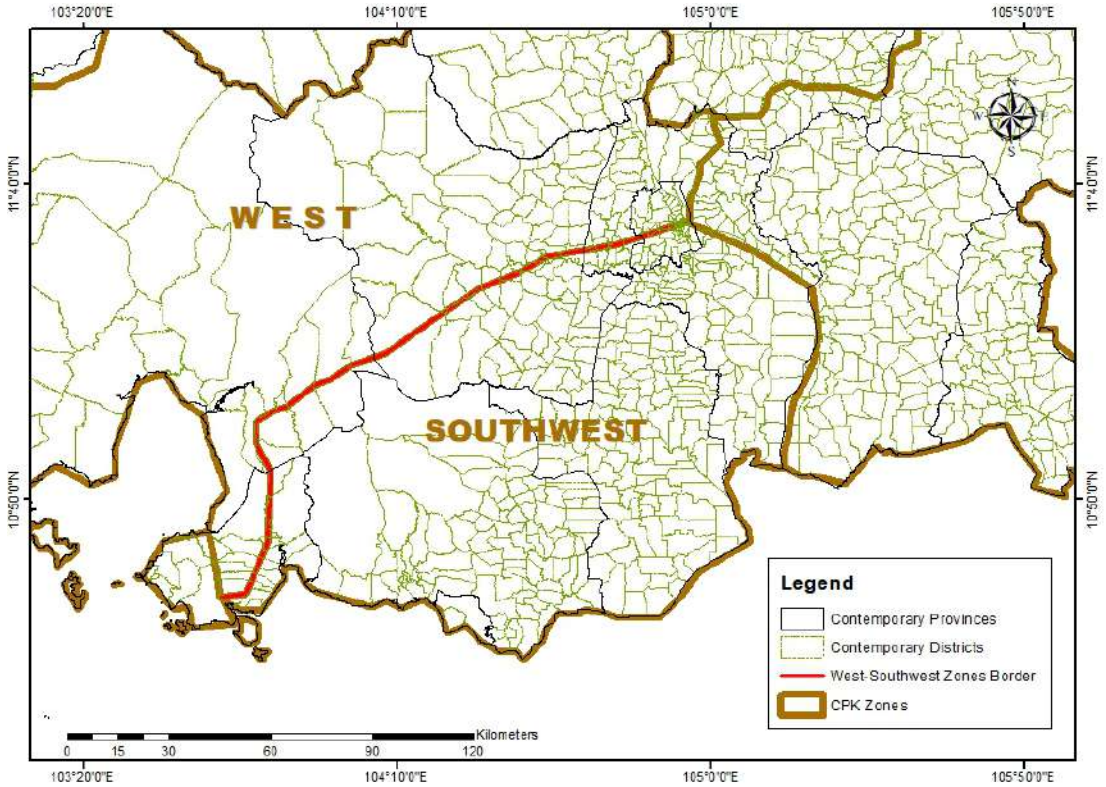
	Dependent variable is:				
	(1) Physical Violence	(2) Emotional Violence	(3) Violence (Either)	(4) Violence (Both)	(5) Attitudes (Consent)
Genocide	0.009	0.125***	0.119***	0.016	-0.004
	(0.029)	(0.034)	(0.037)	(0.024)	(0.036)
Mean	0.0926	0.167	0.195	0.0650	0.273
Observations	999	999	999	999	2841
Clusters	221	221	221	221	245

Note: The unit of analysis is survey respondents. The sample is restricted to those within 30km bandwidth from the Southwest-West boundary. All regressions use a local linear polynomial of distance to the Southwest/West border with a triangular kernel weight. All regressions control for pre-genocide characteristics, distance to the capital, distance to Vietnam and Thailand borders, 15-km segment fixed effects and survey year fixed effects. Standard errors reported in parenthesis are at the DHS survey cluster level. ***(**)(*) indicates significance at the 1%(5%)(10%) level.

Figure E.1: Southwest-West Zones Border and 1970 Administrative Divisions

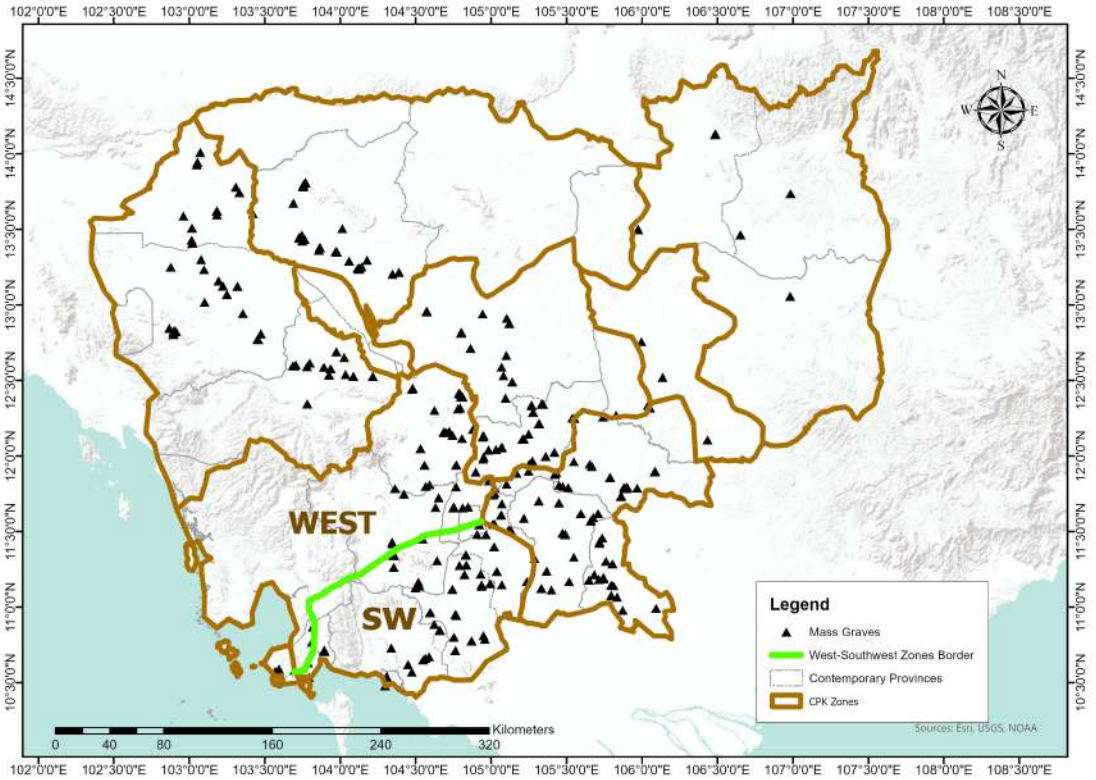
Notes: The map displays pre-genocide administrative divisions of Cambodia, digitized from the 1970 Indochina Atlas. It also shows that the Border between the Southwest and West Zones does not align with any pre-genocide administrative divisions.

Figure E.2: Southwest-West Zones Border and Contemporary Administrative Divisions



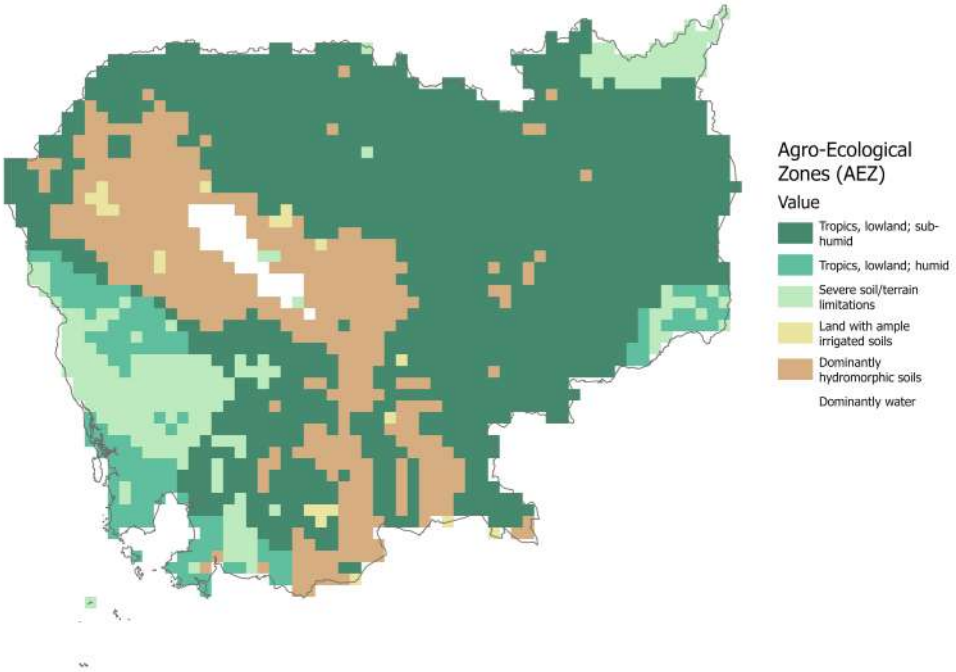
Notes: This map shows contemporary administrative divisions in Cambodia. The border between the Southwest and West Zones does not correspond to any contemporary administrative boundaries.

Figure E.3: 309 Democratic Kampuchea mass grave sites



Notes: This map displays the locations of 309 sites containing a total of 18,953 Democratic Kampuchea (DK) mass graves in Cambodia. Data is from Yale University's Cambodian Genocide Databases.

Figure E.4: Agro-ecological Zones classes

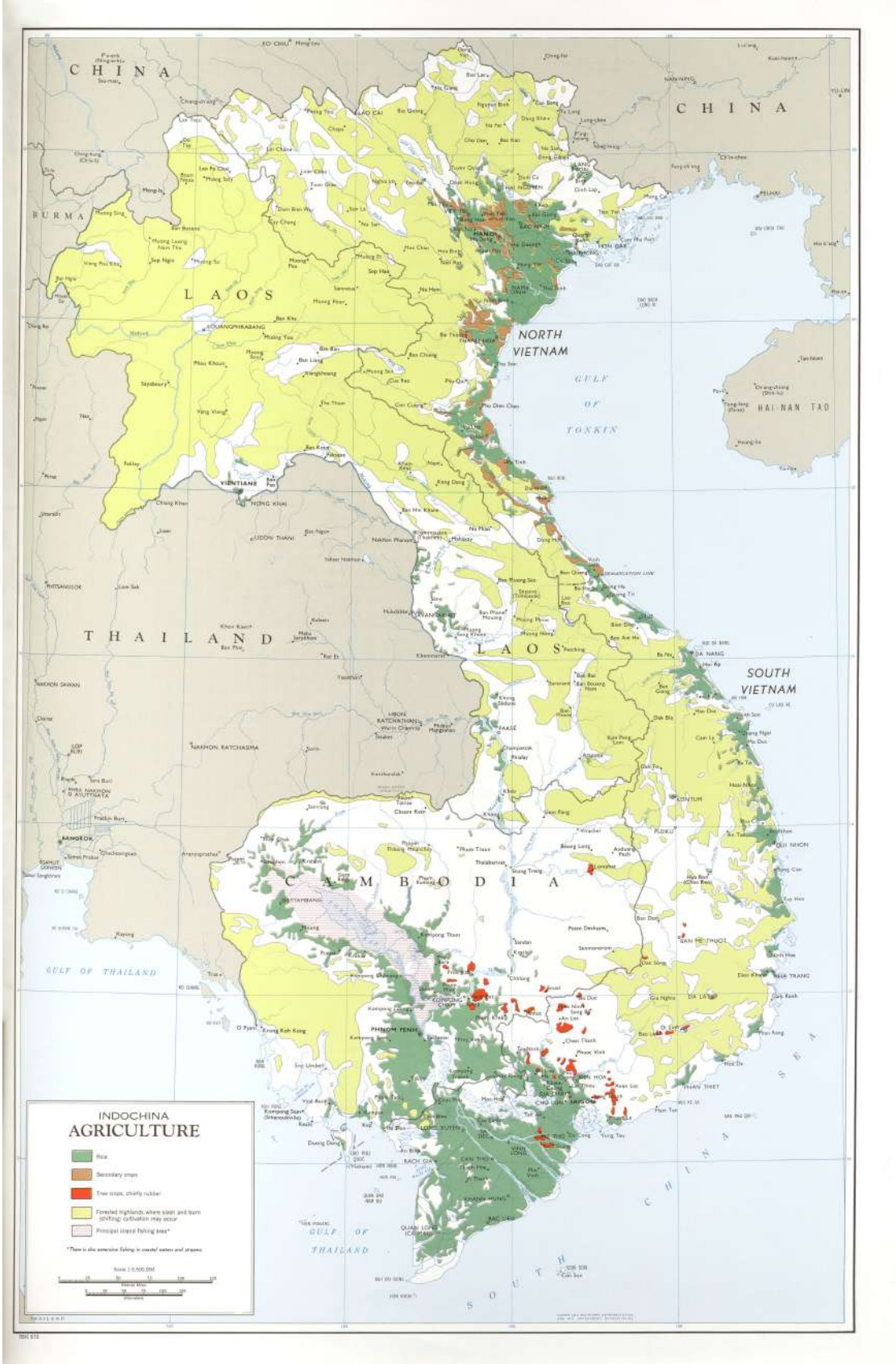


Note: The map overlays Cambodia to the agro-ecological zones (AEZs) as classiffied by The Food and Agriculture Organization of the United Nations (FAO) and the International Institute for Applied Systems Analysis (IIASA). Geographic areas belonging to the same AEZ category exhibit analogous climatic characteristics, encompassing rainfall and temperature patterns, and thus possess equivalent agricultural capabilities. Map is drawn on ArcGIS.

Figure E.5: Indochina Transportation in 1970

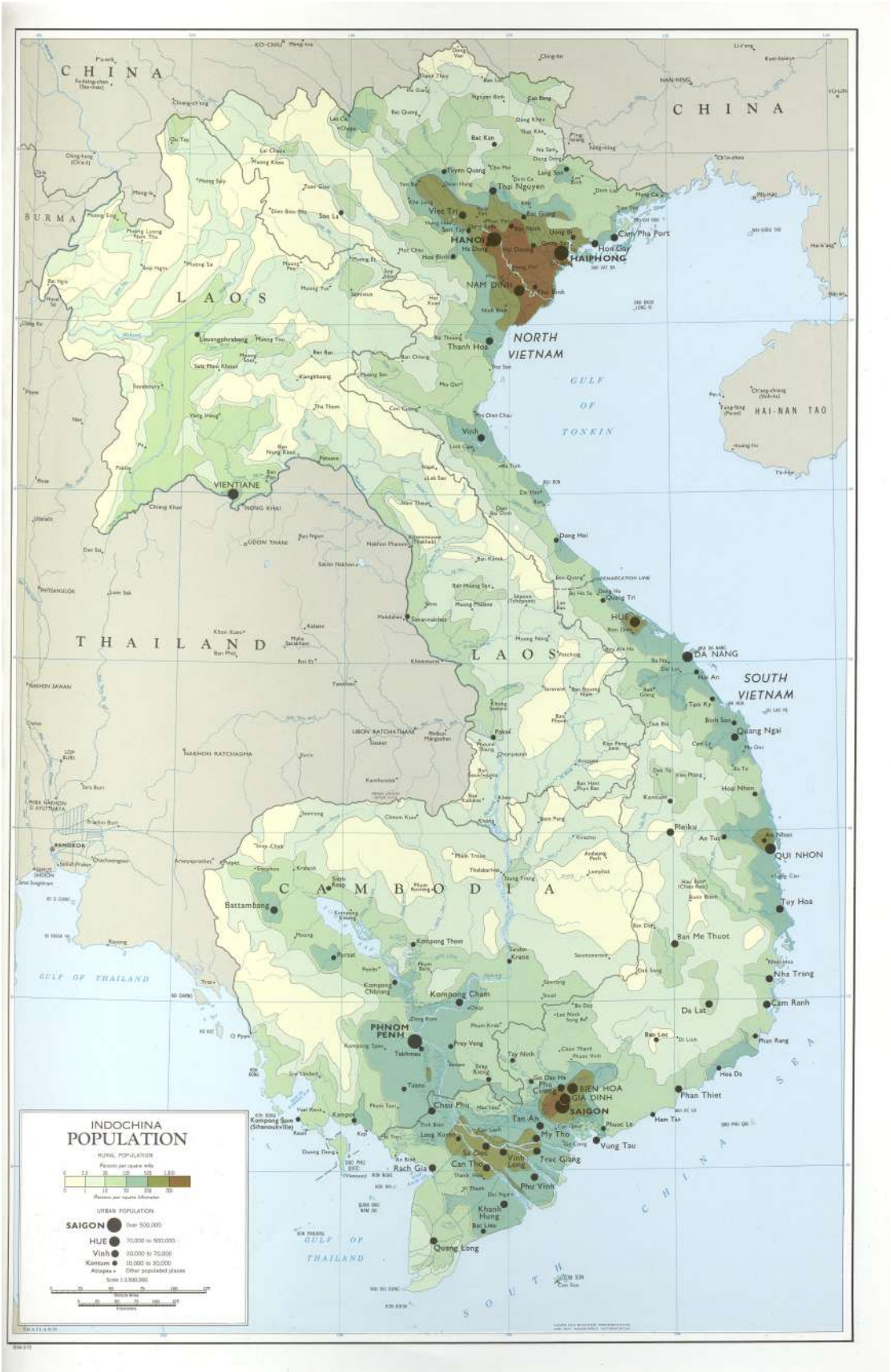
Note: Indochina Transportation map, which was in "Indochina Atlas", published in October 1970 by the Directorate of Intelligence, Office of Basic and Geographic Intelligence, U.S. Central Intelligence Agency.

Figure E.6: Indochina Agriculture in 1970



Note: Indochina Agriculture map, which was in "Indochina Atlas", published in October 1970 by the Directorate of Intelligence, Office of Basic and Geographic Intelligence, U.S. Central Intelligence Agency.

Figure E.7: Indochina Population in 1970



Note: Indochina Population map, which was in "Indochina Atlas", published in October 1970 by the Directorate of Intelligence, Office of Basic and Geographic Intelligence, U.S. Central Intelligence Agency.