# THE SHORT- AND LONG-TERM EFFECTS OF WOMEN'S PARTICIPATION IN A SOCIAL MOVEMENT: EVIDENCE FROM THE ANJUMAN-E-MAZAREEN PUNJAB MOVEMENT

By

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**Abstract**

This study analyzes the implications that women's participation in social movements may have on the level of empowerment in a developing country context. A social movement is a multifaceted phenomenon as it aspires to change not only specific policies but also, simultaneously, broad cultural and institutional structures. Women-specific as well as mixed gender movements provide examples of how collective action can influence mobilization and public opinion. Such collective behavior not only challenges limitations on gender roles but also mobilizes women to demand for equal opportunities in all spheres of life. We estimate a model for understanding this phenomenon by taking the Anjuman-e-Mazareen Punjab Movement as an intervention due to the emergence of women as active actors in this movement. This study provides empirical insights of short- and long-term effects of participation in a social movement by exploring into the employment conditions and educational developments. For this purpose, we draw data from the Labor Force Survey for the years 1990 to 2012. We use a flexible Difference in Differences technique to compare potentially "economically active" women and potentially "school going" girls from rural regions in the treatment districts with two groups: rural women in control districts and urban women from both control and treatment districts. Evidence from the results show a rise in the number of working women after the movement took place but the amount of time they spend at work remains unchanged. We also observe an increase in literacy rates which indicates a preference towards basic learning among women of all ages. Moreover, there is a positive shift in the enrolment rates and years of education obtained by "school going" girls subject to treatment. In addition, we exploit within household variation to show that the treated households are relatively more likely to increase investment towards girls' education in comparison to women and men of the older generation in the post-treatment time period.

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# 1 Introduction

History recognizes large social movements as a catalyst for major cultural, political and economic transformation. Women's Suffrage, Indian Independence, Civil Rights, LGBT rights and other similar movements are some of the many examples that are responsible for revolutionizing the world in terms of social change. The common feature in these events was the emergence of social movements involving thousands of citizens united by a shared purpose.

There already exists a rich literature on the repercussions of social movements on the policies they aim to alter (McAdam, 1992; Meyer and Whittier, 1994; Akerlof and Kranton, 2000; Hasso, 2001; Deopke and Tertilt, 2009;). Mazumder (2019) empirically tested for liberalization in racial attitudes within the context of Black Lives Matter movement in the US and found that it was successful in reducing racial prejudice among Caucasians. The question remains as to whether similar transformation could take place in the economic outcomes of a vulnerable cohort in the context of a developing country.

This study attempts to explore the answer to this question by shedding light on the "Anjuman-e-Mazareen Punjab" (AMP) movement, which grew to be one of the biggest land rights movements in the history of Pakistan. Initiated in 1999, it began as a conflict between the military and the tenant farmers on the ownership of Military Farmlands, located in 10 districts of Punjab, Pakistan. Our particular interest in this movement derives from the emergence of *rural women* as active members parallel to their male counterparts, a unique situation particularly in a conservative country's context (Fleschenberg, 2015). Therefore, we seek to understand if participation of this nature had a transformative impact on the opportunities afforded to these women.

In order to empirically test for the short- and long-term effects on the lives of women who participated in the AMP movement, we draw survey data from the Labor Force Survey from 1990-2012. This way, we get a large repeated cross-sectional data at a district level for a total of 18 rounds where we obtain seven pre-treatment and nine post-treatment years. We divide our sample of women into two cohorts based on their likely economic roles. To study the short-run effects, we look into the employment outcomes on: the potentially "economically active" cohort of women between 14 and 60 years of age. Further, we use a relatively younger cohort comprising of potentially "school going" girls under the age of 16 years to determine any change in educational outcomes in the long-run. Moreover, we make use of the with-in household variation to estimate the effects on girls' education in the later years. We employ a difference-in-differences design in an attempt to isolate the impacts of the movement on rural women in the treatment districts by comparing them to two control groups: rural women in control districts and urban women in both control and treatment districts, in pre- and post-treatment years.

The results provide evidence that for the "economically active" cohort, there was a significant rise in the number of working women in the treatment districts in comparison to women in the control groups. We cannot make any definite inference whether these women were dividing their time between work and job differently post-movement, as the results are unstable in magnitude and statistically insignificant. We also note an upward tick in literacy rates prevalent in all age groups post-treatment, which depicts women's motivation to gain basic learning.

Moving to the younger age cohort, we find compelling positive evidence regarding their educational development. Not only was there a significant rise in the school enrollment of girls in the treatment group, but the years devoted to education also increased in comparison to their counter-parts dwelling in both rural regions of the control districts and urban regions

from control and treatment districts. Moreover, we find that girls in the treatment districts were moving towards higher educational levels but this impact was more pronounced in comparison to their rural counterparts in control districts. Furthermore, the estimates for within-household variation show a highly significant outcome that indicates a positive change in household behavior towards girl's education in the later years in comparison to both women and men belonging from the older generation in the same household. Overall, we establish that affiliation with the AMP movement has significant implications on the lives of women and these are spread across all age groups, in their respective field of outcomes.

This study contributes to the existing literature in development economics and sociology in two ways. Firstly, it rigorously tests the substantial literature on the hypothesized impacts of social movements on women's self-perceptions and roles in the society. Secondly, considering Muzamder (2019), we aim to test whether such effects could be detected in the context of a developing country as well. This is particularly important as women in developing countries are subject to inequalities in terms of the opportunities available to them in comparison to their Western counterparts. Such inequalities are not just limited in relation to men only but there are also substantial gaps between urban and rural women.

The remainder of the paper is organized in the following manner. The subsequent section reviews the literature available on social movements and its likely effects on the attitudes and lives of the people involved. It will be followed by a section on data and context of the study. Next, we provide the empirical strategy employed. Followed by a section on main findings and robustness checks. Lastly, we conclude the paper.

# 2 Literature Review

Public awareness about injustices and activism motivate people to action toward achieving a more egalitarian society that is just in nature. These transformations often owe their roots to ordinary citizens who, in their respective societies, rise collectively with a shared purpose of bringing change in their current conditions. This collective behavior acts as a platform to promote social change, by questioning the established power structures and challenging existing norms. Social movements have the potential to become significant movers of history when people inspired to voice their grievances and oppression claim victories which were, previously, beyond imagination.

Social movements, defined as an organized group of constituents pursuing a common political agenda of change through collective action (Batliwala, 2012) have proved to be one of the important driving forces in the struggle to achieve equality and social change. It is a collective behavior favoring a particular social outlook, which may be either to prevent or implement a transitional change in currently established norms and values. It can consist of formal or informal organizations and networks that comprise ordinary people sharing a relationship that is not defined by rules but rather share a mutual purpose (Beuchler, 1995). Such collective activity can be regarded as an instrument through which individuals, who share common life experiences, join forces to condemn that which oppresses. It reflects the faith that people collectively can bring about or prevent social change if they dedicate themselves to the pursuit of a goal (Turner and Lewis, 2013). Movements tend to emerge as a consequence of inequalities embedded in resource distribution among different groups within society in various fields, such as: education, political power, employment conditions and legal justice (Evelyn, 2014). Hence, social movements give prominence to the injustices

imposed on a particular group in a society and also become a source of a new collective outlook.

The historical importance of movements can be seen from the successes of some of the most influential examples, such as the American Civil Rights movement, Women's Suffrage, Indian Independence and the environmental protection movement, among others. Touching upon one of the examples, the ongoing importance of the Civil Rights movement in the mid-20th Century can be noted its major role in the countering discrimination via availability of equal employment opportunities for women (Skrentny, 2002). Although there are several other institutionalized and less patent venues available for public to raise their concerns, collective action in the form of social movements have long operated as a significant mechanism for groups to give voice to the injustices prevailing in a society (Snow et. al, 2004). Collective action in the current age remains relevant, and seldom is the case when the daily news does not report some social movement activity in action in reference to prevailing contested issues in the areas of civil rights, climate change, gay/lesbian community, religion and others (Snow et. al, 2004). An important example is that of the LGBT social movements which received a major victory when in 2015 the gay and lesbian community was granted the right to wed in the US (Holland, 2015). Other social movements, e.g. MeToo and Black Lives Matter, are currently germane and expected to transform attitudes in regards to racial inequality and harassment, respectively.

While collective action is generally aimed at altering specific state policies or achieving some explicit goals, simultaneously it may also achieve other less obvious aims (Meyer and Whittier, 1994). They often aspire to change not only specific policies, but also broad cultural and institutional structures that have effects far beyond the objectives initially set (Snow and Robert, 1988). Indirect targets in terms of perspectives, practices, ideologies and, most importantly, the lives of people who demonstrate this collective behavior. The emergence of

a collective identity tends to aid in achieving the cultural effects from a social movement. Social movements become a driving force in transforming not only the social norms and cultural representations but also influences way the people involved perceive themselves as well as how they are perceived (Polletta and Jasper, 2001). The emergence of social networks is an important predictor in any social movement. Networks of this nature may motivate people to become more involved in the cause and strengthen the appeals made in regard to the cause. While people get involved in a particular movement through pre-existing links, the participation itself produces new bonds and networks that may cause subsequent developments in not only their role as activists but also, at large, the way they lead their lives (Diani, 2004). The kind of bonds that may give a collective sense of belonging.

Social movements - through their everyday politics - contest cultural values, public opinions and beliefs with the idea of transforming societies through educating and mobilizing activists, thereby promoting awareness and encouraging actions that extend beyond the boundaries of a movement or campaign (Meyer and Whittier, 1994). The intensity and nature of the impact on lifestyles and attitudes may differ by gender. While activism is studied in much the same way across participants of both genders, involvement in social movements could be a different enterprise for women, given that they are not only contesting the rules of policy but also the rules of gender. According to Chowdhury et. al (1994), ideologies differ in the notions imposed on women in society. Where Marxist ideologies imply that women's issues are secondary to a re-ordering of productive arrangements and liberal ideologies indicate a gender-neutral mechanism on part of government. Social movements provide an avenue for women to alter what these theories lack through their own perspectives and ideologies.

The more impassioned the participation may be, the more intensified will be the impact on the lives of the individuals, especially when they have a structure of networks and ties to

facilitate (Hasso, 2001). The concept of women's participation in social movements is not new anymore, not limited to the West and not always feminist. The traditional roles assigned to women were considered as a major obstacle that the women's liberation movement aimed to put an end to (Deopke and Tertilt, 2009). Whatever may be the goal of the movement, such engagement becomes a source of women's activism in political avenues, allowing them to generate networks that enlighten and help them to recognize that their current gender relations are limited and empowers them to push across these boundaries and initiate gender integration. They give a new shape to the existing societal conceptions of feminism and dismiss associations of gender with certain tasks at both their home and work space (Akerlof and Kranton, 2000).

However, previously established gender roles hinder the process of social change and empowerment. The division of labor within the movements often mirrors societal gender stratification (Cable, 1992). The roles assigned to women in these movements are generally in line with traditional household roles. Men act as leaders, while women play supporting roles. Researchers have identified this division of labor in several historical social movements. Women's contributions took the form of chores which included typing, making coffee and cleaning. But involvement in social movements tend to bring forth a rise in feminist attitudes among the women who participate in them (Cable, 1992). The idea is that the longer women are active in such movements the greater the probability of them emerging to take the leadership roles that were assigned to men as per the previously established social norms. The requisite forces that compel women into transforming their behavior towards gender roles in a particular social movement subsequently leads to similar developments in their private life. According to McAdam (1992), social movement participation on the part of women has been found to have long-term implications in their lives, at an even broader scope relative to their

male participants, in that it allows women to highlight and give prominence to activities that concern their own well-being in both private and political spheres.

Historical evidence from the 20th century demonstrates these transformative effects when one considers the impact of women entering the workforce in large numbers during WWII when men left for war, which led to empowerment as they continued to do so even after the war ended (Acemoglu, 2004). Similarly, Akerlof and Kranton (2000) observe a change in the structure of the US labor market post-Women's Liberation Movement in the 1960s in terms of gender composition within occupations. Hence, there was a rise in the number of women doing jobs that were, previously, perceived to be appropriate for men only. Similarly, in Pakistan, the Anjaman-e-Mazareen Punjab movement (the focus of this study) motivated women in owning certain roles rarely witnessed in the rural areas of Pakistan. Conflict between the Army and local farmers in ten districts of Punjab over land rights led to women standing side-by-side with men in confrontation. Affiliation with the AMP movement resulted in women refusing to limit their activities to their households only and becoming active in the labor market, condemning domestic violence and encouraging female education (Mumtaz and Mumtaz, 2012). Such outcomes, due to social movement participation, act as a focal point for the empowerment of women in various aspects of life.

# 3 Data and Context

## 3.1 Anjuman-e-Mazareen Punjab Movement (AMP Movement)

The Anjuman-e-Mazareen Punjab movement reflected a struggle over land contested between tenant farmers and the Military establishment. Initiated in 1999, it comprised a million farmers settled on the Military farmlands, located in ten districts of Punjab, Pakistan. The movement began independently in two different districts of Punjab, namely, Okara and Khanewal. Subsequently, it spread across other districts and eventually combined under a common banner of the Anjuman-e-Mazareen Punjab.

The origins of this collective action can be traced back to the British Raj. The British had settled peasant farmers from across Punjab on farmland in Okara in order to generate revenue from uncultivated lands. The British Army had maintained possession of these lands under the Punjab Colonization Land Act 1912 for a duration of twenty years. According to the AMP leadership, after 1933, when the lease ended, no further extension was given to the British Army nor was it allotted to the Pakistan Army after 1947 when Pakistan was created (Choudry and Kapoor, 2010).

Colonial land settlement policies had granted land to agricultural castes, who were usually issued inviolable property rights if they settled there for a certain period of time, normally about fifteen years. But this did not always prove to be the case. The struggle on part of the tenant farmers of Okara Military Farm for the right to ownership has been ongoing even before Independence; however, they remained unsuccessful in doing so (Mumtaz and Mumtaz 2012).

Therefore, Okara Military Farms have remained under the control of the military. These lands are used for operational purposes, which include: dairy farms, cash crops, growing animal fodder and other related activities for the purpose of generating revenue through sharecropping arrangements with the farmers. With the motive of increasing profitability for

the military establishment, the farm management decided to impose a new contract system in 1999-00 to replace the existing sharecropping system, whereby the farmers were made accountable to pay a fixed sum of cash rents independent of how much they yield. Subsequently, there were attempts on military farms to replace traditional farming systems with a contemporary farming model, indicating the intensity of commercialization of existing tenure system (Ali, 2015).

The new contract system impaired land security of the farmers as the military could evict the tenants who failed to make the fixed payments to the establishment. It soon became clear to the tenants that the land they and their ancestors had tilled for generations would eventually be confiscated (Choudry and Kapoor, 2010). These circumstances became the motivation of the collective action in the form of Anjuman-e-Mazareen Punjab movement (Ali, 2015).

The initial protests staged by the AMP protestants were based on rejecting the new contract leasing system and preventing the military establishment from replacing the local tenant farmers with non-village contract ones. However, with time, the tenants involved in the movement became more organized and came to the realization that the military was not the legal owners of the land they were contesting; rather it was legally under the ownership of the provincial government. Accordingly, their objectives evolved to demanding land ownership instead. Eventually, women emerged as active participants in the movement for the purpose of advancing a stronger resistance from the farmers' side (Ali, 2015).

Within a few months, the protests spread to nine other districts of Punjab where the same contract system was being imposed and farmers were subject to similar eviction pressures as on the Okara military farms (Ali, 2015). Consequently, the movement became visible in the national and international media. Due to long withstanding resistance from AMP farmers and condemnation from the national and international media, the military rangers were withdrawn in August 2003 and the local farmers were again able to cultivate on their lands. In some cases,

the farmers refused to give a share of their harvest to the authorities. Even those who were forced into signing the new lease contracts rejected it and ceased making any payments to the military (Mumtaz and Mumtaz, 2012). Up to the current day, the AMP is still actively struggling to achieve legal ownership of the military farmlands.

The significant involvement of women is a particularly interesting outcome of the movement in a conservative country such as Pakistan context (Fleschenberg, 2015). Initially, women physically shielded men in police encounters during protests in order to protect them from being arrested, but thereafter, they became involved in strategizing, movement building and travelling across villages to spread their message. Qualitative research suggests that affiliation with the movement became the basis of exposure, mobility and confidence among women (Khan and Kirmani, 2018). In their empirical survey and interview findings, Mumtaz and Mumtaz (2012) reported a reduction in the level of domestic violence towards women, gender segregation owing to increased mobilization and a rise in preferences towards education for girls. Simultaneously, there was a change in tasks that were previously gender-specific. From looking after household and tending to livestock, women became involved in activities on their agricultural lands, which were previously strictly men's work, in the form of harvesting, bringing fodder and farming. Women's affiliation with this movement altered their lives as it changed their self-perceptions.

The transformation of such nature becomes the impetus to study this movement as a norm-changing "intervention" in order to empirically test its implications on the lives of the women involved in the AMP movement.

## 3.2 Data

The data source for this study is are the rounds of the Labor Force Survey conducted between 1990 and 2013. This is a nationally representative survey which provides data on household

socioeconomic characteristics, education attainment and the labor force across Pakistan. Since the AMP movement was established in 1999, we use seven pre-treatment rounds (1990-1, 1991-92, 1992-93, 1993-94, 1994-95, 1996-97 and 1997-98) and nine post-treatment rounds (2001-02, 2003-04, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11 and 2012-13) [1]. The data is restricted to women, aged between 5 to 60 years, located in both rural and urban regions across 59 districts of Pakistan. Over the years, a number of new districts have emerged in all provinces of Pakistan. In order to take this in account, we make the overall districts consistent with the district clusters obtained from the Labor Force Survey round of 1990, which contains a total of 59 districts. We do this by combining the new districts with the ones they were originally part of in 1990. We collect information on changes in district boundaries to match districts over time. This way, we get 59 "consistent" districts throughout the 18 years of data used in this study.

[1] The reason for limiting the post-treatment rounds to 2012-13 is a change in the sampling frame adopted by the Labor Force Survey from 2013 onwards. In 2012 the list of enumeration blocks was updated through Economic Census 2003 and the list of villages/mouzas/dehs of 1998 Population Census were taken as sampling frames. But from 2013, the list of enumeration blocks was updated from field on the prescribed proforma by Quick Count technique and revised during House Listing in 2011 for conduct of Population Census taken as sampling frames. (LFS Report)

# 4 Empirical Framework

In line with the literature, we test for the short- and long-run impact of movement participation by taking in account the fields of employment and education for two different age cohorts.

For the short-run effects, we focus on women with the potential to be in the "economically active" population, between 14 to 60 years. We test for whether there was a rise in the number of working women, the total hours women were spending at work and their literacy rates, from the pre- to post-treatment time period.

For the status educational developments, we test for a relatively younger group pertaining to the potentially "school going" population, falling under 16 years of age. The motive behind choosing this age group came from the literature, according to which there was an observed inclination of preferences towards girl's education post-AMP movement (Shaheed, 2007; Mumtaz and Mumtaz, 2012; Fleschenberg, 2015; Khan and Kirmani, 2018). For this purpose, the main outcome of interest is in terms of enrolment of girls in schools and the years of education they attained. For further analysis, we test for two more outcomes in the form of attaining at least 5 years of education[2], and attaining at least 8 years of schooling[3], in order to determine the concentration of girls in lower and higher levels of education in the post-movement time period. Moreover, we attempt to determine how the educational attainment of the children exposed to the movement changed 10 years after the treatment. For this purpose, use a triple difference with household fixed effects to look for any change in household behavior by drawing a comparison between the education level of girl's who were of "schooling going" age at the time of the treatment, ten years later, and the older generation of women and men in the same household. We do this by creating a new data set where we

[2] Education 5 years of schooling and above takes in account primary school and above levels.

[3] This variable takes in account education from middle school and above levels.

restrict the years from 2009 to 2012 and obtain post-treatment observations from individuals between 15 to 30 years of age and pre-treatment observations from the older generation which is of age greater than 30 (who would have been in aged 15-30 pre-movement) and look for any changes in the level of education between the two generations dwelling in the same household. Overall, these educational outcomes provide us with the indirect, long-term impact on the next generation.

## 4.1 Districts under Treatment

We define treatment districts as the ones where these Military Farms were present and the tenant farmers were contesting tenancy. These sum up to a total of ten districts in Punjab, namely: Okara, Sahiwal, Khanewal, Faisalabad, Multan, Sargodha, Lahore, Pakpattan, Vihari and Sheikhupura. The control districts are all those districts other than the ones in treatment[4]. Given that the amount of land in question (see Figure 1) varies in each treatment district, we expect that the movement may have a larger impact in the districts where more land was affected. Therefore, we generate a treatment variable with variation in treatment intensity by taking the proportion of land in question as a share of total cultivable land in that particular district.

## 4.2 Methodology and Identification Strategy

We employ the difference-in-differences technique, which allows us to capture any changes in the outcomes (both employment and education) deferentially between the participants and the non-participants of the AMP movement, in both pre- and post-movement years. The first difference compares these outcomes between rural women (both age cohorts) in the treatment

[4] As the land in question was only located in the ten districts we consider as treated, therefore, all other districts become part of the control group as we consider them to be unaffected by the movement.

districts and rural females (both age cohorts) in the control districts, in both pre- and post-treatment time periods. For further analysis, we add another layer of control in the form of urban women to obtain triple difference estimates.

An important point to note here is the motive behind our selection of the control groups. Each region type has distinctive features; rural women devote more of their time as compared to their urban counterparts on household work, which revolves around household chores, care for children and elderly, husking, processing food and other related activities. Moreover, rural women also tend to be more challenged than urban women in terms of lack of educational opportunities, training, access to property and availability of finance (ILO, 2018). We assume that women dwelling in rural regions across all provinces would be subject to somewhat similar constraints. Any improvement in the situation of women in the AMP-affected "treatment" districts in comparison to rural women in the control group will indicate progress as a result of the movement, and improvement with respect to urban women should indicate even more substantial progress given that latter are generally afforded more opportunities as compared to the former.

The identification strategy of the study is the assumption of "parallel trends", implying that there is no significant difference between the treatment and control districts in the pre-treatment time periods that may get carried forward in the post-treatment years and create a bias in the estimates. We test for parallel trends via graphical representation (see Figures 2-15) of all outcome variables. With the exception of the Total Hours variables, all others comply with this assumption.

The difference-in-difference or **double difference** estimation equation is as follows:

$$Y_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (1)$$

where $Y_{idt}$ is the outcome of interest, $proptreat_{d,}$ represents the proportion of land in question in the treatment districts, $post_t$ indicates post-treatment years i.e. years after 1999, $\delta_d$ is the district fixed effects, $\psi_t$ is the yearly fixed effects and $X'_{idt}$ denotes other control factors (age categories). The coefficient on $proptreat_{d*}post_t$ provides the estimate of the treatment effect of the AMP movement where we draw comparison between rural women in the treatment and rural women in the control districts.

The double-difference equations on each outcome of interest used for the purpose of short-term effects on potentially "economically active" women are the following:

$$work_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (2)$$

where $work_{idt}$ is a dummy for the working status of women in which 1 denotes currently working and 0 otherwise. The interaction term $proptreat_d * post_t$ gives the treatment effect on the number of working women in the treatment districts in comparison to their rural counter-parts in the control districts, both pre and post-treatment rounds.

$$totalhours_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (3)$$

where $totalhours_{idt}$ is the hours spent at work each day during the last week at the main occupation. The interaction term $proptreat_d * post_t$ gives the treatment effect on any change in the total hours spent at work by women in the treatment districts in comparison to their rural counter-parts in the control districts, both pre and post-treatment rounds.

$$literacy_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (4)$$

where $literacy_{idt}$ is a dummy which equals to 1 if the individual can read or write and 0 otherwise. The interaction term $proptreat_d * post_t$ gives the treatment effect on any change in literacy rates of women in the treatment districts in comparison to their rural counter-parts in the control districts, both pre and post-treatment rounds.

The double-difference equations on each outcome of interest for the long-term effects on potentially "school going" girls are the following:

$$currentenrolment_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (5)$$

where $currentenrolment_{idt}$ is a dummy in which 1 is an indicator for the individual enrolled in a school/institution and 0 otherwise. The interaction term $proptreat_d * post_t$ gives the treatment effect on any change in the number of "school going" girls enrolled in a school/institution in the rural regions of treatment districts compared to the ones in the control districts, both pre and post-treatment rounds.

$$yearsofeducation_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (6)$$

where $yearsofeducation_{idt}$ denotes the years of education obtained by the individual in district *d* and time period *t*. The interaction term $proptreat_d * post_t$ gives the treatment effect on any change in the years of education acquired by "school going" girls in the treatment districts compared to the ones in the rural regions of the control districts, both pre and post-treatment rounds.

$$educ \geq 5years_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (7)$$

where $educ \geq 5years_{idt}$ is an indicator for the individual obtaining primary schooling or above. The interaction term $proptreat_d * post_t$ gives the treatment effect on any change in

the number "school going" girls acquiring primary education and above levels of schooling in the treatment districts compared to their rural counterparts in the control districts, both pre and post-treatment rounds.

$$educ \geq 8years_{idt} = B_0 + B_1 proptreat_d * post_t + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (8)$$

where $educ \geq 8years_{idt}$ equals to 1 if an individual is in middle school or above. The interaction term $proptreat_d * post_t$ gives the treatment effect on any change in the number "school going" girls obtaining middle and above levels of schooling in the treatment districts compared to their rural counterparts in the control districts, both pre and post-treatment rounds

The **triple difference** estimation equation is as follows:

$$Y_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2\, proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (9)$$

Where $Y_{idt}$ is the outcome of interest, $proptreat_d$ represents the proportion of land in question in the treatment districts, $post_t$indicates post-treatment years i.e. years after 1999, $rural_{idt}$ is equals to 1 if a women lives in the rural region and 0 otherwise, $\delta_d$ is the district fixed effects, $\psi_t$ is the yearly fixed effects and $X'_{idt}$ denotes other control factors (age categories). The coefficient on $proptreat_{d*}post_{t*}rural_{idt}$ gives us the treatment effect on rural women in the treatment group as compared to rural women in the control districts and urban women in both control and treatment districts, in pre- and post-treatment rounds.

The triple difference equations for each outcome variable used to determine the short-run effects on potentially "economically active" women are as follows:

$$work_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2 proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (10)$$

where $work_{idt}$ is a dummy for the working status of women, which equals to 1 if currently working and 0 otherwise. The interaction term $proptreat_d * post_t * rural_{idt}$ gives the treatment effect on the number of working women in the rural regions of treatment districts in comparison to the rural women in the control districts and urban women in the control and treatment districts, both pre and post-treatment rounds.

$$totalhours_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2 proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (11)$$

where $totalhours_{idt}$ is the hours spent at work each day during the last week at the main occupation. The interaction term $proptreat_d * post_t * rural_{idt}$ gives the treatment effect on any change in the total hours spent at work by rural women in the treatment districts in comparison to the rural women dwelling in the control districts and urban women in the control and treatment districts, both pre and post-treatment rounds.

$$literacy_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2 proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (12)$$

where $literacy_{idt}$ is a dummy which equals to 1 if the individual can read or write and 0 otherwise. The interaction term $proptreat_d * post_t * rural_{idt}$ gives the treatment effect on any change in literacy rates of the rural women in the treatment districts in comparison to rural

women in the control districts and urban women in the control and treatment districts, both pre and post-treatment rounds.

The triple difference equations for each outcome variable to capture the long-term effects on potentially "school going" girls are as follows:

$$currentenrolment_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2 proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (13)$$

where $currentenrolment_{idt}$ is a dummy in which 1 is an indicator for the individual enrolled in a school/institution and 0 otherwise. The interaction term $proptreat_d * post_t * rural_{idt}$ gives the treatment effect on any change in the number of "school going" girls enrolled in a school/institution in rural areas of the treatment districts compared to the ones living in rural regions of the control districts and urban region in the control and treatment districts, both pre and post-treatment rounds.

$$yearsofeducation_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2 proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (14)$$

where $yearsofeducation_{idt}$ denotes the years of education obtained by the individual. The interaction term $proptreat_d * post_t * rural_{idt}$ gives the treatment effect on any change in the years of education acquired by "school going" girls in the treatment districts compared to the ones in the rural regions of the control districts and in urban regions of control and treatment districts, both pre and post-treatment rounds.

$$educ \geq 5years_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2 proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (15)$$

where $educ \geq 5years_{idt}$ is an indicator for the individual in obtaining primary schooling or above. The interaction term $proptreat_d * post_t * rural_{idt}$ gives the treatment effect on any change in the number "school going" girls acquiring primary education and above levels of schooling in the rural areas of treatment districts compared to their counter-parts in both the rural regions of control districts and urban regions in control and treatment districts, in pre and post-treatment rounds.

$$educ \geq 8years_{idt} = \theta_0 + \theta_1 proptreat_d * post_t + \theta_2 proptreat_d * rural_{idt} + \theta_3 post_t * rural_{idt} + \theta_4 proptreat_d * post_t * rural_{idt} + \delta_d + \psi_t + X'_{idt}\lambda + \nu_{idt} \quad (16)$$

where $educ \geq 8years_{idt}$ equals to 1 if an individual is in middle school or above. The interaction term $proptreat_d * post_t * rural_{idt}$ gives the treatment effect on any change in the number "school going" girls obtaining middle and above levels of schooling in the treatment districts compared to their rural counterparts in the control districts and the ones in urban regions in treatment and control districts, both pre and post-treatment rounds.

# 5 Results

### 5.1.1 Main Findings

Table 1 presents the double difference estimates. In the women's "currently working" status, we see that the share of "economically active" women working in the treatment districts grew significantly in comparison to rural women in the control districts, which means that women in the treatment group opted to work in greater numbers after the movement took place. From the time event-study in Figure 2, the trend for "currently working" women start to accelerate from the year 2003, which is also the same year when the army withdrew its rangers from the farmlands and the tenants were able to cultivate on their lands again. This implies that when the farmers obtained their lands back from the military, there was a greater inclination on women's part to join the labor force.

Though, the number of working women significantly increased after the treatment, the total hours these women in the treatment group were spending at work did not change. From the time-event study (see figure 3) we do, however, observe a temporary shift upwards in trend post-1999 but we cannot attribute this trend with the effects of the movement as there was significant pre-treatment volatility in working hours. Therefore, we cannot, with confidence, make an inference about changes in how women were dividing their hours between household and paid work in the post-AMP movement period.

In addition, we observe a significant rise in the number of women who are literate post-movement in comparison to rural women in the control districts. Given that these women were attending court hearings, giving seminars and addressing press conferences (Choudry and Kapoor, 2010), therefore, activities of such nature could have generated a preference to attain basic learning, hence, the increase in the literacy rate.

Table 2 shows the results for the second main specification of this study, a triple difference strategy, which adds urban women as an additional control group. In the triple difference specification, we continue to observe higher female labor force participation among "economically active" women in the treatment districts. This suggests a diminishing urban-rural gap, at least for the rural women in the districts affected by the AMP movement and that the intensity of the impact was large given that we observe higher numbers of women actively joining the labor force in comparison to their urban counter-parts in control and treatment districts as well. Again, we can observe this trend graphically in Figure 5, where we see a short-term increase in trend from 2003 onwards, which further complements the idea that women became active in labor market when the tenants were able to cultivate on their lands again as a result of a decrease in military repression.

The number of hours worked women in the treatment districts remain insignificant but the coefficient turns negative. In this case as well, we obtain significant pre-trends in the time-event-study (see Figure 6), therefore, we cannot say that the positive shift in trend obtained for working hours post-treatment was a result of the movement itself. Hence, even after adding an additional layer of control to the estimates, we are unable to determine whether women were devoting more hours to work in the post-treatment rounds.

Finally, trends in literacy rates among "economically active" women are similarly positive and significant for the triple difference specification as well. This further strengthens the idea that as women became more mobile and active in the campaigns for the movements such as seminars, court hearings, sit-ins and other such avenues, they developed an inclination towards basic learning.

Upon close examination of the Figures 2 and 5, we observe that the favorable trends for the employment outcomes of rural women in the AMP-affected districts are short-lived and diminish after 2006-07. A possible explanation for this could be that even though participation

initially provided women with the opportunity to gain awareness, confidence and mobility, once the movement became firmly established and the situation stabilized, the women were expected to return to their previous socially accepted roles again that limited them to their households (Karim, 2014).

Next, we look at the impacts on girls under age 16. According to the results in Table 3, overall, we observe highly favorable outcomes resulting from the movement. There is higher enrollment, they complete more years of education, and are more likely to complete at least 5 years of education (i.e. complete primary schooling) and more likely to complete 8 years of education (middle school) as compared to rural girls in the control districts. This suggests that girls in the rural treatment group were moving towards higher education as compared to girls in the rural control group post-movement time period. As Shaheed (2007) points out in her study, women started to send their daughters to nursing schools and other technical institutions just so that their livelihood is not dependent on their access to land. From the figures (see Figures 8-11) we see that the parallel trends assumption holds and there is an upward shift in trend for all these outcomes as compared to pre-treatment years. There is some volatility in the middle school and above outcome in Figure 11 but overall, the effect is positive.

From Table 4 we get very similar results for girls under 16 when we conduct the triple difference estimation, adding girls in urban areas as an additional control group. There is a significant rise in the number of girls in the treatment districts enrolled in schools, in the number of years they were devoting to their education, and completing at least five years of schooling and some increase in the middle schooling and above education. Hence, we see significant improvement in education attainment of "school going" girls in the treatment districts, which implies a reduction in the urban-rural gap in terms of educational

development. These trends can be observed from Figures 12-14, which show an overall upward shift in the educational outcomes post AMP movement years.

### 5.1.2 Educational outcomes in later years using household fixed effects

For a deeper understanding of the situation with the level of education attainment in the post-treatment time period, we move ten years ahead of the initial year of treatment to observe any change in behavior within a household towards the educational outcomes of the children who were exposed to the movement. We use the information available on age and level of education of individuals within a household to compare the level of education of the younger generation with that of the older generation in the same household. To do this, we move ten years ahead from the treatment year and create a new data set from 2009 to 2012, and define *post*=1 if an individual is between 15 to 30 years of age and control them against the older generation by making *post*=0 if greater than 30. This way, the younger generation becomes the post-treatment observation of that household and older generation becomes the pre-treatment observation of the same household. We then put an additional layer of control in the form of men and generate triple difference estimates to further determine any change in behavior within a household towards investment in girl's education in comparison to the opposite gender. Table 5 shows that across all educational outcomes, the estimates are significantly positive. From this, we learn that after the treatment, the girls who were exposed to the movement at the "school going" age were obtaining more education in reference to the women of the older generation in the same household. A similar impact is also present in comparison to men as from the triple difference estimates in Table 6 we see that within the same household the difference between the education level of men belonging from the older generation and women who were of "school going" age at the time of the treatment has changed positively over time in the households that were subject to treatment. This, therefore,

implies a positive transformation in behavior and preferences towards investment in girls' educational development.

## 5.2 Robustness Checks and Alternative Stories

### 5.2.1 Difference in Differences with District Dummy

In the main findings we showed results on the basis of differing treatment intensity taking in account that the area of land contested in each of the ten treatment districts varied in size. We move from this technique and try to replicate the same results by taking a district dummy instead [5] to see if we get any deviations from the main findings.

The results from Tables A.1 and A.2 are based on the "economically active" cohort where we see that the outcomes for total hours and literacy are highly robust for both specifications (rural women in the control districts and urban women in both the control and treatment districts). There is a fall in the level of significance for the number of women currently working in the treatment group as compared to rural women in the control and the results turn insignificant when we add urban women as a control from both control and treatment districts. To look into this, we produce time-event studies for these and Figures A.1 and A.2 illustrate the same trend as the one obtained from the main findings. The reasons for deviation could be an increase in the standard errors making these estimates noisy. For the "school going" girls under 16 years of age, in Tables A.3 and A.4 we see that the results for all educational outcomes stay consistent to the main findings across both specifications.

[5] The only difference in the estimation equation for this case if that $proptreat_d$, is replaced with $treat_d$ where 1 is equal to individual in the treatment and 0 otherwise

### 5.2.2 Difference in Differences Estimates with the exclusion of Lahore District

Lahore is the second most populous and one of the wealthiest cities of Pakistan. Since Lahore is part of the treatment districts where these military farms are located and are contested for by the tenant farmers, we run a placebo test to determine whether the main results are not driven by the inclusion of this district. From Table A.5, we see that the double-difference estimates are the same as our main findings and so are educational outcomes (see Tables A.7 and A.8). In the triple difference estimates for the "economically active" cohort (see Table A.6) the signs are in sync with the main results but some of the variables become noisy as we see some deviation in the outcomes for work and literacy in terms of their significance. For a better understanding of this, we again generate time-event studies for these two outcomes of interest. From the Figures A.6-1 and A.6-2 we obtain almost the same trends as the ones in our main findings for triple difference, which shows that results are qualitatively the same and they also show the same trends but it is the increase in standard errors that can explain the fall in the level of significance. Therefore, we can conclude that our main results are not driven by the inclusion of a metropolitan district such as Lahore, rather the effect could be traced to the movement itself.

### 5.2.3 Situation in the Neighboring Districts

In an attempt to detect spillovers from the movement into adjoining districts, we make use of a placebo test in which we run the same regressions for the neighboring districts. We define neighboring districts as the ones that are at border with the treatment districts. This way we obtain seven total districts, namely: Kasur, Bahawalnagar, Bahawalpur, Muzzaffargarh, Jhang, Toba Tek Singh and Gujranwala [6]. From Tables A.9-A.12, we see that almost all

[6] Although there are other districts such as, Hafizabad and Chiniot, that border with some of the districts in the treatment but these were not created until later in 90's, which is why we do not account

coefficients are insignificant and in both specifications the outcome we get for currently working turns negative. This indicates that there are unlikely to have been spillovers from the movement to the neighboring districts. Moreover, they also provide evidence that the impact of the AMP movement obtained from the main results is not random; rather is driven by the movement itself.

### 5.2.4 Migration

There is also some likelihood of inter-district migration. It could be that people were either coming into the treatment districts due to greater opportunities available for them in these areas or were moving out of these districts to avoid the conflict, which may result in spillovers. To rule out the possibility of such factors driving our main results, we run a placebo test where we limit the data [7] to only people who have been living in the same district since birth. Tables A.13-A.16 show that our initial results are highly robust for all outcomes of interest and for both specifications, i.e. the double and triple difference estimates. Hence, we can conclude that the effects remain the same for those dwelling in the same districts since birth, therefore we can conclude they are driven neither by in- nor out-migration.

### 5.2.5 Estimates for Okara and Khanewal only as treatment districts

The AMP movement came into the limelight starting from the Okara and Khanewal districts. Within a short period of time, it spread across the other treatment districts where the same contract system was being imposed by the military and the farmers were under the threat of loss of land. We take this information in account and check for the intensity of the outcomes

for them as separate districts. This is because the districts in all years have been made consistent with those in the year 1990 for this study.

[7] The section on Migration was not added to the Labor Force Survey until 1996. Therefore, the results for this placebo test is generated from the data in the years between 1996 till 2012.

of interest (both employment and educational) by taking a double difference keeping Okara and Khanewal as the treatment districts only. The results from tables A.17-A.18 show that the estimates are more or less the same as the main findings. Therefore, even though the movement initiated from these two districts, after we restrict the sample to Okara and Khanewal only, the results are in line to when we brought other treatment districts into the sample.

### 5.2.6 Education attainment for children as adults from 2009 onwards

To further understand the situation with the level of education attainment in the post-treatment time period among females in the treatment districts, we make use of a placebo test to determine the conditions of education level from 2009 onwards for an age group of people who were alive in 1999. Given that we define the younger "schooling going" cohort between the age of 5 and 16, we restrict our sample to women aging from 15 to 29 years for this test [8]. This sample is further restricted to people who are not currently enrolled in any educational institution. In short, we generate a sample of women in the treatment and control districts who have completed their education, ranging between 15 to 29 years for the period 2009 - 2012. The results are in Table A.19, which are highly robust with the ones obtained from the main findings. Hence, the same effect remains even when the girls in the treated districts have grown into adults 10 years after the AMP movement took place.

### 5.2.7 Literacy rates among women above 30 years of age

For a deeper understanding of the conditions of literacy in the post-treatment rounds, we further restrict the sample of "economically active" women to an even older age group in order to determine where the effect of literacy is mostly concentrated. To do this, we create a sample of women between 30 to 60 years of age and check for their literacy in pre- and post-treatment rounds. Table A.20 show that in comparison to rural women in control, we get

positive results but the level of significance falls. In the case of urban women in both control and treatment districts as an additional control, the estimates turn insignificant. From these results, we establish that the impact of literacy is more pronounced in the younger cohort, which further complements with the educational outcomes of this study. However, we do see significantly positive outcome for literacy rates among the older women in comparison to their rural counterparts in the control districts, which shows that there was some preference towards basic learning among the women involved in the AMP movement.

[8]Girls who were between 5 to 16 years old in 1999 will grow up to be in the age group of 15 to 26 years in 2009. A limit of 29 years is set taking in account years up till 2012.

# 6 Conclusion

This paper explores the implications that participation of women in a social movement may impact on the level of empowerment measured through female labor market participation and educational outcomes. According to the literature, female participation in social movements allows them to recognize the limitations set by previously established norms and cultures on the type of roles they possess in the society. Participation of this nature results in creation of new collective identities and networks that lead to the kind of awareness that enables them to break through these boundaries and reflect on the subsisting issues.

This paper attempts to empirically test this hypothesis in a developing country's context, such as Pakistan. We use the Anjuman-e-Mazareen Punjab movement as the intervention to determine how this movement may have had an impact, both in short- and long-term, on the lives of women in the affected districts in term of employment conditions and educational development both pre- and post-treatment time periods. The results show that there was a significant increase in the number of "economically active" women in the AMP-affected districts who worked in comparison to both rural women in control and urban women in the treatment and control districts. We were not able to observe significant changes in the total hours they spent at work. We see a rise in literacy rates among the "economically active" women which shows that the inclination towards learning was spread across all age groups. In terms of educational outcomes, we see considerable improvement in not only the rate at which girls were getting enrolled but the number of years of education they were obtaining in the post-treatment years. Similarly, there is also a likelihood of girls obtaining more primary and middle schooling and above levels of education. Furthermore, we learn that there was a rise in preferences and investment towards girls' education within households in the treatment districts. We see a positive change in the educational outcomes of the younger generation who

was exposed to the movement at their ‘school going’ age in comparison to the older generation dwelling in the same household ten years after the movement started. What strengthens the results more is the progress not in comparison to women of the older generation only but men living in the same household as well. Therefore, we observe a strong impact on the next-generation in terms of their educational development in the long-run.

Overall, the study provides evidence that involvement of women with the AMP-movement proved to have an impact in different aspects of their lives, which was spread across all age groups. We see that the participation in the movement resulted in positive outcomes for women who were active but the intensity of the impact is relatively more pronounced on the next generation.

**References**


Acemoglu, D. H. (2002), ‘‘Women, War, and Wages: The Effect of Female Labor Supply on the Wage Structure at Midcentury.’’ *Journal of Political Economy*, 2004, vol. 112, no. 3.

Akerlof, G. A. and Kranton R. E. (2000), Economics and Identity, *The Quarterly Journal of Economics*, Vol. CXV Issue 3

Ali, S. M. (2014). *Development, Poverty and Power in Pakistan: The impact of state and donor interventions on farmers*, London: Routledge

Barnett, B. M. (1993) ‘‘Invisible Southern Black Women Leaders in the Civil Rights Movement: The Triple Constraints of Gender, Race and Class.’’ *Gender & Society*, 7 (2), 162–82.

Batliwala, S. (2012) Changing their World: Concepts and Practices of Women’s Movements, 2nd Edition, Toronto: AWID

Buechler, S. M. (1995), ‘‘New Social Movement Theories.’’ *Sociological - Quarterly*, 36, 441– 64.

Cable, S. (1992), ‘‘Women's Social Movement Involvement: The Role of Structural Availability in *in* Recruitment and *Participation* Processes, *The Sociological Quarterly*, 33:1, 35-50.

Choudry, A., & Kapoor, D. (2010). Learning from the ground up: Global perspectives on social movements and knowledge production. In *Learning from the Ground Up* (pp. 1-13). Palgrave Macmillan, New York.

Chowdhury, N., Nelson J. B., Carver, A. K., Johnson N. J. and O’Loughlin, P.L. (1994) “Redefining Politics: Patterns of Women’s Political Engagement from Global Perspective” in Women and Politics Worldwide (Ed) Barbara J. Nelson and Najma Chowdhury, London: Yale University Press, P11

Diani, M. (2004), “Networks and Participation”, *The Blackwell companion to social movements*. John Wiley & Sons.

Doepke, M. and Tertilt, M. (2009), ‘‘Women's Liberation: What's in It for Men ?.’’ *The Quarterly Journal of Economics*, Volume 124, Issue 4, 1 November 2009, Pages 1541–1591

Evelyn, A. Y. (2014) ‘‘Entrenched Patriarchy, Women Social Movement and Women Participation in Politics.’’ *American International Journal of Contemporary Research,* Vol. 4.

Everitt, J. (1998), ‘‘Public Opinion and Social Movements: The Women's Movement and the Gender Gap in Canada.’’ *Canadian Journal of Political Science*, Vol. 31, No. 4 (Dec., 1998), pp. 743-765

Fleschenberg, A. (2015), “Mapping Pakistan’s Heterogeneous, Diverse, and Stratified Civil Society and Democratization — Gendered Tales of Collaboration, Networking, and Contestation’’, *ASIEN*, S. 51–72.

Hasso, F. S. (2001), Feminist Generations? The Long-Term Impact of Social Movement Involvement on Palestinian Women’s Lives, *American Journal of Sociology*, Volume 107 Number 3 (November 2001): 586–611

Holland, L. (2015), Gay Marriage in the New South: What's New About It?, *The Journal of Public and Professional Sociology*, Vol. 7 : Iss. 2, Article 3.

ILO. (2018). Empowering Women in the Rural Economy: Decent Work in The Rural Economy

Karim, M. (2014, May 25). Fight on for Land, *The News (International).*

Mazumder S. S. (2019), Black Lives Matter for Whites’ Racial Prejudice: Assessing the Role of Social Movements in Shaping Racial Attitudes in the United States, Working Paper, Harvard University.

McAdam, D. (1992). Gender as a mediator of the activist experience: The case of Freedom Summer. *American Journal of Sociology*, 97, 1211–1240.

Meyer, D. S. and Whittier N. (1994), Social Movement Spillover.’’ *The Public Opinion Quarterly*, Vol. 47, No. 4. (Winter, 1983), pp. 461-478.

Mumtaz, K. and Mumtaz, S. K. (2012), “Women’s Rights and the Punjab Peasant Movement’’, *South Asian Journal*, 35: 138-50

Khan, A. and Kirmani, N. (2018), “Moving Beyond the Binary: Gender-based Activism in Pakistan’’, *Feminist Dissent,* 2018 (3), pp. 151-191

Phillips, S. (2014), ‘‘The Women’s Squad in Ukraine’s protests.’’ *Journal of the American Ethnological Society*, Vol.41, No.3, pp.414–426.

Polletta, F. and Jasper, M. J. (2001), Collective Identity And Social Movements, *Annual Review of Sociology*. 2001. 27:283–305

Safa, H. (1990), ‘‘Women’s Social Movements in Latin America.’’ *Gender and Society*, Vol. 4, pp. 354-369.

Shaheed F (2007), Rethinking Global Women’s Movements, ed. Amrita Basu; London: Routledge

Skrentny J. D. (2002). The Minority Rights Revolution. Cambridge, MA: Harvard Univ. Press

Snow, D. A., and Robert, D. B. (1988), ‘‘Ideology, Frame Resonance and Participant Mobilization’’. *International Social Movement Research*, 1, 197–217.

Snow, D. A., Soule, S. A., & Kriesi, H. (Eds.). (2008). *The Blackwell companion to social movements*. John Wiley & Sons.

Stewart, A. J., Settles, I. H. and Winter, N. J. G. (1998), ‘‘Women and the Social Movements of the 1960s: Activists, Engaged Observers, and Nonparticipants.’’ *Political Psychology*, Vol. 19, No. 1P.

Turner, R. H. and Lewis M. K. (2013), ‘‘The Theme of Contemporary Social Movements.’’ *British Journal of Sociology*, 20, 390–405.

# Tables

**Table 1: Double Difference Estimates with Proportion of Land Treated**

| VARIABLE | (1) Total Hours | (2) Work | (3) Literacy |
|---|---|---|---|
| c.proptreat#1.post | 0.023 | 0.036** | 0.016** |
| | (0.540) | (0.015) | (0.007) |
| Observations | 409,768 | 409,768 | 409,768 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women only in the rural areas from 59 “consistent” districts. All columns consist of “economically active” rural women in treatment districts compared with rural women in the control group. Total Hours is defined as the number of hours worked in the main occupation and Work is a dummy where 1 is equal to individual currently working. Literacy is a dummy where 1 denotes the individual able to read and write. The standard errors are clustered at the district level. The "prop treated" variable is calculated as "state owned land * 100 / total cultivable land in the district". All estimates include district and year fixed effects and control for age categories.

**Table 2: Triple Difference Estimates with Proportion of Land Treated**

| VARIABLE | (1) Total Hours | (2) Work | (3) Literacy |
|---|---|---|---|
| 1.rural#1.post#c.proptreat | -0.195 | 0.032** | 0.027*** |
| | (0.520) | (0.015) | (0.010) |
| Observations | 734,682 | 734,682 | 734,682 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women only in both rural and urban areas from 59 “consistent” districts. All columns consist of “economically active” rural women in treatment districts compared with those in the rural regions of control districts and urban regions in both treatment and control districts. Total Hours is defined as the number of hours worked in the main occupation and Work is a dummy where 1 is equal to currently working. Literacy is a dummy where 1 denotes the individual able to read and write. The standard errors are clustered at the district level. The "prop treated" variable is calculated as "state owned land * 100 / total cultivable land in the district". All estimates include district and year fixed effects and control for age categories.

**Table 3: Double Difference Estimates with Proportion of Land Treated**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| c.proptreat#1.post | 0.036*** | 0.071*** | 0.021*** | 0.007*** |
| | (0.009) | (0.016) | (0.007) | (0.002) |
| Observations | 278,349 | 278,348 | 278,348 | 278,348 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women only in the rural areas from 59 "consistent" districts. All columns consist of "school going" girls in the rural regions of the treatment districts compared with their rural counter-parts in the control districts. Current Enrolment is a dummy where 1 denotes the individual is currently attaining some level of education. Years of Education is a continuous variable which denotes any change in years of schooling obtained. Education greater and equal to 5 years consists of primary schooling and above and Education greater and equal to 8 years comprises of middle schooling and above, tested for children under 16 years of age. The standard errors are clustered at the district level. The "prop treated" variable is calculated as "state owned land * 100 / total cultivable land in the district". All estimates include district and year fixed effects and control for age categories.

**Table 4: Triple Difference Estimates with Proportion of Land Treated**

| VARIABLES | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.rural#1.post#c.proptreat | 0.069*** | 0.115*** | 0.026** | 0.007* |
| | (0.013) | (0.024) | (0.010) | (0.004) |
| Observations | 476,796 | 476,794 | 476,794 | 476,794 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women only in both rural and urban areas taken from 59 "consistent" districts. All columns consist of "school going" girls in the rural region of the treatment districts compared with their rural counter-parts in the control and the ones in urban regions in both control and treatment districts. Current Enrolment is a dummy where 1 denotes the individual is currently attaining some level of education. Years of Education is a continuous variable which denotes any change in years of schooling obtained. Education greater and equal to 5 years consists of primary schooling and above and Education greater and equal to 8 years comprises of middle schooling and above, tested for children under 16 years of age. The standard errors are clustered at the district level. The "prop treated" variable is calculated as "state owned land * 100 / total cultivable land in the district". All estimates include district and year fixed effects and control for age categories.

**Table 5: Double Difference Estimates for Educational Outcomes With-In the Same Household in Later Years**

| VARIABLE | (1)<br>Years of Education | (2)<br>Educ>=5years | (3)<br>Educ>=8years |
|---|---|---|---|
| 1.treat#1.post | 0.817***<br>(0.134) | 0.252***<br>(0.039) | 0.153***<br>(0.029) |
| Observations | 110,233 | 110,233 | 110,233 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 2009-2012. The data is based on women between 15 to 30 years of age compared to women older than 30 years defined as the older generation living in the same household in the treatment districts compared to the ones in rural regions of the control districts. All estimates take in account year and household fixed effects.

**Table 6: Triple Difference Estimates for Educational Outcomes With-In the Same Household in Later Years**

| VARIABLE | (1)<br>Years of Education | (2)<br>Educ>=5years | (3)<br>Educ>=8years |
|---|---|---|---|
| 1.treat#1.post#1.female | 0.266***<br>(0.094) | 0.082***<br>(0.026) | 0.061***<br>(0.021) |
| Observations | 216,155 | 216,155 | 216,155 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 2009-2012. The data is based on both men and women in rural regions from 59 “consistent” districts. We restrict the sample to women between 15 to 30 years of age in the treatment districts compared to an older age group of women and men of more than 30 years of age, living in the same household, in the rural areas of control and treatment districts. All estimates take in account year and household fixed effects.

**Table A.1: Double Difference Estimates with District Dummy**

| VARIABLE | (1)<br>Total Hours | (2)<br>Work | (3)<br>Literacy |
|---|---|---|---|
| 1.treat#1.post | 0.096 | 0.062* | 0.042** |
| | (1.144) | (0.033) | (0.016) |
| Observations | 409,768 | 409,768 | 409,768 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women in the rural areas only from 59 "consistent" districts. All columns consist of "economically active" rural women in treatment districts compared with rural women in the control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.2: Triple Difference Estimates with District Dummy**

| VARIABLE | (1)<br>Total Hours | (2)<br>Work | (3)<br>Literacy |
|---|---|---|---|
| 1.treat#1.rural#1.post | 0.022 | 0.038 | 0.043** |
| | (0.893) | (0.027) | (0.019) |
| Observations | 734,682 | 734,682 | 734,682 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women only in both rural and urban areas from 59 "consistent" districts. All columns consist of "economically active" rural women in treatment districts compared with those in the rural regions of control districts and urban regions in both treatment and control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.3: Double Difference Estimates with District Dummy**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.treat#1.post | 0.051*** | 0.102*** | 0.033*** | 0.012*** |
| | (0.019) | (0.029) | (0.008) | (0.004) |
| Observations | 278,349 | 278,348 | 278,348 | 278,348 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women under 16 years of age in the rural areas only from 59 "consistent" districts. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.4: Triple Difference Estimates with District Dummy**

| VARIABLES | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.treat#1.rural#1.post | 0.083** | 0.128*** | 0.034*** | 0.002 |
| | (0.026) | (0.044) | (0.013) | (0.007) |
| Observations | 476,796 | 476,794 | 476,794 | 476,794 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women only under 16 years in both rural and urban areas from 59 "consistent" districts. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts and the ones in urban regions in both control and treatment districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.5: Double Difference Estimates without Lahore as a Treated District**

| VARIABLE | (1) Total Hours | (2) Work | (3) Literacy |
|---|---|---|---|
| 1.treat1#1.post | 1.239 | 0.072** | 0.040** |
| | (1.192) | (0.035) | (0.016) |
| Observations | 409,768 | 409,768 | 409,768 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012 The data is based on women in the rural areas only from 59 "consistent" districts. Treat is a dummy where 1 denotes all districts in the treatment with the exception of Lahore. All columns consist of "economically active" rural women in treatment districts compared with rural women in the control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.6: Triple Difference Estimates without Lahore as a Treated District**

| VARIABLE | (1) Total Hours | (2) Work | (3) Literacy |
|---|---|---|---|
| 1.rural#1.post#1.treat | -0.021 | 0.038 | 0.025 |
| | (0.856) | (0.025) | (0.017) |
| Observations | 734,682 | 734,682 | 734,682 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012 The data is based on women only in both rural and urban areas from 59 "consistent" districts. Treat is a dummy where 1 denotes all districts in the treatment with the exception of Lahore. All columns consist of "economically active" rural women in treatment districts compared with those in the rural regions of control districts and urban regions in both treatment and control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.7: Double Difference Estimates without Lahore as a Treated District**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.treat1#1.post | 0.046** | 0.094*** | 0.030*** | 0.011*** |
| | (0.019) | (0.030) | (0.008) | (0.004) |
| Observations | 278,349 | 278,348 | 278,348 | 278,348 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women between under 16 years of age in the rural areas only from 59 "consistent" districts. Treat is a dummy where 1 denotes all districts in the treatment with the exception of Lahore. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts. All columns consist of rural women in control compared with rural women in the treatment group. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.8: Triple Difference Estimates without Lahore as a Treated District**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.rural#1.post#1.treat | 0.064*** | 0.085** | 0.022** | -0.005 |
| | (0.023) | (0.034) | (0.011) | (0.005) |
| Observations | 476,796 | 476,794 | 476,794 | 476,794 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women between under 16 years of age in both rural and urban areas from 59 "consistent" districts. Treat is a dummy where 1 denotes all districts in the treatment with the exception of Lahore. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts and the ones in urban regions in both control and treatment districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.9: Double Difference Estimates for Neighboring Districts**

| VARIABLE | (1)<br>Total Hours | (2)<br>Work | (3)<br>Literacy |
|---|---|---|---|
| 1.neigh#1.post | -0.649 | -0.037 | 0.020 |
| | (1.162) | (0.033) | (0.023) |
| Observations | 409,768 | 409,768 | 409,768 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women in the rural areas only from 59 "consistent" districts. Neigh is a dummy where 1 denotes all districts that border with the treatment districts in this study. The neighboring districts constitute of Kasur, Bahawalnagar, Bahawalpur, Muzzaffargarh, Jhang, Toba Tek Singh and Gujranwala. All columns consist of "economically active" rural women in treatment districts compared with rural women in the control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.10: Triple Difference Estimates for Neighboring Districts**

| VARIABLE | (1)<br>Total Hours | (2)<br>Work | (3)<br>Literacy |
|---|---|---|---|
| 1.neigh#1.rural#1.post | -0.877 | -0.035 | 0.004 |
| | (0.944) | (0.032) | (0.027) |
| Observations | 734,682 | 734,682 | 734,682 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women in the rural and urban areas from 59 "consistent" districts. Neigh is a dummy where 1 denotes all districts that border with the treatment districts in this study. The neighboring districts constitute of Kasur, Bahawalnagar, Bahawalpur, Muzzaffargarh, Jhang, Toba Tek Singh and Gujranwala. All columns consist of "economically active" rural women in treatment districts compared with those in the rural regions of control districts and urban regions in both treatment and control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.11: Double Difference Estimates for Neighboring Districts**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.neigh#1.post | 0.010 | 0.043 | 0.017 | 0.001 |
| | (0.027) | (0.043) | (0.017) | (0.006) |
| Observations | 278,349 | 278,346 | 278,346 | 278,346 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women under 16 years of age in the rural areas only, from 59 "consistent" districts. Neigh is a dummy where 1 denotes all districts that border with the treatment districts in this study. The neighboring districts constitute of Kasur, Bahawalnagar, Bahawalpur, Muzzaffargarh, Jhang, Toba Tek Singh and Gujranwala. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.12: Triple Difference Estimates for Neighboring Districts**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.neigh#1.rural#1.post | 0.037 | 0.060 | 0.010 | -0.017* |
| | (0.037) | (0.058) | (0.017) | (0.009) |
| Observations | 476,796 | 476,794 | 476,794 | 476,794 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990 2012. The data is based on women in the rural and urban areas from 59 "consistent" districts. Neigh is a dummy where 1 denotes all districts that border with the treatment districts in this study. The neighboring districts constitute of Kasur, Bahawalnagar, Bahawalpur, Muzzaffargarh, Jhang, Toba Tek Singh and Gujranwala. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts and the ones in urban regions in both control and treatment districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.13: Double Difference Estimates for Non-migrants**

| VARIABLE | (1)<br>Total Hours | (2)<br>Work | (3)<br>Literacy |
|---|---|---|---|
| 1.post#1.treat | 1.428 | 0.069** | 0.058*** |
| | (1.106) | (0.029) | (0.014) |
| Observations | 303,061 | 303,061 | 303,061 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1996-2012. The data is based on women in the rural areas who have been in the same district since birth, from 59 "consistent" districts. All columns consist of "economically active" rural women in treatment districts compared with rural women in the control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.14: Triple Difference Estimates for Non-migrants**

| VARIABLE | (1)<br>Total Hours | (2)<br>Work | (3)<br>Literacy |
|---|---|---|---|
| 1.treat#1.rural#1.post | 0.517 | 0.046** | 0.065*** |
| | (0.882) | (0.022) | (0.022) |
| Observations | 498,347 | 498,347 | 498,347 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1996-2012. The data is based on women in the rural and urban areas who have been in the same district since birth, from 59 "consistent" districts. All columns consist of "economically active" rural women in treatment districts compared with those in the rural regions of control districts and urban regions in both treatment and control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.15: Double Difference Estimates for Non-migrants**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| 1.post#1.treat | 0.069*** | 0.170*** | 0.061*** | 0.023*** |
| | (0.020) | (0.037) | (0.015) | (0.007) |
| Observations | 111,235 | 111,235 | 111,235 | 111,235 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1996-2012. The data is based on women under 16 years of age in the rural areas who have been in the same district since birth, from 59 "consistent" districts. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.16: Triple Difference Estimates for Non-migrants**

| VARIABLE | (4) Current Enrolment | (5) Years of Education | (6) Educ>=5years | (7) Educ>=8years |
|---|---|---|---|---|
| treat1#1.rural#1.post | 0.079** | 0.186** | 0.067** | 0.004 |
| | (0.032) | (0.076) | (0.027) | (0.018) |
| Observations | 186,428 | 186,428 | 186,428 | 186,428 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1996-2012. The data is based on women under 16 years of age in the rural and urban areas who have been in the same district since birth, from 59 "consistent" districts. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts and the ones in urban regions in both control and treatment districts. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.17: Estimates for only Okara and Khanewal as treatment**

| VARIABLE | (1)<br>Total Hours | (2)<br>Work | (3)<br>Literacy |
|---|---|---|---|
| 1.treat#1.post | 1.423 | 0.120*** | 0.035*** |
| | (1.857) | (0.029) | (0.010) |
| Observations | 409,769 | 409,769 | 409,769 |

Notes ***p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women in the rural areas of 59 "consistent" districts. All columns consist of "economically active" rural women in treatment districts compared with rural women in the control districts. We restrict the sample to Okara and Khanewal only. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.18: Estimates for only Okara and Khanewal as treatment**

| VARIABLE | (4)<br>Current Enrolment | (5)<br>Years of Education | (6)<br>Educ>5years | (7)<br>Educ>=8years |
|---|---|---|---|---|
| 1.treat#1.post | 0.090*** | 0.167*** | 0.047*** | 0.016*** |
| | (0.010) | (0.016) | (0.007) | (0.003) |
| Observations | 278,349 | 278,348 | 278,348 | 278,348 |

Notes ***p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women less than 16 years of age, in the rural areas of 59 districts. All columns consist of "school going" girls from rural regions in the treatment districts compared with those in the rural regions of control districts**.** We restrict the sample to Okara and Khanewal only. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

**Table A.19: Education Estimates in later years**

| VARIABLE | (1)<br>Years of Education | (2)<br>Educ>=5years | (3)<br>Educ>=8years |
|---|---|---|---|
| Treat | 0.476*** | 0.150*** | 0.092*** |
| | (0.171) | (0.050) | (0.036) |
| Observations | 47,652 | 47,652 | 47,652 |

Notes *** p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 2009-2012. The data is based on women between 15 to 29 years of age in the rural areas of both treatment and control districts only. This sample restricts to women who have completed their education. The standard errors are clustered at the district level.

**Table A.20: Estimates for Literacy among women between the age 30 to 60 years**

| VARIABLE | (1)<br>Literacy | (2)<br>Literacy |
|---|---|---|
| 1.treat#1.post | 0.031* | |
| | (0.017) | |
| 1.treat#1.rural#1.post | | 0.010 |
| | | (0.017) |
| Observations | 181,710 | 322,742 |

Notes ***p$<$0.01, ** p$<$0.05, *p$<$0.1. All regressions use data from Labor force survey 1990-2012. The data is based on women between 30 to 60 years of age in both rural and urban regions of 59 "consistent" districts. Column 1 provides estimates for rural women in the treatment districts compared with rural women in the control districts. Column 2 shows estimates based on rural women in the treatment districts in comparison to rural women in the control and urban women in both control and treatment district. The standard errors are clustered at the district level. All estimates include district and year fixed effects and control for age categories.

# FIGURES

Figure 1: Area of land in Treatment

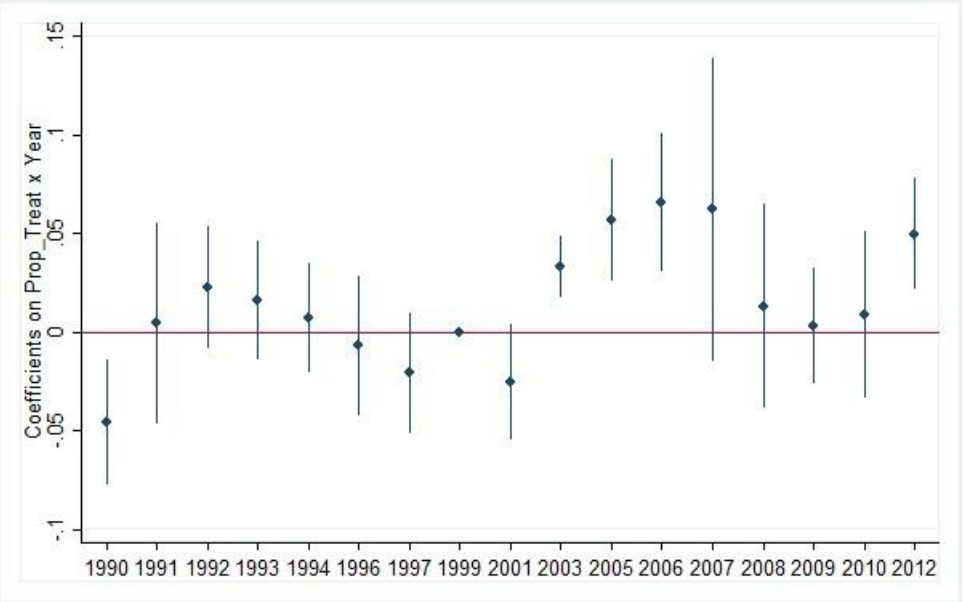
Details of Lands In Question

| S. # | Name of Farm | Total area *(acres)* | According to Scheme / Self cultivated land | Area belonging to tenants |
|---|---|---|---|---|
| 1. | Military Dairy Farm, Okara | 17013 | 5000 | 12013 |
| 2. | Military Dairy Farm, Lahore | 6689 | 1500 | 5189 |
| 3. | Military Dairy Farm, Sargodha | 1525 | 500 | 1025 |
| 4. | Military Dairy Farm, Multan | 1050 | 617 | 433 |
| 5. | Military Farm Renala Khurd, Okara | 3193 | 142 | 1771 |
| 6. | Army Welfare Trust Pakpattan, Okara | 10433 | 1250 | 9183 |
| 7. | Jahangir Abaad Cattle Farm, Khanewal | 5000 | 2200 | 2800 |
| 8. | Allahdaad Cattle Farm, Khanewal | 3000 | 1250 | 1750 |
| 9. | Dharkhana Farm, Khanewal | 2750 | – | 2750 |
| 10. | Livestock Farm, Qadirabaad , Sahiwal | 350 | 200 | 150 |
| 11. | Bahadur Nagar Livestock & Dairy Farm, Okara | 2998 | 1820 | 1178 |
| 12. | Maize and Millets Research Farm, Yousafwala, Sahiwal | 1500 | 87 | 1413 |
| 13. | 86/9-L Maize Farm, Sahiwal | 450 | – | 450 |
| 14. | Maize Research Farm, 11/14-L, Iqbal Nagar, Sahiwal | 1000 | 12 | 988 |
| 15. | Cotton Research Farm, 89/9-L, Sahiwal | 75 | 18 | 57 |
| 16. | Seed/Old Farm, 92/9-L, Sahiwal | 700 | 100 | 600 |
| 17. | Seed Farm, Mohammad Nagar, Arifwala, Sahiwal | 625 | 50 | 575 |
| 18. | Rice Research Farm, Kala Shah Kaku, Sheikhupura | 450 | 105 | 345 |
| 19. | Research Farm, Sargodha | 302 | 120 | 182 |
| 20. | Ayub Research Farm, 231 G. B. Faisalabad | 400 | – | 400 |
| 21. | Livestock Experimental Farm, Sher Garh, Okara | 875 | 15 | 860 |
| 22. | Seed Corporation of Pakistan, Peerowal, Khanewal | 6383 | 879 | 5504 |
| 23. | British Cotton Growing Farm, Peerowal, Khanewal | 581 | 229 | 352 |
| 24. | Reclamation Farm Mian Channu, Khanewal | 500 | 100 | 400 |
| 25. | Livestock Farm, Calra, Sargodha | 7500 | – | 7500 |
| - - | | | | |
| TOTAL | 75342 | 16194 | 59148 | |

Notes: These figures are taken from the official blog of Anjuman-e-Mazareen Punjab Movement.

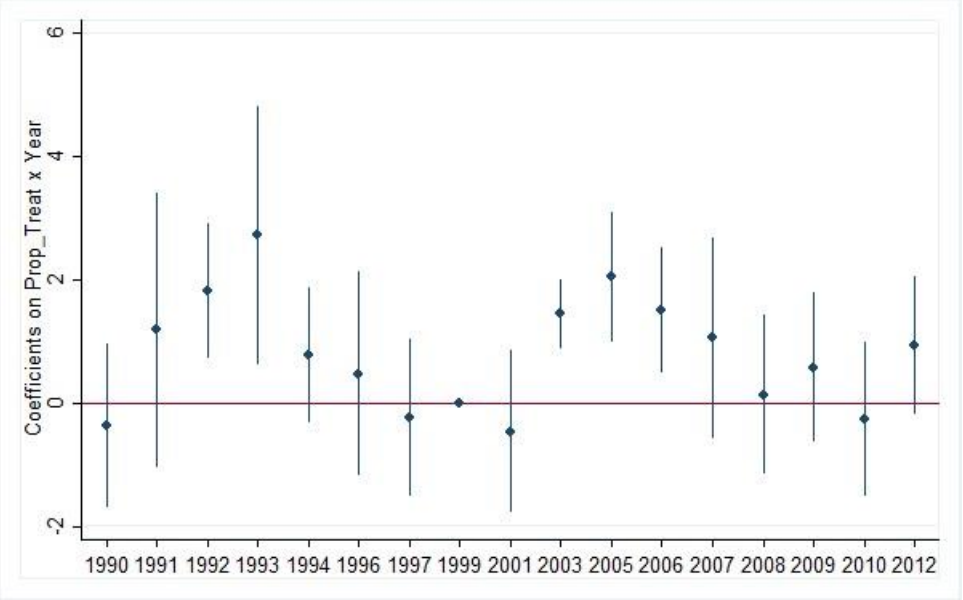
## Time-Event Study

Figure 2: Proportion Treated - Double Difference - Currently Working



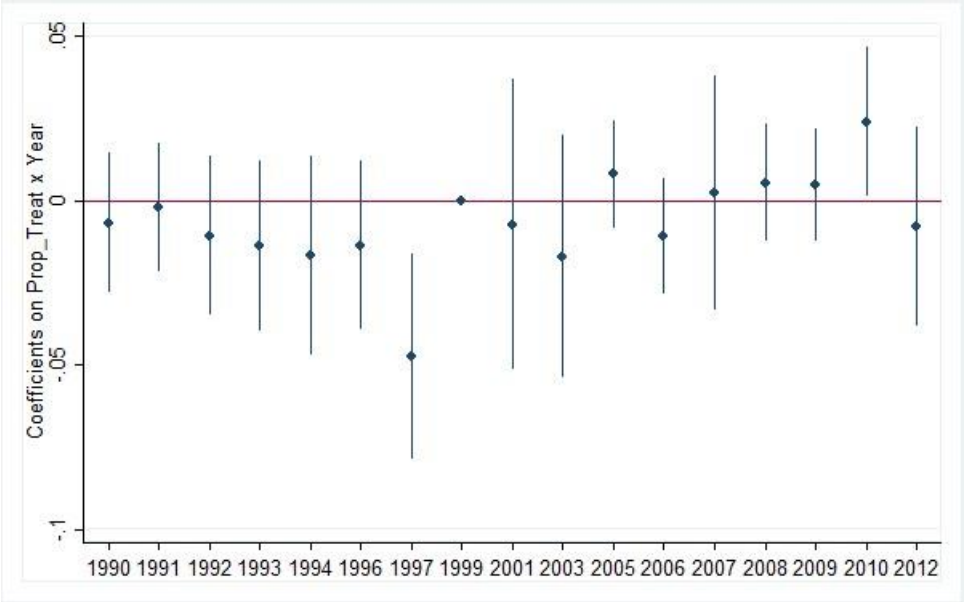

Notes: Graphical representation of regression estimates for double difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts.

Figure 3: Proportion Treated - Double Difference - Total Hours



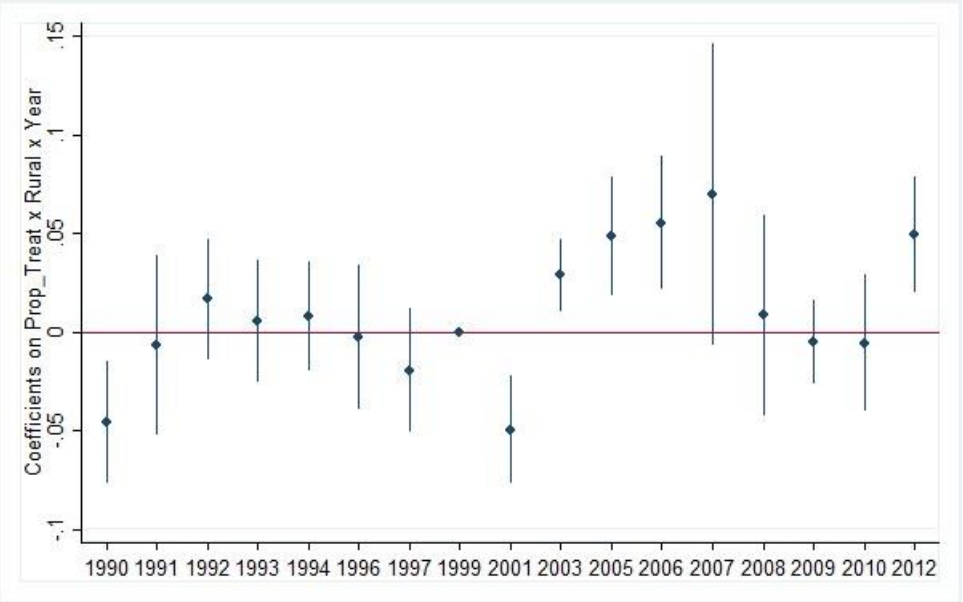

Notes: Graphical representation of regression estimates for double difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts.

Figure 4: Proportion Treated - Double Difference - Literacy



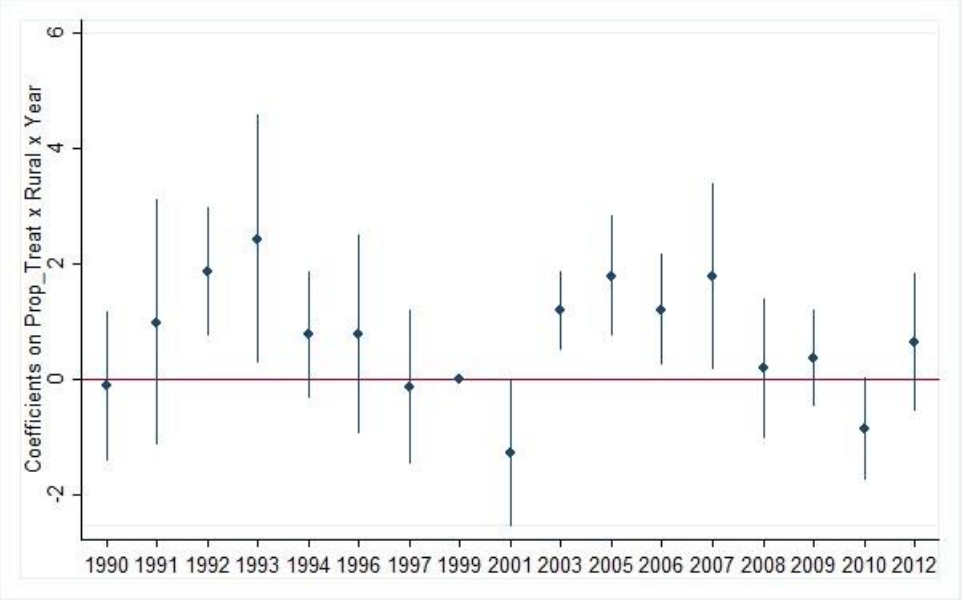

Notes: Graphical representation of regression estimates for double difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts.

Figure 5: Proportion Treated - Triple Difference - Currently Working



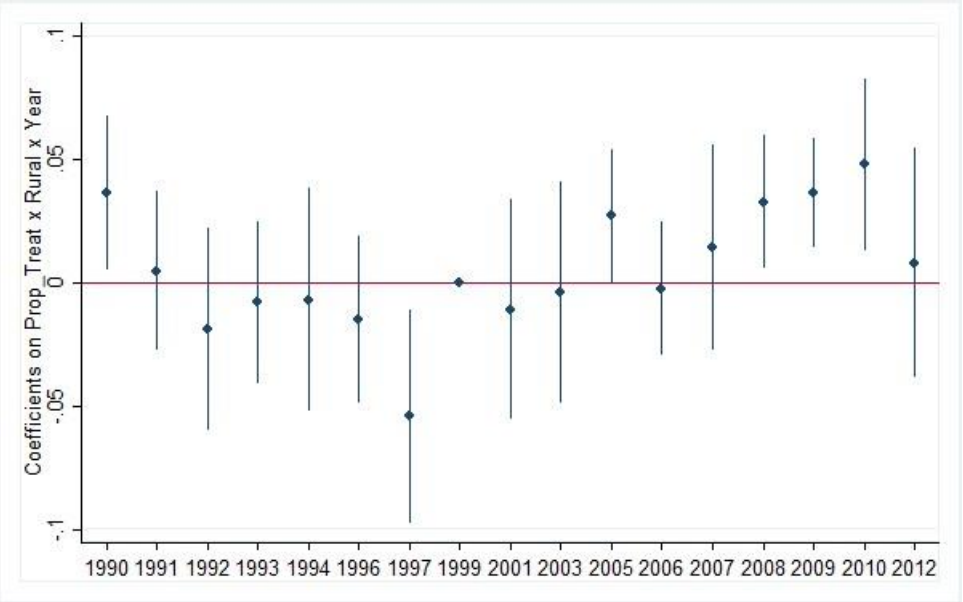

Notes: Graphical representation of regression estimates for triple difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts and urban regions of both control and treatment districts

Figure 6: Proportion Treated - Triple Difference - Total Hours



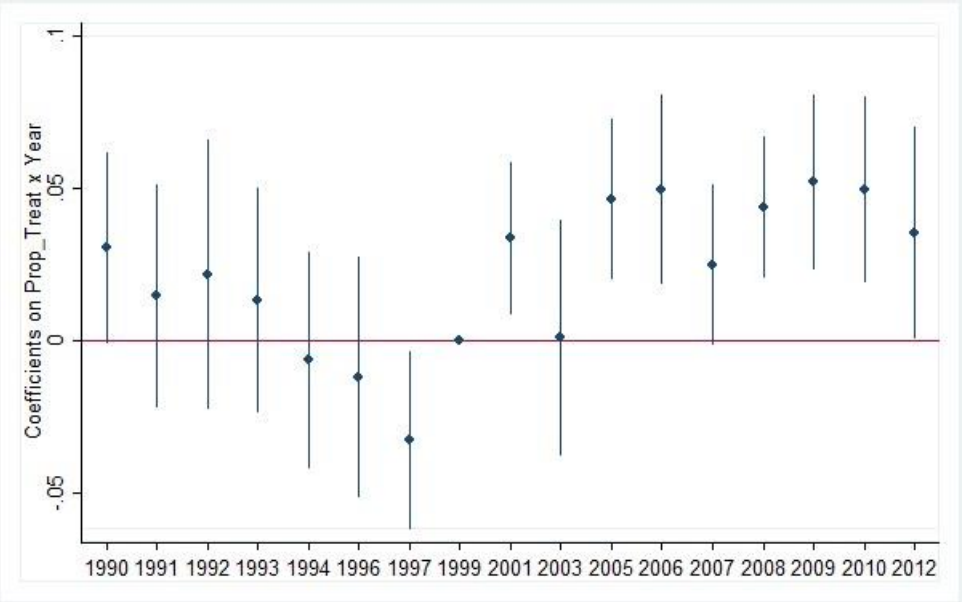

Notes: Graphical representation of regression estimates for triple difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts and urban regions of both control and treatment districts

Figure 7: Proportion Treated - Triple Difference - Literacy



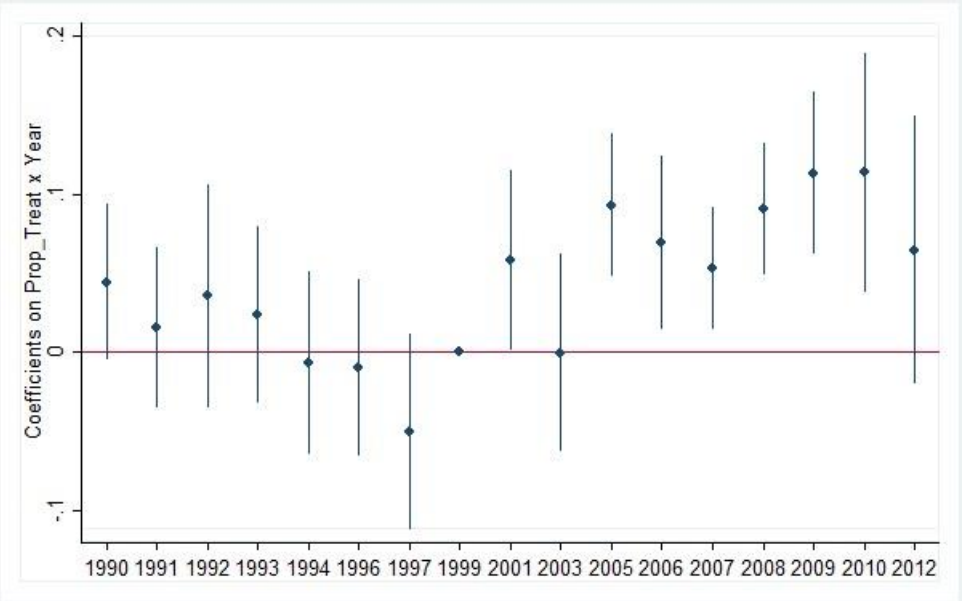

Notes: Graphical representation of regression estimates for triple difference where “economically active” rural women in treatment are compared to those in the rural regions of control districts and urban regions of both control and treatment districts

Figure 8: Proportion Treated - Double Difference - Current Enrolment



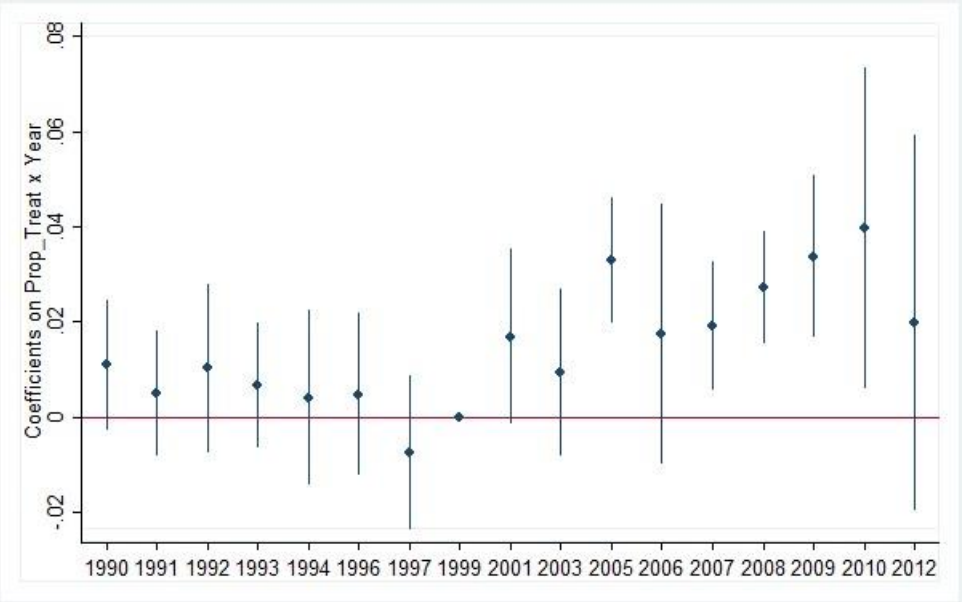

Notes: Graphical representation of regression estimates for double difference where "school going" girls from rural regions in treatment are compared to those in the rural control districts.

Figure 9: Proportion Treated - Double Difference - Years of Education



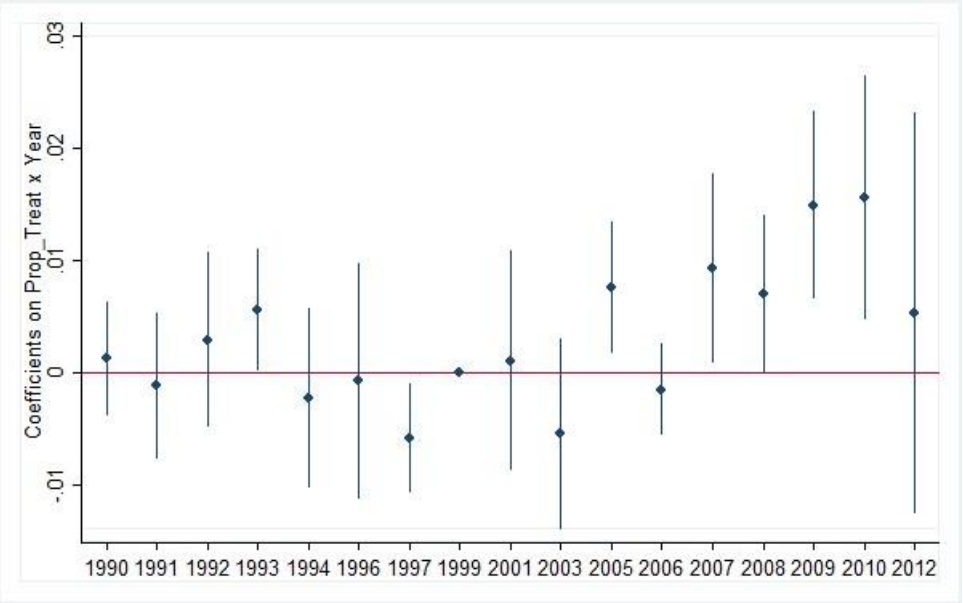

Notes: Graphical representation of regression estimates for double difference where "school going" girls from rural regions in treatment are compared to those in the rural control districts.

Figure 10: Proportion Treated - Double Difference - Primary School and Above



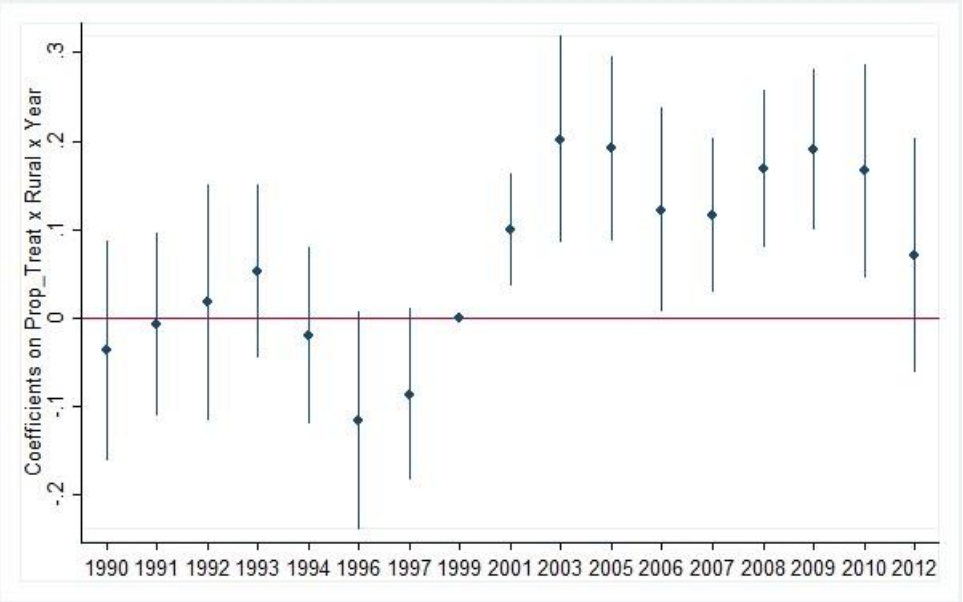

Notes: Graphical representation of regression estimates for double difference where "school going" girls from rural regions in treatment are compared to those in the rural control districts.

Figure 11: Proportion Treated - Double Difference - Middle School and Above



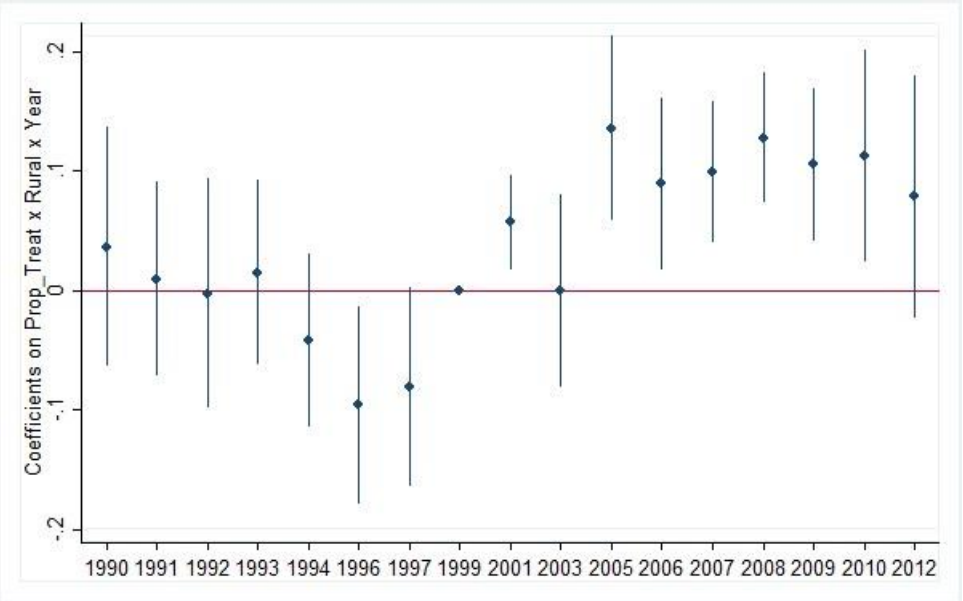

Notes: Graphical representation of regression estimates for double difference where "school going" girls from rural regions in treatment are compared to those in the rural control districts.

Figure 12: Proportion Treated - Triple Difference - Current Enrolment



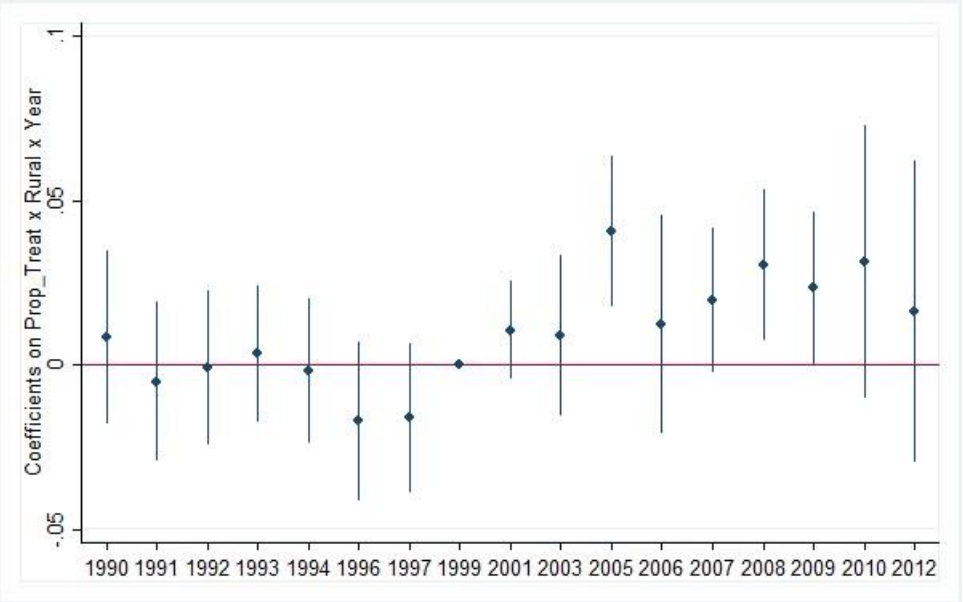

Notes: Graphical representation of regression estimates for triple difference where "school going" girls from rural regions in treatment are compared to those in the rural regions of control districts and urban regions from both control and treatment districts.

Figure 13: Proportion Treated - Triple Difference - Years of Education



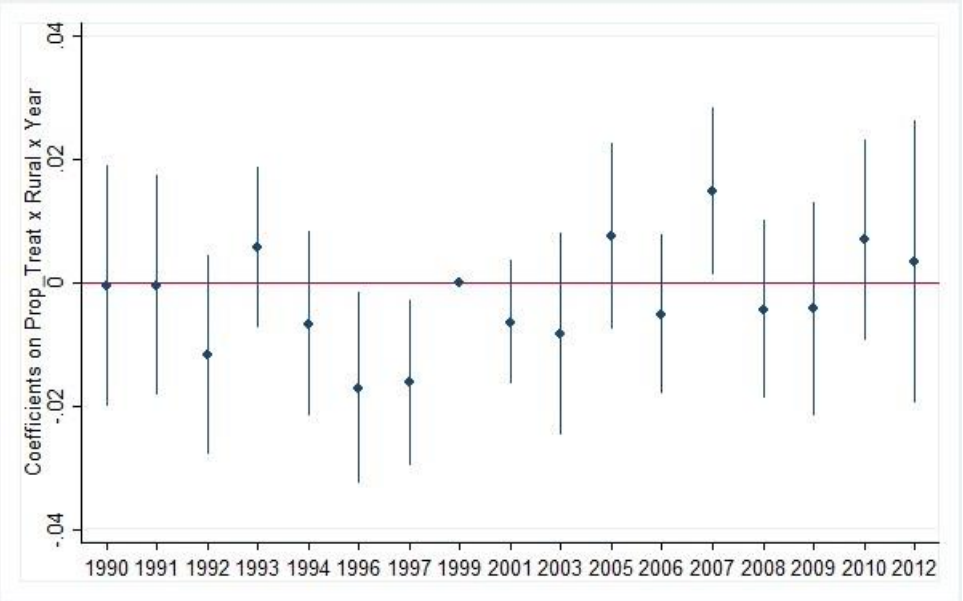

Notes: Graphical representation of regression estimates for triple difference where "school going" girls from rural regions in treatment are compared to those in the rural regions of control districts and urban regions from both control and treatment districts.

Figure 14: Proportion Treated - Triple Difference - Primary School and Above



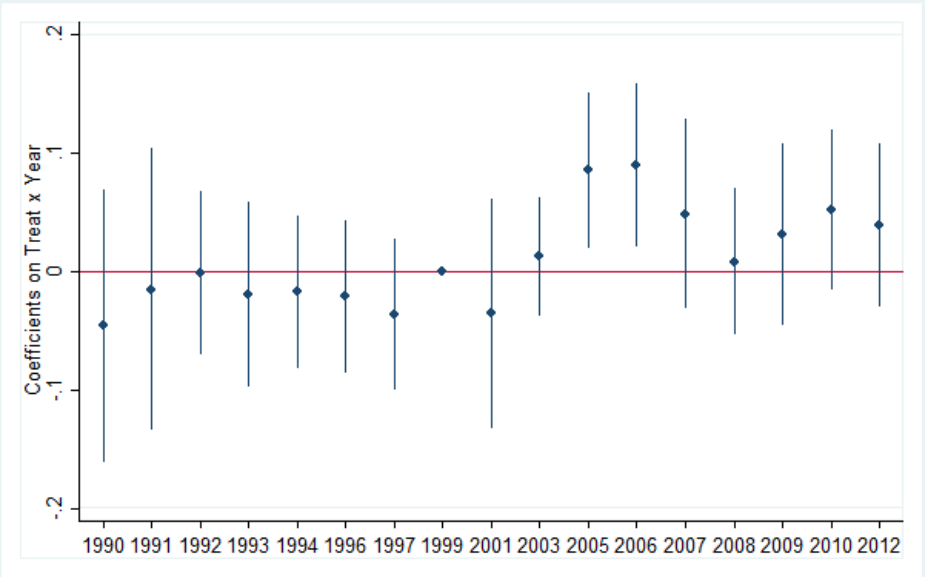

Notes: Graphical representation of regression estimates for triple difference where "school going" girls from rural regions in treatment are compared to those in the rural regions of control districts and urban regions from both control and treatment districts.

Figure 15: Proportion Treated - Triple Difference - Middle School and Above



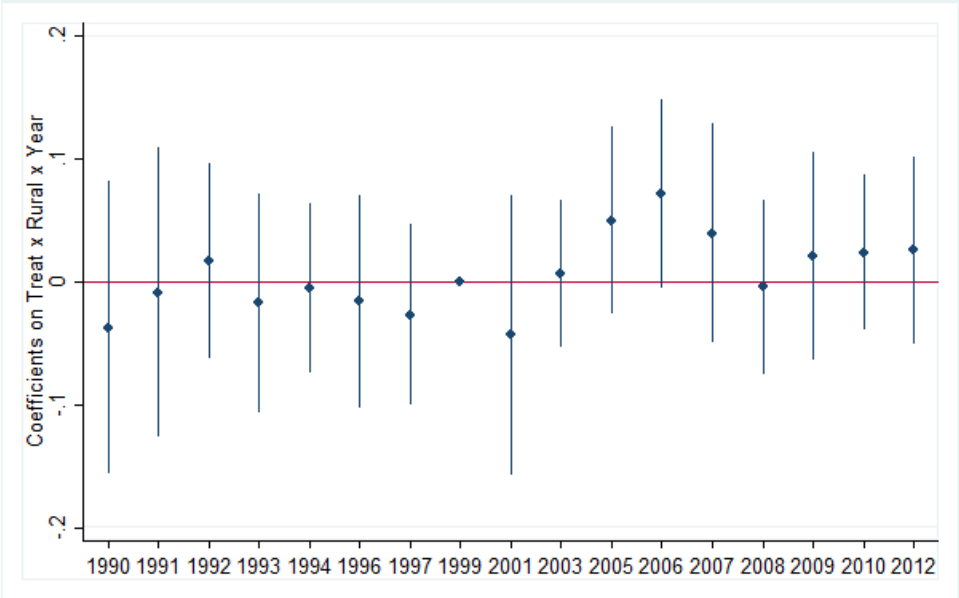

Notes: Graphical representation of regression estimates for triple difference where "school going" girls from rural regions in treatment are compared to those in the rural regions of control districts and urban regions from both control and treatment districts.

Figure A.1: District Dummy – Double Difference - Currently Working



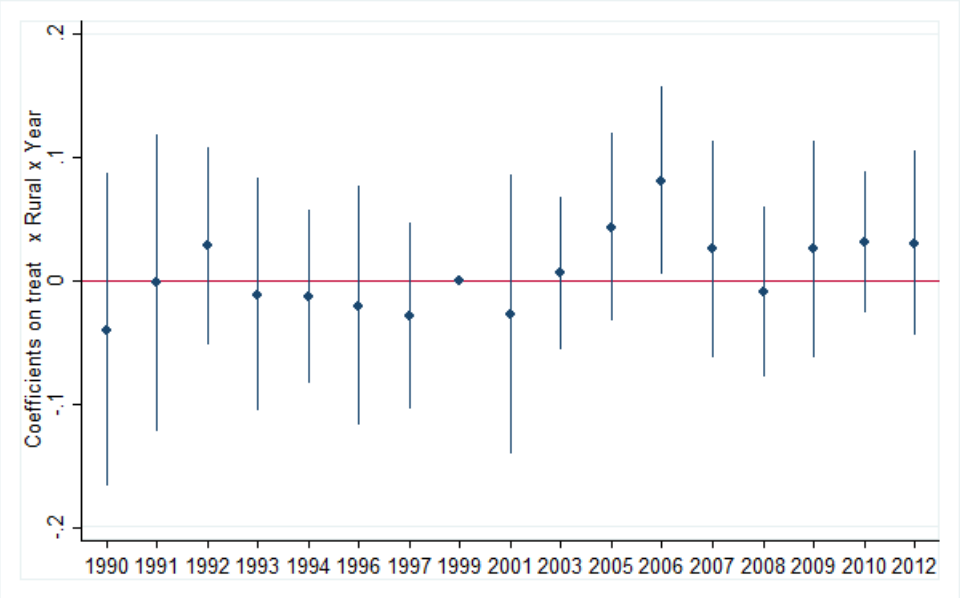

Notes: Graphical representation of regression estimates for double difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts.

Figure A.2: District Dummy – Triple Difference - Currently Working



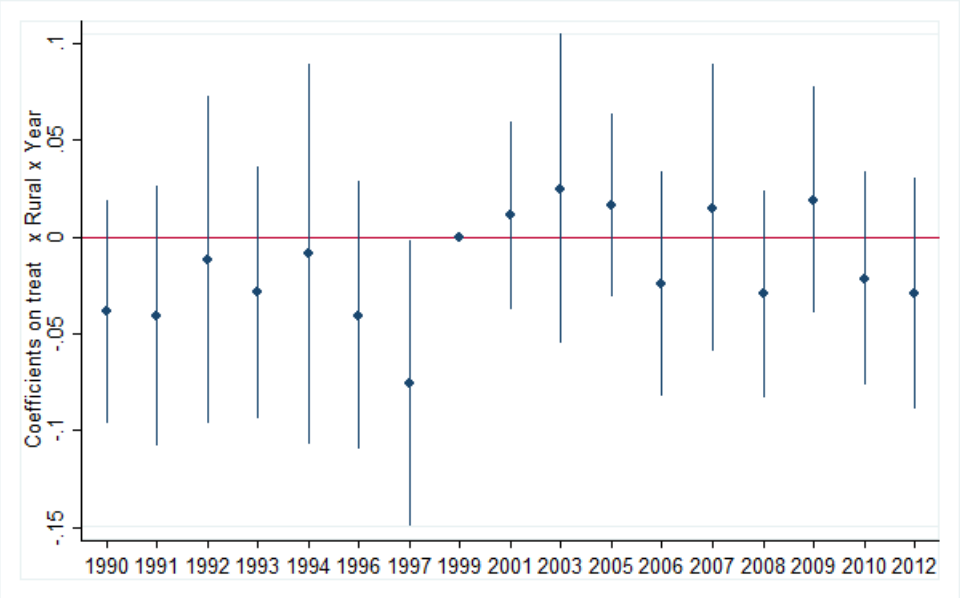

Notes: Graphical representation of regression estimates for triple difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts and urban regions of both control and treatment districts

Figure A.6-1: Treatment Districts without Lahore - Triple Difference - Currently Working




Notes: Graphical representation of regression estimates for triple difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts and urban regions of both control and treatment districts

Figure A.6-2: Treatment Districts without Lahore – Triple Difference - Literacy




Notes: Graphical representation of regression estimates for triple difference where "economically active" rural women in treatment are compared to those in the rural regions of control districts and urban regions of both control and treatment districts