

Social Norms and Gender Equality

A Descriptive Analysis for South Asia

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Abstract

Despite decades of economic growth, gender inequality in South Asia remains remarkably high. Although not the only one, social norms are a crucial driver of various gender outcomes, including differential economic participation. Using repeated cross-sectional data from nationally representative surveys, this paper explores the long term trends of gender outcomes and social norms (proxied by attitudes towards gender roles) in South Asia. The results corroborate the evidence that there has been almost no progress in gender equality in South Asia over the past half-century. There has been little progress on female labor force participation,

marriage age, agency, intimate partner violence, and preference for sons, with education being the only exception. The lack of progress is apparent among all socioeconomic groups, including women who live in urban areas, are educated, and have higher incomes. Gender attitudes also remain unchanged, and in some cases, have become more conservative and have a negative relationship with gender outcomes. Better measurements of social norms and better understanding of how their constraining role can be loosened may be critical for achieving gender equality in the region.

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1. Introduction

Gender inequalities across a variety of dimensions of well-being, education, economic participation, health, access to assets, services, and voice have been highlighted as key features of inequality and poverty in the South Asia region (Klasen and Lahoti 2021, Vijaya, Lahoti, and Swaminathan, 2014; Alkire and Santos 2014). Although progress has been achieved in several of these dimensions, gender inequalities persist and remain unchanged in some areas. A major area of concern is the low female labor force participation (FLFP) in the region. Notwithstanding some within-region differences, FLFP rates in South Asia remain below all other world regions, apart from the Middle East and North Africa, by a large margin (at 23.6 and 19.8 percent, respectively, for 2019)¹ and have remained broadly unchanged since 2001 (Najeeb et al., 2020).

The theoretical and empirical literature consistently recognizes social norms as a key driver of various gender outcomes (Galvan & Garcia-Penalosa, 2018; Heise, 1998; Munoz Boudet et al., 2013; The Social Norms Learning Collaborative, 2021; Weber et al., 2019; The World Bank, 2012; Verick, 2014). A recent review by Jayachandran (2020) illustrates how norms act as a barrier to women's employment and the impact of various policy measures when strong norms are present. By placing restrictions on women's mobility, control over finances, roles within the household and attitudes around gender-based violence, cultural norms make it harder for women to participate and thrive in the labor market. Other studies have confirmed this to be true in the specific context of South Asia (Amir et al., 2018; Bernhardt et al., 2018; Heintz, Kabeer, and Mahmud, 2017; Klasen, 2019; Bridges, Lawson, & Begum, 2011).

The role of norms may explain why, in the past two decades, FLFP has continued to be low in the region despite significant gains in GDP growth, women's educational attainment, and total fertility rate²- factors typically associated with improvements in women's economic participation (Mammen and Paxson, 2000; Goldin, 1994; Olivetti, and Petrongolo, (2016); Luci *et al.*, 2012; Hosney, 2016; Zaheer and Qaiser, 2016; Verick, 2014). Indeed, trends observed in South Asia also do not conform to the traditionally hypothesized U-shaped relationship between economic development and FLFP (Boserup, 1970; Durand, 1975; Goldin, 1995). Examination of data from two time periods – 1995 and 2020 – shows that FLFP in most South Asian countries tends to fall substantially below global employment rates in the U-shaped curve (see Figure 1), at the same level of GDP per capita compared to the rest of the world.

Social norms often influence behavior in combination with or through interactions between households, markets, and formal and informal institutions (The World Bank, 2012). To understand the drivers of gender inequality, it is therefore important to look at changes over time in various macro and micro level

¹ For women 15+. Source World Development Indicators, using the International Labour Organization, ILOSTAT database. Data retrieved on June 15, 2021. The main outlier in the region is Nepal with rates over 75%.

² See Annex Figure A1 for graphs on observed trends over time in FLFP, gross domestic product (GDP) growth rate (data from WDI), female educational achievement (data from DHS), and the national total fertility rate (TFR) (data from WDI) across South Asian countries.

indicators that influence gender outcomes and their relationship with the evolving norms and attitudes. At the macro level, this includes markets and the types of opportunities they generate (Lopez Acevedo and Robertson, 2016; Mani et al., 2020), large infrastructure investments (Samad and Zhang, 2016), and formal institutions, such as laws (Gonzales et al. 2015). At the micro level, the literature points to several supply-side factors, including lifecycle events such as educational attainment, age of marriage, and age of first birth (Parsons et al., 2015). Another important gender outcome is women's agency within the household (Kabeer, 1999; Afridi, et al., 2018; Klasen and Pieters, 2015; Rahman and Islam, 2013). Agency can manifest in decisions about economic participation through women's role in decision-making within the household, realization of desired fertility, timing of first birth after marriage, and intimate partner violence (IPV) experience (Jayachandran, 2020; Kabeer, 1999; The World Bank, 2012).

Despite the wide recognition of social norms as an important determinant of gender outcomes, the evolution of these norms has not been adequately examined or measured. While norms around various dimensions of gender have been explored in isolation in specific geographical contexts,³ the literature is still scant, relying generally on available proxy measures of norms, especially at the regional level. This is mainly due to the lack of available data on norms and normative shifts. Consequently, adequate insights are lacking on how gender norms - even when measured through proxies - have evolved and interacted with these gender outcomes over time.

This paper attempts to look at this relationship across the South Asia region, using available proxies for social norms measurement. We try to understand the persistence of gender inequality in the region by exploring trends in gender outcomes and related attitude variables. Using large-scale, cross-country data over multiple time periods, we provide a long-term, regional view of these trends. Using a cohort analysis approach, we unpack what has changed and what has remained stagnant. This allows us to assess gaps in measurement to inform future regional data-collection efforts and gender-related policies.

Our analysis documents four stylized facts on gender attitudes and gender outcomes in South Asia. *First*, South Asian women born across half a century have experienced little progress, or even regression, in terms of a series of norms-sensitive outcomes, such as labor force participation, marriage age, agency, IPV, and even the preference for the offspring's gender; the only exception has been education. *Second*, economic development had almost no impact on progress. This comes in contrast to what would be expected after decades of strong economic growth in the region. As countries develop, these gender disparities should decrease, but this is not the case. In fact, the stagnation of gender outcomes is quite widespread and applies to women living in urban areas, who are educated, and have higher incomes. *Third*, gender attitudes – often conservative – have not changed or have become even more conservative for men and women born across that same period. These gender attitudes involve views on a woman's right to a job, higher education, contributing to household income, and childbearing. This extends even

³ See for example Pande et al. (2019), De Hoop et al (2020), Dhar et al. (2018), Buchmann et al (2021) among others.

to acceptance of violence, with a slightly increasing trend in justification of IPV. While attitudes are incomplete and noisy proxies for social norms, this stable trend in conservative attitudes is indicative of the persistence of regressive gender norms in the region. *Fourth*, a negative relationship exists between these conservative gender attitudes and their respective gender outcomes. Although this is not a causal relationship, their interdependence is important to note, given the difficulty in explaining the lack of progress in gender outcomes in the region.

The remainder of the paper is organized as follows. Section 2 discusses the related literature on social norms and women's outcomes focusing on South Asia. Section 3 describes the secondary data sources used to explore these trends in the region, while Section 4 outlines the methods used to analyze them. In Section 5, we present the four stylized facts and discuss their implications. Finally, Section 6 concludes.

2. Literature Review

Women's economic participation may be influenced by several factors operating at different levels -from the macro to the individual. While there are both demand and supply-side factors that may predict and determine women's labor force participation and employment outcomes, we focus primarily on barriers on the supply-side, especially those that interact strongly with social norms to influence FLFP.⁴

Many studies argue that gender norms are behind the low levels of women's economic participation (Heintz, Kabeer, and Mahmud, 2017; Bridges, Lawson, and Begum, 2011; Luci, Jütting, and Morrisson, 2012, Blau et al., 2013; Fernandez 2013, Fernandez and Fogli, 2009, Giuliano, 2017).⁵ In some South Asian countries, economic growth has reshaped long-standing norms, as in Bangladesh, where women's employment and mobility in cities have risen due to the growth of the garment sector (Heath and Mobarak, 2015). Nevertheless, many norms remain unchanged or have regressed along with this progress; for example, child marriage remains a widespread practice in Bangladesh despite legal frameworks against it (Male and Wodon, 2017). Advancement in some areas and lack of progress in others illustrate the complex links between norms, gender disparities, and economic development.

While studies in the region are relatively small-scale and country-specific, the literature does converge on social norms being one of the key drivers of low FLFP in the region. In India, Deshpande and Kabeer (2021) find that detrimental social norms that reinforce expectations of women being primarily responsible for household chores lower their probability of employment. Analysis of national household survey data in Bangladesh reveals a strong correlation between a conservative outlook (as indicated by wearing a *burqa*

⁴ For a discussion on demand-side factors see for example, for the case of India, Deshpande and Singh (2021), Klasen and Pieters (2015), Chatterjee et al. (2015), Mehrotra and Parida (2017).

⁵ The reverse is also true, female labor force participation and employment has a transformative potential on gender norms (Seguino 2007).

or veil) and a lower probability of female employment (Ahmed & Sen, 2018). Another study in Madhya Pradesh finds that men's perceptions about community norms against FLFP are predictive of their spouse's employment status, suggesting that husbands, and their concern for their own reputation, may act as a conduit for social norms to affect women's labor force participation (Bernhardt et al., 2018). Men's own support for FLFP has also been found to be more predictive of women's labor force participation in their household in Pakistan than women's own opinions (Amir et al., 2018).

Social norms also influence FLFP via other micro level indicators that are associated with women's employment. Education is frequently cited as one of the strongest determinants of FLFP (Heath and Jayachandran, 2017). However, cultural and social norms can affect both decisions regarding girls' education and its ability to influence employment outcomes of women. For example, in Nepal, Vogel and Korinek (2012) find that households are more willing to invest in boys' than girls' education based on norms about their role in society. Another study in Pakistan (Sawada and Lokshin, 2009) finds strong supply-side constraints when it comes to school due to low demand for primary schooling for girls in the villages studied, which seems to come from views about their roles in the future. In Sri Lanka, Malhotra and DeGraff (1997), as well as Gunatilaka (2013), found that the labor market behavior of educated young women is shaped by family expectations about their role as daughters in the household, cultural differences in the acceptability of young women working, marital status, and more.

Women's employment outcomes are also closely linked to key lifecycle events such as the age of marriage and the age of first birth, which are frequently and systematically reported as barriers to employment in the literature. Early marriage -a practice that strongly depends on collective arrangements and preferences derived from social norms (Greene and Stiefvater, 2019), can limit women's access to education (Delprato et al., 2015, Field and Ambrus, 2008), limiting future employment opportunities, and lead to early childbearing, which further restricts their ability to participate in employment (Parsons et al., 2015). Similarly, spousal age gaps that normally accompany early marriage, education gaps, and others have been associated with different outcomes for women.⁶ Across the world, entrenched gender norms around women's role within the household create expectations for women to be responsible for household chores and child-rearing, often irrespective of their employment status (Bittman et al., 2003; Sayer, 2005). In South Asia, where early marriage, arranged marriage, within-kin marriage, large spousal age gaps, and other practices are still prevalent, women face additional normative pressures once married. In some cases, women are expected to have children soon after getting married to prove their value (Scott et al., 2021), for example, by birthing sons (Mitra 2014, Javed and Mughal 2019). Adding to marriage and childbearing, the added expectations around domestic responsibilities women face, and the low availability of childcare options, women in the South Asia region often face insurmountable barriers in pursuing employment due to conflicting demands on their time after marriage (Kantor, 2009). For example, a cohort analysis of barriers to FLFP in Pakistan finds that household and childcare

⁶ For a discussion of marriage markets in developing countries see Anukriti and Das Gupta (2017).

responsibilities are frequently attributed as a reason for women's absence from the labor force. This trend has remained mostly unchanged in the 15-year period since 1999 (Amir et al., 2018).

Women's ability and voice in decision-making within the household, and the social norms, such as expected gender roles, that regulate it, have implications beyond childbearing. These include women's mobility (Jejeebhoy, and Sathar, 2001, Kantor 2002) when norms bound women to limited access to means of transport, or limited ability to leave their homes; their ability to build their capabilities and access economic opportunities (Afridi, et al., 2018; Rahman and Islam 2013; Kabeer, 1999), and their experience of IPV when participating in the labor market or earning an income (Krishnan et al. 2010; Weitzman 2014; Raj et al. 2018).

3. Data

To explore the role and evolution of social norms in women's outcomes in South Asia, we searched for sources of data on both gender outcomes and their related attitude indicators that were available for more than a single period. While most countries in South Asia have several waves of comprehensive household surveys, the combination of outcome and attitude variables is not common in any single survey. Surveys were mapped based on these criteria, and several potential secondary data sources were identified.⁷ In our analysis, we use nationally representative data from the Demographic and Health Survey (DHS) and the World Value Survey (WVS) surveys. Among the secondary data sources considered, DHS provided the most comprehensive combination of gender-relevant outcome variables across all countries and time periods. However, one limitation of the DHS sample is that it is restricted to women of childbearing age (and in some countries, it covers only women who have married or live in a consensual union). WVS, though not available for all countries in the region, was selected due to the availability of gender attitude variables that could serve as a proxy for relevant norms (see Table A1 in the Annex for more details).

Following the survey identification, we proceeded to review the indicators in the identified surveys that were related to norms and FLFP. This was done in an iterative process, similar to the one Malhotra, Shuler and Boender (2002) follow for identifying empowerment indicators. Building on the literature on agency and empowerment, and publications on social and gender norms, we identified a set of indicators and variables repeatedly appearing in the literature as norms-related indicators.⁸ We then looked at how

⁷ This included the Demographic and Health Survey (DHS), World Values Survey (WVS), Multiple Indicator Cluster Surveys (MICS), Gallup Poll, Gender and Adolescence: Global Evidence (GAGE) (see Table A1 in the Annex for more detail on these data sources). Upon careful review, the latter three were dropped due to limited data availability (GAGE) and duplication of variables already available in the DHS and WVS surveys (MICS and Gallup).

⁸ For the review we assume social and gender norms to be conditional preference for following behavioral rules based on expectations of other's approval and/or sanctions for conformity or transgression of that rule (Bicchieri, 2006); that are embedded in formal and informal institutions, as well as individuals' minds, and specifically define

these specific variables from these specific surveys had been used in the literature (i.e., whether as an outcome or as explanatory variables, or as indicative of social norms). We were able to detect that for a given topic, data were used as indicative of a presence of social norms when the indicators referred to were closer to beliefs or opinions (for example, acceptance of wife-beating, intensity of preference for sons), and as an outcome when reporting occurrence or frequency of a behavior (for example, incidence of IPV, fertility). We found many indicators being used both to refer to dimensions of women's empowerment or agency and to social norms. We then proceeded to sort indicators from the closest proxy of a possible social norm (i.e., beliefs and normative explanations for behaviors), to the ones that reported individual-level outcomes that appear to be the most independent from a possible gender norm. We then identified which indicators were available across countries and survey rounds. The final classification of indicators labels them as either 'gender norm-influenced outcomes' or 'gender-normative attitudes'. Most of the first set of variables come from the DHS data, while the latter is mainly from the WVS data.

Since our primary gender outcome of interest is employment status, that variable is included, followed by education (years of education), which impacts gender outcomes across multiple domains. Next, we look at key hypothesized determinants of labor force participation around marriage and children (age of marriage and age at first birth). The next set of variables relate to intrahousehold power and negotiation-agency (role in household decision-making), IPV (incidence and acceptance), age and education gap with spouse, difference between desired fertility and realized fertility, time between marriage and age at first birth, and son preference. The literature has identified these variables as strongly influenced by social norms. Clearly, some variables have a more direct link with social norms, such as the age of marriage and IPV, while others, such as educational achievements, are determined by multiple factors, and their links with social norms may be less direct. Lastly, we look at a list of subjective attitudes around gender that are expected to have a strong correlation with underlying gender norms: gender attitudes towards education, economic empowerment, IPV, and fertility. While attitudinal data remains an imperfect and likely incomplete proxy for underlying social norms, cross-country data on influential social norms are not available. Table 1 summarizes these indicators across the different domains.

4. Methods

Pseudo-panel from repeated cross-sections

Using repeated cross-sections from the Demographic and Health Surveys and the World Value Surveys, we create pseudo panels, where individuals from specific birth cohorts are followed as they age. Using

what is acceptable and appropriate as an action for women and men in a given group or society (Cislaghi and Heise, 2020).

these pseudo panels allows us to compare relevant outcomes for generations born more than 50 years apart.

Consider, for example, Table 2, which presents data on women's employment rate for the pseudo panel created using eight cross-section surveys for Bangladesh. The first cross-section is from the DHS of 1993, and then seven more surveys provide data every three or four years, covering the period up to 2017.⁹ Each cell of Table 2 contains two pieces of information: a) the size of a group, i.e., how many people were born in a certain period and observed at a certain age range, and b) the share of women employed in that group. Reading from top to bottom along the columns, the table shows how the employment rate for a specific cohort changes as that cohort ages, thus providing an estimate of the age effect for each cohort. Reading from left to right along the rows, the table shows the employment rates for different cohorts observed at the same age, thus revealing the cohort effect. The bottom row of the table is the weighted average of the 'lifetime' employment rate for all the cohorts of Bangladeshi women that we observe in the pseudo-panel. And the rightmost column illustrates the weighted average employment rate at each age across all cohorts.

There are two important issues to be noted. The first is that the size 'N' for some cells in the table is relatively small. This means that the employment shares (or any other relevant outcome variable) for these cells are estimated on a restricted number of observations, and they will be less precise (Verbeek and Nijman, 1992). The second issue is that the full lifecycle – or at least the period from age 15 to 49 – is observed only for some cohorts, those born between the 1960s and 1980s, in the middle of the table. This means that the lifetime employment rate (the bottom row of the table) is biased at the extreme ends of the table. It overrepresents older people at the left end (for the 1940s cohorts) and overrepresents younger people at the right end (for the 1990s cohorts). This is because the earliest surveys for the DHS are in the 1990s, and so we can observe people who were born in the 1940s only when they are about 50 years old, but we have no information about them when they were younger because we do not have surveys fielded before the 1990s. Conversely, since the most recent DHS surveys were collecting data around 2015, we can observe cohorts who were born in the 1990s only when they are about 25 years old or younger, but not when they become older. A similar bias affects the weighted average for the rightmost column of the table. The employment rates for the young ages are overrepresenting the cohorts born more recently, while those for the older ages overrepresent cohorts born in earlier years.

Two types of variables: With and without age profiles

The first issue means that the estimates for the oldest and youngest cohorts (and ages) should be taken with a grain of salt. In fact, when summarizing the long-term evolution of women's economic engagement

⁹ See table A2 in the annex for details about the availability of DHS and WVS for the countries covered in this study.

and other outcomes, we drop some of the earliest and latest cohorts, restricting our analysis to the cohorts born between 1950 and 1990 (see Table 3 footnote for details).

The second issue is dealt with differently for different types of outcomes. Outcomes such as the age at first marriage, or the years of education, do not change after a certain age. In fact, all variables relating to a specific event that happens only once, or at least that happens before a certain age, do not have an ‘age profile’ and therefore the mentioned bias does not affect the time trend observed across cohorts, even if the cohorts are observed at different ages. However, employment, agency and IPV do have age profiles and thus, changes across cohorts need to be assessed when cohorts are of the same age.¹⁰

Moreover, the level of a variable in these data is also determined by the year (or period) effect. Variables such as employment may change because in a specific *year* the economy experiences a shock that affects everyone, no matter their age or the cohort they belong to. A more precise way to estimate the long-term trend across cohorts is by applying an econometric decomposition.

Econometric methods for Age-Period-Cohort decomposition

This decomposition of employment rate (or any outcome for that matter) into age, year (or period) and cohort (year of birth) effects can be formulated using a set of dummy variables as follows

$$y = \sum_a \alpha_a Age^a + \sum_p \pi_p Period^p + \sum_c \kappa_c Yob^c + \epsilon$$

where Age^a is a dummy variable that takes value 1 for those aged a , and 0 otherwise; $Period^p$ is a dummy variable that takes value 1 for those interviewed at year/period p , and 0 otherwise; and Yob^c is a dummy variable that takes value 1 for those born in c , and 0 otherwise. This equation suffers from two identification problems: each set of dummies sum to one, and there is an exact linear relationship between age, period and cohort. While the first problem can easily be addressed by dropping the first dummy variable from each set, the second problem remains, making identification of all these effects impossible. Thus, there is no one solution to this problem, rather several different approaches to address this so-called age-period-cohort identification problem.

The popularity of this type of analysis, along with the unsolvable problem of identification gave rise to a large literature in many disciplines, such as statistics, epidemiology, and economics, using a wide range of different approaches. All of them making different identifying assumptions, therefore each having its limitations and popularity in different disciplines. In this analysis, we use five different approaches, which we name as follows: Prime Working Age (PWA), period restriction (HHDP), Intrinsic Estimator (IE), Maximum Entropy (ME), and Hierarchical Age-Period-Cohort (HAPC) (Browning et al., 2012; Deaton and Paxson, 1994; Fu, 2000; Hanoch and Honig, 1985; Nientker and Alessie, 2019; Yang et al., 2004; Yang and

¹⁰ See Annex 6 for an illustration of this issue for the two types of outcomes.

Land, 2006).¹¹ We apply all these five models in the data from Bangladesh and Nepal, for which we have an adequate number of cross-sectional surveys to conduct such analysis.

Up to this point, the discussion focused on outcome variables. But this paper examines also social norms or, rather, attitudes variables towards gender roles and women’s position in society. In the case of norms variables, it may be more difficult to establish whether they have or not a life cycle. The sociology literature and some economic literature view that what happens in the formative years tends to leave permanent marks (Giuliano and Spilimbergo, 2014). Others found that life experiences, which are different across cohorts, are stronger predictors of gender roles attitudes than the age of individuals (Lynott and McCandless 2000). If these are valid conclusions, it means that attitudes will not change as the cohorts age.

Heterogeneity analysis

While the described methods so far relate to the ‘average’ woman in the countries of the region, there is potentially quite a bit of dispersion around this average, and to capture this heterogeneity we analyze separately different groups of women. The groups are formed according to the level of education, wealth quintiles, and rural versus urban location. This heterogeneity analysis is based on the following regression specification:

$$\text{Outcome}_{i,r,y} = \sum_{q=2}^5 \varphi_q W_{iry} Yob_{i,r,y} + \beta_1 Yob_{i,r,y} * U_{i,r,y} + \beta_2 Yob_{i,r,y} * E_{i,r,y} + \sum_{q=2}^5 \theta_q W_{iry} + \beta_3 U_{i,r,y} + \beta_4 E_{i,r,y} + \gamma_y + \rho_r + \varepsilon_{i,r,y}$$

Where ‘Outcome’, the dependent variable, refers to the series of norms-sensitive outcomes listed in Table 1; *Yob* is the year of birth and is a continuous variable ranging between early 1940s to late 1990s, *W* is wealth group (in quintiles), *U* is a dummy indicating urban location, and *E* a dummy variable representing higher education level (secondary or tertiary); and γ and ρ are year of birth and region fixed effects; and ‘*i*’, ‘*r*’ and ‘*y*’ are indexes for the individual, the region and the year of birth.

The focus is on the marginal effects of education, location, and wealth. More precisely, for example in the case of wealth ‘*W*’ the marginal effect for the outcome variable ‘Age at first marriage’ is defined as:

$$\frac{\partial \text{1st Marriage}}{\partial W_q} = \varphi_q Yob + \theta_q$$

Likewise, one can estimate the marginal effects of the other two independent variables. This analysis allows to identify whether the trends across cohorts are different for women who are more educated, live in urban areas, or are richer.

¹¹ See Annex 7 for a detailed discussion on each of these models.

The results of applying these methods are described in the next section which organizes them around the four stylized facts mentioned at the outset. In some cases, the results emphasize the long-term changes across cohorts for all variables as if none of them had age effects, as this allows to observe the longest time span. In other cases, the results present more precise cohort effects using simple age and cohort decompositions. For Bangladesh and Nepal, which have a sufficient number of repeated cross-sections, the results of more sophisticated econometric decompositions are discussed.

5. Results

Stylized fact 1: Apart from education, norms-sensitive outcomes – such as economic participation, marriage age, agency, IPV – for South Asian women born across half a century remained stagnant and, in some cases, regressed.

The main result from analyzing a large set of norms-sensitive outcomes for women is that their improvement has been mostly elusive. We assessed outcomes in various domains and across cohorts spanning half a century, as we start our analysis for generations of women born in the 1940s. The lack of progress on some indicators during such a long time, and especially during the more recent decades of strong economic growth, is notable. The result of our analysis is summarized in Table 3 for all six South Asian countries considered in the study.¹² The norms-sensitive variables, whose general trends are described in the table, can be grouped, as noted in Table 1, in three broad categories: a) employment and education, b) marriage and children, and c) intrahousehold power/negotiation.

Table 3 summarizes results that are shown in more detail in Figure 2 to Figure 8 in the following pages. These figures show the time evolution of the outcome variables – or, more precisely, how these variables have changed for the *average* women across cohorts – while Table 3 shows the decadal average change in these variables comparing cohorts born in 1950 to cohorts born 40 years later, in 1990. To provide a reference point, Table 3 also reports the value for the different variables calculated for the full population, not just a specific cohort, from the most recent survey. An example is helpful here. Consider women's employment in Bangladesh, in the top two rows of Table 3. The percentage of women working in Bangladesh in 2017/18 was 48 percent, as shown in the first line of the table. The average employment rate for women born in the 1950s was about 22.8 percent and this increased to 29.3 percent for women born in the 1990s. The cumulative change between these two cohorts is 6.5 percentage points, and the average decadal change is thus 1.625 which in the table is rounded to 2 percentage points. In short,

¹² The 6 countries correspond to a subset of the 8 countries included in the World Bank-defined South Asia region: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka.

employment for women in Bangladesh increased on average just 2 percentage points during each of the decades that separate the generations of women born in the 1950s from those born in the 1990s. Decadal changes for the other variables are calculated in the same way.

Table 3 offers a bird's-eye view of the recent 40 plus years evolution of norm-sensitive outcomes for women in the South Asia region. To facilitate the interpretation of the evolution, consider the color of the decadal changes rather than their sign. Red means that there has been a worsening trend, such as the reductions of employment rates for women in Afghanistan, India, Maldives, and Nepal in the first row of the table (this independent of starting or ending levels, which for Nepal are high). Dark orange signals that there has been neither progress nor deterioration but, given the low levels of these variables in the region, dark orange has a negative connotation and should be interpreted as stagnation. Finally, green indicates progress and, as mentioned above, this is recorded only in the case of education, with very few exceptions. Thus, overall, the bird's-eye 'color' view emphasizes lack of progress and, in some cases, even deterioration.

In more detail, and starting from the first group of variables, employment and education, Bangladesh and Pakistan are the only cases where there are decadal improvements of women's employment while, for all the other countries, it shrunk. Changes in education are expressed in number of additional months of education accumulated during each decade. This is the only variable registering improvements, ranging between 6 months and 3.3 years each decade.

Consider next the second group of variables, marriage and children. For marriage age and age at first birth, changes are measured in number of months to be added, or in some cases subtracted, for each decade to the average age at which women marry the first time and to the average age women gave birth to their first child. Son preference is the percentage points to be subtracted for each decade from the percent of women who prefer more sons. Almost no improvement is recorded for these variables, and in some cases – age at marriage and at first birth in Afghanistan – the situation worsened.

For the last group, intrahousehold power/negotiation, changes are expressed as percentage points (for agency and experience or justification of IPV), months (for the spousal difference in age or education) or number (for fertility). And again, apart from spousal difference in age and education in Bangladesh, there has been no improvement in this group of outcomes.

Figure 2, Figure 3, and Figure 4 depict the detailed trends across all cohorts for all 12 norm-sensitive outcomes, and the next subsections provide a discussion of these trends.

Employment and education

Low female labor force participation is a crucial concern for the South Asia region both in terms of its implications for gender equality and for overall economic growth. In 2019, women's labor force participation in the region stood at 25 percent while for men it was 80.5 percent (WDI). Against a background of strong economic growth and, as discussed further below, increased levels of education, economic participation has not changed significantly in the region among women born across over 50 years. Figure 2 (left panel) shows that women born in recent years are *not* participating in the labor market significantly more than women of older generations. In fact, for Nepal, India, and Pakistan, there has been some reduction in the share of working women among cohorts born more recently. For a cohort born in the early 1970s, the share of working women was 36%, 77% and 28% in India, Nepal and Pakistan, respectively. For cohorts born in the 1990s, these shares shrink significantly by 13, 23, and 10 percentage points in these three countries. Bangladesh appears to be a slight exception as women born in recent years witness an increase in employment compared to the oldest generations, but even for the most recent cohort this share, at 23.5%, remains at a quite low level. As documented in Figure 2, this persistently low share of employment places South Asia off the empirical regularity of the "U" curve linking female employment and level of development.

Albeit Nepal sits as an exception for the region with high levels of FLFP, it appears to conform with the U shape downward slope of increased GDP and possible reduction of FLFP due to processes such as agricultural substitution, availability of old age pensions and increased education levels and trajectories for young people associated with higher levels of economic development.¹³

As discussed in the methods section, the comparison of employment shares across these cohorts does not provide an accurate picture of the long-term trend as mainly older women are represented in the 1940s cohorts, while mainly younger ones are found in the 1990s cohorts. Comparing different cohorts at the same age eliminates this age composition bias. This more accurate comparison is graphically shown in Figure 5. For the case of Nepal, Figure 5 shows the same data used in Figure 2 but organized differently. In Figure 5, the dots represent the shares of working women calculated for each cohort in each of the

¹³ See Besamusca et al (2015) for a cross-country comparison and discussion.

years in which a DHS survey is available. The lines connect the dots that belong to the same cohorts as they age. For easier interpretation, we group cohorts from different decades by color.

The typical inverted ‘U’ life cycle profile for employment, with the middle part of the life cycle with the highest participation, is clearly shown in Figure 5. Zooming in on the cohort of women who were born in 1970-74 (middle dark blue line in the figure), it appears that about 70 percent of these women were working at age 20-24, then this percentage increases to 80 percent when they are 25–35-year-old, and finally it declines to below 70 percent when they reach 45 years.¹⁴ Figure 5 also highlights the cohort effect, namely that lines of different cohorts, when compared at the same age, display different levels of participation in the labor market. The darker shaded lines plotting labor participation for more recent cohorts lie mostly below the lighter shaded lines of their predecessors, confirming the declining trend in participation found in Figure 2 (left panel) even when the age composition is controlled for. The vertical distances between the lines of Figure 5 can be explicitly plotted as the cohort effect, and this is done in Figure 6 for Nepal and other countries in the region.¹⁵ In this figure, the lines connect different cohorts observed at the same age.

In the case of Nepal, the left panel of Figure 6 shows cohorts born more recently have lower participation in the labor market at all ages. In the cases of India and Pakistan, the recent decreasing participation is confirmed by the cohort plots shown in the right panel. The exception of Bangladesh with an increase in participation for the recent cohorts is confirmed.¹⁶

Going beyond this graphical examination, we applied the formal econometric Age-Period-Cohort (APC) decompositions discussed in the methods section for two countries where we have a sufficient number of evenly repeated cross section data sets. The results from the models in the APC analysis for Bangladesh and Nepal complement the conclusions from the graphical examination of these effects on female employment. Tables A5 and A6 in the Annex present the parameter estimates and their standard errors

¹⁴ This inverted “U” shape for the age effect, with a peak around 30-40 years of age and lower participation at the other ages, is typical for countries in South Asia as well as in other regions (see Figure A4 in the Annex).

¹⁵ Afghanistan is not included because it has only one round of survey in 2015.

¹⁶ Interestingly, the sharp rise in employment happens at the same time for the two cohorts born most recently, i.e. it seems mainly driven by data from the latest two survey rounds. Thus, what in the figure is labeled as a cohort effect, it may in fact also be a ‘year effect’. As Deaton and Paxson (1994) clearly explain, one has to make some strong assumptions to identify the age, cohort and year effects in these panel data. And clearly the graphical decomposition in Figure 7 and Figure 8 are not fully identifying these three components. For a similar analysis see also Yang, Schulhofer-Wohl and Land (2008); Fosse and Winship (2019); Tunali, Kirdar and Dayioğlu (2019).

for all the five APC models. For ease of reading and comparison across models, we also present the coefficients from these models in Figure 7.

Both countries exhibit the typical life cycle profile for employment. However, we observe a flattening of the employment rate, rather than a decline in the later age groups, but this is probably because of the range of age groups we have in the data. Indeed, the older group is 46-50 for Nepal, and 47-50 for Bangladesh.¹⁷ Nevertheless, we can see that the employment rate for women stops increasing around their late 30s/early 40s, with some evidence of decline, albeit rather slowly. This can be seen by the magnitudes of the dummy variables for age, but also from the positive sign in the linear term and negative sign in the quadratic term.

Looking at the period and cohort effects, we can highlight several conclusions about their patterns. First, period seems to drive employment rate more than cohort. We can see this by the larger variation in the period coefficients compared to the ones of cohort. Moreover, the estimated variances for period are much larger than the estimated variances for cohort in the HAPC model, for both countries. This shows that the evolution of female employment rate is affected more by business cycle effects or wider policy changes which affect everyone equally, rather than by cohort-specific attributes. In Nepal, we can see an overall decline in employment rate. This is driven mostly by time, as can be seen in the decline of period effects since 2001, whereas the cohort effect shows either flat effect or slight decline for cohorts born more recently. In contrast, the period effects in Bangladesh have a cyclical pattern. However, this can be due to the time range in the data, as for Bangladesh we have a larger span of years (30 years) than for Nepal (20 years). In terms of cohort effects, while all models show an initial increase in employment rate with each subsequent cohort, this seems to stabilize for the IE and ME. This is coupled with a similar non-increasing rate for age observed for these two models. This might be driven by the fact that Bangladesh has a much larger variation explained by period, rather than cohort, as pointed out in the estimates of the variances for the random effects in HAPC.

In brief, even when controlling for the age composition and using formal econometric methods to separate age, period, and cohort effects as precisely as possible, the long term *stagnant* or *decreasing* trend for women's employment shown in Table 3 remains a valid summary result for the region.

¹⁷ This is in line with the prime working age assumption we made for the PWA, where we imposed these groups' effect to be equal with their previous ones.

This employment trend is concerning when compared with the progress recorded in women's education. The average years of education has increased significantly over time for most South Asian countries (Figure 2 right panel). For women born before 1965, average educational attainment was low, at less than 4 years for all six countries. The trend begins to rise after 1965, reflecting greater access and investment in education in the region (and across the world, see Barro and Lee, 2013 and Ahmed et al, 2020). Women born after 1990 achieve more than twice the years of education of women born before 1965 in all countries. The highest growth in years of education is seen in the Maldives and the lowest in Afghanistan, where women born after 1990 attain less than 2 additional years of education compared to those born in 1965. Although an upward trend is evident in all countries, the average years of education of women born after the 1980s stagnates in Pakistan. Comparing the years of education of men and women (Figure 4 middle left panel), education inequality is closing in the region, except for Afghanistan. Women are catching up with men in the number of years they spend in school. However, even if women of more recent cohorts have a higher number of years of education than those born in the 1970s or 1980s, they still seem to be below having completed the full cycle of secondary education, and this gap is particularly severe for Pakistan, Nepal and Bangladesh. This is linked to another set of important decisions in the lives of women: marriage and childbearing which is discussed next.

Marriage and children

The fact that the ages at which women first marry or have their first child remain overall unchanged for more than 50 years covered in this study is remarkable. Women born in 1950 in Bangladesh were getting married at about 13 years old, and those born in the 1990s were marrying at 16. Bangladeshi women's marriage age increases by less than 9 *months* per decade.

In the cases of Pakistan and India the marriage age started a little higher than in Bangladesh, but its pace of change has also been glacially slow: slightly more than 1 month per decade in Pakistan and about 5 months in India. Even less progress is recorded for the age at first birth shown in the top right panel of Figure 3: 8.6 months per decade for Bangladesh, -14 months for Pakistan, a decrease in this country, and 7 months for India. Two other countries in the region are at the extremes of these stagnant trends: Afghanistan for which both age at first marriage and at first birth go down, and Maldives where some improvement is recorded.

In South Asia, women give birth to their first child a few years after getting married. Going through childbirth at a young age has both economic, psychological, and health implication for women. Early

childbirth may truncate the continuation of a woman's education and hence limit her labor market opportunities. The gap (in months) between marriage and first born and its evolution for women born in different years is shown in Figure 3, bottom left panel. This graph combines the trends in the two top panels of the figure. The gap is decreasing as women in younger cohorts are marrying slightly later but giving birth at the same age or slightly earlier than women in older cohorts.

Parental son preference is prevalent in South Asia and has been widely documented for India.¹⁸ The DHS ask women about how many children they would choose to have in their whole life if they could go back to the time before they had children. A following question asked for the ideal number of sons, daughters, and ideal number of either sex. Son preference (as a reported choice and not the outcome) is estimated as the share of women who reported a higher number for the ideal number of sons than ideal number of daughters. The long-term trend of son preference across different birth years is shown in the bottom right panel of Figure 3. This graph paints a picture where son preference is decreasing in Bangladesh, India, and Nepal. While over 30 to 60 percent of women in these countries born in the late 1940s to early 1950s prefer to have more sons, less than 20 percent born in mid-1990s have this preference. For the Maldives and Pakistan, the trend is stagnant.

Intrahousehold power/negotiation

Gender norms are intrinsically connected with roles and expectations for women and men that are played out inside the household and particularly in spousal power relations. These relations (and norms) are connected to issues such as women's agency (Donald et al. 2020; Bussolo et al. 2021), which in turn responds to changes such as spousal gaps in education and age, differences between partners in terms of their desired and realized fertility, and experience and justification of IPV. As noted by Bernhardt et al. (2021), when men and women bear different costs of violating norms, intra-household bargaining will mediate the role that norms play in governing female labor supply.

Agency, according to Kabeer (1999), is the "ability to define one's goals and act on them". One of the ways in which researchers have measured agency is by considering the process of decision making inside households. The DHS collects data on self-reported participation in this process. In more detail, women

¹⁸ See Pande and Astone 2007 and Mitra, 2014 for India, Hafeez and Quintana-Domeque 2018, for Pakistan, Asadulla et al. 2021 for Bangladesh, Hattlebakk 2017 for Nepal.

(and men) are asked whether they have a say in decisions about different issues, from large household expenses to personal health care, and mobility.¹⁹

The top left graph in Figure 4 plots, for each birth cohort, the share of women who have a say in at least one of the three household decisions. The remaining group is thus that of women who have no say at all. Apart from Maldives, women born in recent years have less agency than women born in early years. This is especially the case for women in Afghanistan, Nepal, and Pakistan. To unpack the trends of this aggregate indicator, the separate trends of the three specific decision are shown in the Annex (Figure A2). In general, we observe near-identical trends of the three separate decisions to that of the aggregate agency shown in Figure 4.

Agency, like employment, has a life-cycle profile, as shown in Figure 8 for Nepal.²⁰ Not surprisingly women's bargaining might increase due to having children, increased wealth, and other age-related factors (Mahmud et al. 2012; After and Chindarkar 2020). It is thus necessary to compare cohorts at the same age to be able to gauge more precisely the cohort effect. Apart from Bangladesh (Figure A5 in the Annex), there is no clear evidence that women of younger generations have higher agency than women of older generations at the same age. While in other countries such as Nepal, there is an initial rise for each cohort which then flattens out as the cohort ages, in Bangladesh (Figure A5 in the Annex) the case is different. Women born in recent cohorts in Bangladesh have more agency, at a particular age, than women born in the preceding years. The gap is however almost negligible.

Agency, and more generally women's empowerment, is influenced by age and education differentials among spouses.²¹ The two middle panels of Figure 4 show these differentials, which are calculated by subtracting the years of schooling and age of a woman from the years of schooling and age of their spouse. In most countries, a positive gender gap in education remains between men and women across time but for more recent cohorts in Bangladesh and Maldives, the gap is negative. The reversing of the gap in Bangladesh is encouraging and may be a consequence of targeted policies for girls' education. The

¹⁹ Questions included here are those referring to who has a say on (i) large household purchases, (ii) woman's health care, and (iii) women's visits to relatives and friends. Possible answers are: (a) respondent alone; (b) respondent and husband/partner jointly; (c) husband/partner alone; (d) someone else; and (e) other. Having a say is defined as choosing answers (a) or (b).

²⁰ The age profiles of agency in Bangladesh and India show that women older than 30 years have higher agency within their households on average than women less than 30 (Figure A4 in the Annex).

²¹ See for example Carmichael, 2011 and Mogford, 2011, Nyssola 2007 for different implications of the age and education gaps among spouses.

difference in years of schooling between husbands and wives in India and Nepal is reducing as well, from around 1 to 3 years for women born before 1980, to less than 1 year for the most recent birth-cohorts. Despite the drastic reduction in the schooling gender-gap, couples in Bangladesh throughout the past five decades have the highest, albeit decreasing, age gaps. Spousal differences in age are important as they have a bearing on women's agency within the marriage and are often indicative of marriage quality (Carmichael, 2011). In the other South Asian countries, spousal age gaps have been mostly stable since the 1970s, going from 6 to 5 years in India and holding steady at 5 and 4 years in Pakistan and Nepal, respectively.

Figure 4 (top right) also shows the long-term trends in fertility as the difference between self-reported desired and realized fertility.²² Apart from India and Afghanistan, the rest of the countries have witnessed a declining difference meaning that women born in later years are more likely to give birth to their ideal number of children. Whether this decline is a result of women using their agency in the household to bargain for their desired number of children or the availability of contraceptives is not investigated in this study.

The last outcome considered in this group is experiencing IPV. Social norms can play a role in the acceptability of violence, and when and why is it justified (Weber et al., 2019; ALIGN 2021). Regarding the incidence of IPV, a set of questions were asked to the women whether they have ever experienced any form of physical and sexual violence by their current or previous partners.²³ The bottom graph in Figure

²² We construct our outcome variable as the difference between actual and ideal number of children for women 40 years and above. The DHS asks women questions on the ideal number of children that she would have liked to have in her whole life, irrespective of the number she already has. Another question asks the total number of children actually born who are living. We arrive at the plotted fertility variable by subtracting the ideal number of children a woman reported at age 40 from the actual number of living children. We focus on 40 years because, at this age, women are less likely to continue childbearing (United Nations Demographic Yearbook 2019, available at: https://unstats.un.org/unsd/demographic-social/products/dyb/dyb_2019).

²³ We coded the IPV experience variable as 1 if a woman has experienced any of these two forms of violence and 0 for no violence. The options included are whether the respondent has ever been either slapped, punched with fist or hit by something harmful; strangled or burnt; threatened with knife/gun or other weapon; had arm twisted or hair pulled; physically forced into unwanted sex; forced into other unwanted sexual acts; physically forced to perform sexual acts respondent did not want to. There is no response for the sexual violence experience for Bangladesh. These data were collected in limited surveys: one survey round for Afghanistan (2015), Bangladesh (2007), Maldives (2016-17), and Pakistan (2017-18) and two survey rounds in India (2005-06 and 2015-16) and Nepal (2011-2016).

4 shows a stagnant trend for IPV experience across all countries. Bangladesh has the highest share of women who experience physical or sexual violence by their husband/partner.²⁴

Stylized fact 2: Urbanization, education, and higher incomes do not seem to be correlated with better outcomes for women.

The results discussed up to this point refer to the average woman in each birth cohort. However, it may be the case that there is dispersion around the average results and that the trends have been different for some groups of women. A recurring theme in debates about gender disparities is that these disparities should decrease, if not disappear, as countries develop. Higher levels of income, education and urbanization usually support the closing of the gaps between women and men. The fact that these gaps remain may indicate that social norms are acting as a barrier to gender equality over and above the usual barriers faced by poorer and less educated, rural women. In fact, things can be more complex as the direction of influence is not unequivocally positive. Education and place of residence can ease the pressures of social expectations or norms to marry young. Education may operate by changing a woman's goals and opportunities away from early marriage. Place of residence may change the nature of social norms that women are exposed to, but it is not clear that in urban areas they encounter norms that are less conservative than those in rural areas. When families migrate from rural to urban areas, as is common in South Asia, the influence of their relevant reference group may diminish if urban areas are more heterogeneous or dispersed. However, this might also work in the opposite direction as cities are considered more "dangerous" for women and hence their "purity" more needing of protection and control. Communities also tend to concentrate in specific neighborhoods and socially segregate themselves even in urban areas, which can further strengthen the influence of social norms. Using the regression approach described in the methods section and by focusing on more affluent, better educated, and urban women within each cohort, this section addresses the questions of whether the trends are different and the gender gap is closing for these groups of women in South Asia.

This heterogeneity analysis for labor market participation shows that women in the top 20 percent of the wealth distribution have enjoyed stronger progress when compared with their poorer counterparts. However, more educated women, or women living in urban areas do not seem to have followed a different path than less educated or rural women. So, this confirms that the stagnant trends and decadal

²⁴ Although IPV prevalence is not static and likely to change over the life cycle, we do not show the age by cohort graphs because the variable has too few data points in the DHS data set to claim any meaningful result.

changes discussed above for the *average* woman indeed affected *most* women and that urbanization and education have not contributed much to boost employment, while rising incomes seem to provide some upward lift. The same conclusion – namely some positive influence of wealth and lesser to no impact of education and place of residence – can be drawn for the heterogeneity analysis of the other norm-sensitive outcomes. The remaining of this sub-section provides additional details.

Figure 9 shows the marginal effect of wealth across cohorts for women’s engagement in the labor market. Within each cohort and holding constant other determinants, the most affluent group of women, which is represented by women in the top quintile of the wealth distribution, has a lower probability than women in the bottom quintile (the reference, or omitted group) of being employed. For Bangladesh, India and Pakistan, the relative difference between richer and poorer women has been decreasing from the early to the recent cohorts. This means that women of the richer group have progressed faster, i.e. they have experienced larger increases in employment rates, than women of the reference group, quintile 1. In fact, quintile 5 has progressed faster than any other quintiles.²⁵ This is shown, in the figure, by the steeper slope of the marginal effect for quintile 5 vis-à-vis quintile 2. The case of Nepal is slightly different. As shown by Figure 2, the employment rates are really high in this country averaging more than 80 percent in earlier cohorts. This means that with rising incomes, employment of women of more recent cohorts has decreased; however, the marginal effect graph shows that the employment for the richer group has not ‘decreased’ faster than that of quintile 2, as the two lines in the graph are almost parallel.

Consider next the groups of more educated and urban women in the following Figure 10. As for the case of wealth, the marginal effects show the impact of belonging to one category – having more education or living in an urban area – vis-à-vis the reference group, while holding other factors constant. Starting with education, it does not seem that having secondary or higher education confers a substantial advantage in the probability of being employed; at best better educated women’s employment probabilities are about 2 percentage points higher than lower educated ones. Then comparing the trend across cohorts, we note that, for the cases of Bangladesh, India, and Pakistan, the premium of education is decreasing, i.e., the differential in probability of being employed between educated and not educated women is smaller in cohorts born more recently. This is probably linked to the expansion of education. Conversely, in Nepal,

²⁵ For clarity the graphs show only quintile 5 (the richest group) and quintile 2 (the second poorest group). Quintiles 3 and 4 are, as expected, for this and all other variables, in between quintiles 5 and 2. The levels for quintile 1, the reference group are normalized to zero for all cohort, so the graph does not show the levels at which the various quintiles are, but just their differences with respect to quintile 1.

more educated women in recent cohorts are doing a little better. The slope of the marginal effect across cohorts for the urban dummy tends to be quite low and for the case of Bangladesh negative, indicating that, at best, there is no differential progress for urban women with respect to rural ones and, in the case of Bangladesh, urban women have fared slightly worse than rural ones.

In terms of the other norms-sensitive outcomes, the trends for more affluent women have been better in all countries for education, marriage age (with India being an exception), first birth age, son preference, spousal difference in age, and for IPV experience (only in India for this last variable). For some of these outcomes, a better trend for richer women means that the marginal effect amounts to a few percentage points. For example, in the case of marriage age for Pakistan, while the difference in the average marriage age of women in all wealth quintiles born from 1940 to 1965 was not statistically different, this difference became significant, in favor of the richer quintiles, for women born afterwards and reached about 2 percentage point difference for the richest and the poorest quintiles.

Better educated women enjoyed progress only in the case of a) the agency outcome variable, in India and Pakistan and marginally in Nepal, b) differentials in spouses' education, and c) experience of IPV, apart the case of Bangladesh. For all other outcomes, educated women and not educated women did not experience different trends. Similarly, more recent cohorts of women in urban areas did not experience stronger progress than women in rural areas in any variables with the exception of spousal differences in education for India and in age in Nepal, and experience of IPV in Nepal.²⁶

Stylized fact 3: Attitudes towards gender roles in South Asia have remained conservative for men and women born across half a century.

In parallel to the outcome variables, we examine the long-term evolution of attitudes towards gender roles and find no progress in the four attitudes studied. Using various waves of the World Values Surveys, we construct pseudo-panels for three countries in the region, Bangladesh, India and Pakistan, and follow the evolution of attitudes from cohorts born in the late 1940s to cohorts born in the late 1990s. Like Table 3, Table 4 offers a bird's-eye view of the decadal changes of key beliefs, while Figure 11 shows the detailed trends.

The share of people agreeing with conservative attitudes – such as the priority for becoming breadwinners should be given to men, or women's preeminent goal is maternity – are remarkably high in the most

²⁶ Detailed graphs and comments for all these norms-sensitive outcomes are available in Annex Figures A7 to A26.

recent surveys. Between 70 to more than 90 percent of the population agree or strongly agree that men have precedence over women in obtaining jobs when these are scarce and, at best, less than 30 percent agree or strongly agree that both spouses should contribute to the household income. At the same time, 85 to almost 100 percent view maternity as key to a woman's fulfillment. The most progressive position is that towards education where the population is about 50-50 divided between agreeing and disagreeing that university education is more important for boys than for girls. More importantly, the table highlights that these large majorities holding conservative views have been either stable for decades or even increased in some cases. Referring again to the same color codes of Table 3 – where red means worsening, dark orange stagnation and green improvements – Table 4 has mainly red numbers, and no green number.

Right to a job

Discrimination by gender in employment contributes to low female labor force participation (Özbilgin et al., 2012). The attitudes in a society over who gets a job may influence women's supply of labor. The top left panel of Figure 11 shows that in Bangladesh, India, and Pakistan, the majority of respondents agree that when jobs are scarce, men have more rights to a job than women. In all three countries, more than half of the respondents agree with this attitude. Examining the trend across cohorts, this conservative attitude has increased among more recent cohorts. For instance, in Pakistan, the share of respondents who believe that men have more right to jobs averaged about 70 percent for cohorts born until 1970. This share increased to over 80 percent for cohorts born from the late 1980s. Similar increase can be seen in Bangladesh and, though less obvious, in India.

University education

While the years of education has increased for South Asian women, the conservative attitude towards girls' education is not reducing as one would expect (Figure 11, top right panel). However, the attitude about university education being more important for boys than for girls, although conservative, is relatively less so among respondents, compared to the other attitudes examined in this paper. About 30 to 60 percent of respondents in the three countries believe that university education is more important for boys than for girls. Comparing the trend across cohorts, the share had reduced slightly for the younger cohorts in Bangladesh, remained constant across cohorts for India, and has a U-shape for Pakistan.

Contribution to household income

When women contribute to household income, they are also more likely to contribute to household decision making. Figure 11 (middle left panel) shows that less than half of respondents in Bangladesh, India, and Pakistan agree that women and their spouses should contribute to household income. Across cohorts, this share has reduced in all three countries. This regression is more obvious in Bangladesh and Pakistan where the share of respondents born in the 1940s and 1950s who agree that both partners should contribute to household income is twice the share of respondents born in the 1970s and 1980s.

Having children is key for women's fulfillment

Figure 11 (middle right panel) shows that more than four-fifths of respondents in all countries agree that a woman has to have children to be fulfilled. This share, which is over 90 percent in Bangladesh and India, has remained stagnant across generations of respondents. In India, this share fell by about 10 percentage points for respondents born in 1980 compared to those born in 1941.

Justifying intimate partner violence

Figure 11 (bottom panel) shows an upward trend for some countries for justification of IPV.²⁷ In general, women in Afghanistan are more likely to justify, about 80 percent in all cohorts justify beating. Pakistan and Bangladesh women born after the 1960s are more likely to justify beating than women from earlier generations. IPV justification is not static and likely to change over the life cycle. We show the age profiles for IPV justification of different cohorts in Figure A6 in the Annex. In general, these age profiles for Bangladesh, India, Nepal, and Pakistan do not highlight any clear cohort effect. So, it is difficult to conclude that women of recent cohorts are less likely to justify beating than earlier cohorts at a specific age. Overall, the increasing trend in IPV justification, along with no progress in IPV experience, are worrisome.

Stylized fact 4: A negative relationship links gender outcomes and attitudes: the larger the share of people holding conservative attitudes, the worse the gender outcomes.

Gender norms have received increased attention in recent years by researchers and policy makers, to a large extent, motivated by the search for determinants of the stubbornly low rates of female labor force

²⁷ We coded the IPV justification variable as 1 if a woman responds 'yes' to at least one of the following circumstances/questions and 0 if she responds 'no' to all of them: In what circumstances is a husband hitting his wife justified? a) when she goes out without telling the husband, b) neglects the children, c) argues with him, d) refuses to have sex with him, and e) when she burns the food. Data were collected in one survey round in Afghanistan, two rounds in India, Maldives, and Pakistan and in four rounds in Bangladesh and Nepal.

participation or the lack of progress in closing other gender gaps. While we cannot capture the underlying norms themselves nor establish causality, the following graphs plot the correlation between norms-sensitive outcomes and corresponding attitudes and provide some initial evidence of the strength of the linkages between these two sets of variables.

For all the countries with WVS data (Bangladesh, India and Pakistan), Figure 12 depicts a clear negative association between women's employment rate and the attitude toward precedence of men in obtaining scarce jobs. It is interesting to note that while India and Pakistan have similar slopes, the association in Bangladesh is weaker. This means that even if the share of people supporting the right of men to jobs increases (as it is visible for the more recent cohorts), the share of women working does not decrease by a large amount. Further, despite Bangladesh and Pakistan experiencing large overlaps on the horizontal dimension, such that 70-80 percent of respondents in both countries believe that men have more right to jobs, Bangladesh is placed higher on the vertical axis in terms of the share of women working.

The linkage of educational outcome with the related attitudinal variable is shown in Figure 13. This figure plots the correlation between the share of women having secondary or higher education against the share of respondents who agree that "university is more important for boys than girls" in Bangladesh, India, and Pakistan. We group observations into 5-year birth cohorts with darker shades indicating more recent birth cohorts. In the case of education, the results are mixed. A strong negative association is found only for Bangladesh. In addition, the change in attitudes and education levels is consistent with the passing of time as more recent (darker) cohorts display more progressive views and higher levels of education. The correlation, however, is not present or has the 'wrong' sign in the cases of India and Pakistan. In India, recent (darker) cohorts have higher levels of education even if attitudes towards gender roles with respect to tertiary education do not change. In Pakistan, even if attitudes become less progressive, the share of women receiving higher education increases. The persistence of regressive gender attitudes has, seemingly, not been a binding constraint for women's education outcomes. However, the consequences of static and regressive attitudes may show up in other proximate outcomes to education, like employment.

Financial empowerment can increase the agency of women in the household. Women who contribute financially to household income are more likely to participate in household decision making. The share of women who agree that both spouses should contribute to household income is generally low in all three countries – less than 40 percent, and this share is decreasing with more recent cohorts. As shown in Figure

14, the correlation between the attitude towards shared economic responsibilities and agency seems positive for the cases of India and Pakistan, while no significant association is found for Bangladesh.

The onset of motherhood has been strongly linked to withdrawal of women from the labor force and selection into casual work or more flexible jobs which allow time for childcare. Deep-seated beliefs about women as mothers are evident in Figure 11 (middle right panel), where overwhelmingly, above 80 percent of respondents agree that women need to have children to be fulfilled. This holds across countries and cohorts, ranging from the 1940s -1980s. Correspondingly, the average age of women at their first birth has remained mostly stable, at around 17-18 years in Bangladesh and above 20 years in Pakistan. Figure 15 highlights this by showing how concentrated within a small area are the observations for these two countries. In the case of India, the slight increase of age at first birth is mirrored by a corresponding decline in the share of respondents who agree that women need to have children to be fulfilled.

IPV has generated a great deal of concern among policy makers and is of interest to researchers (Chibber and Krishnan, 2011). In finding solutions to IPV, understanding attitudes towards this violence, its justification especially, is important. Researchers have found a strong positive relationship between IPV experience and justification in several countries in Africa and Asia (Abramsky et al., 2011). Their results are not different from what we find in Afghanistan, India, Maldives, and Pakistan in Figure 16. In these countries, the linear relationship between IPV experience and IPV justification is positive —the higher the share of women that justify beating the higher the shares that are likely to experience beating (and vice versa). However, the slopes of the relationship are almost flat. On the contrary there is a negative relationship between the two variables for Bangladesh and Nepal. An explanation for the opposing relationships may not be available but the clustering of the different cohorts leads us to the conclusion that domestic violence, its justification and incidence, is sticky and warrants effective interventions.

6. Conclusion

This paper explores the evolution of gender-normative attitudes and gender norm-influenced outcomes in South Asia. Using repeated cross-sectional data from nationally representative surveys in the region, we examine the levels, trends, and relationship of these outcomes for women born across half a century. Our results highlight the presence of wide gender disparities and of conservative gender attitudes, which are a proxy for norms. In terms of trends, all gender outcomes relating to employment, marriage and children, and intrahousehold power/negotiation have remained stable or even regressed, with the exception of education. These trends were observed for all women, irrespective of location, education,

and income. A similarly stable, or even negative, trend was observed for gender attitudes relating to these categories.

This persistence of gender disparities and conservative attitudes is particularly remarkable when contrasted with the sustained economic development observed in the last two or more decades in most South Asian countries. Gender equality in the region does not seem to be an automatic byproduct of economic development, indicating that restrictive gender norms are constraining progress in gender outcomes. Stylized fact 4 highlights exactly this. Attitudes are related to gender outcomes, and conservative gender attitudes are linked to worse gender outcomes. However, gender norms are still poorly understood and measured, generally, with inadequate proxies. Attitudes may not always correspond with the norms prevalent in society, and do not adequately indicate the strength of a norm (which can potentially override individual attitudes in influencing behavior). To properly address these normative barriers, future research should be focused to: (i) measure gender norms more systematically, (ii) identify causal links between norms and outcomes, and (iii) inform norm sensitive policies and interventions.

7. References

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Tables and Figures

Table 1: Norm-related variables from DHS surveys by domain (top panel) and WVS attitudes (bottom panel)

Gender norm-influenced outcomes		
	Domain	Measure
Economic empowerment Human Capital	Economic empowerment Human Capital	Labor force participation Years of education*
Marriage and children	Human capital	Age at marriage Age at first birth
Intrahousehold bargaining and agency	Decision making/autonomy Intrahousehold power	Say in HH decisions – mobility, household purchase and health^ Education gap with spouse Age gap with spouse
	Control over own body/aspirations re children	Marriage to first birth interval Son preference (difference in ideal number of boy and girl children) Difference between desired fertility and realized fertility ** IPV experience ^^
Gender norm-influenced attitudes		
	Domain	Measure
Human capital		University is more important for a boy than a girl *
Voice and agency		Both the husband and wife should contribute to household income ^ Justification for IPV ^^
Fertility		A woman has to have children to be fulfilled **
Economic empowerment		When jobs are scarce, men should have more right to a job than women #

The symbols *, ^, **, ^^, and # are used to link gender outcomes variable of the top panel of the table with gender norm-influenced attitudes of the bottom panel. For instance, "*" links years of education to the attitude towards university education for boys vis-à-vis girls.

Table 2: Women employment rates in Bangladesh by cohort and age group

Age group	Statistics	Cohorts													Wgt Ave
		1940-44	1945-49	1950-54	1955-59	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	
15-19	Share (%)							11%	15%	16%	13%	8%	17%	22%	15%
	N							116	1772	1819	2098	1837	3243	683	
20-24	Share (%)						12%	20%	23%	19%	18%	25%	35%		23%
	N						150	2633	2589	3218	3378	5510	2411		
25-29	Share (%)					19%	24%	29%	27%	22%	31%	47%			30%
	N					116	2810	2844	3020	3193	5853	2490			
30-34	Share (%)				30%	28%	34%	30%	26%	36%	54%				35%
	N				107	2052	2289	2673	2591	5221	2470				
35-39	Share (%)			25%	28%	34%	34%	23%	37%	57%					36%
	N			93	1684	1800	2253	2304	4313	2138					
40-44	Share (%)		9%	26%	34%	30%	23%	36%	58%						34%
	N		57	1234	1490	1874	1886	3924	1682						
45-49	Share (%)	7%	19%	25%	25%	22%	37%	56%							32%
	N	75	949	1336	1867	1820	3486	1662							
Weighted average		7%	19%	25%	29%	28%	31%	31%	31%	30%	29%	27%	25%		

Source: DHS surveys for 1993, 1996/97, 1999/20, 2004,2007, 2011, 2014, and 2017. Note: For each age group and birth cohort, i.e. for each 'cell', this table shows the number of (unweighted) observations (N) and the share (as percentages) of women who are employed in Bangladesh. Reading the table along the column provides an approximation to the age effect, i.e., what happens to the employment rate of women from a specific birth cohort as they age. Reading along the rows, the table provides an approximation of the cohort effect, i.e., the differences in the employment rate among cohorts observed at the same age. The last row, "weighted average", represents the employment rate for a specific cohort average along its whole life cycle. The weights from the different surveys as well as the size of the cell are used in the calculation.

Table 3: Summary of findings: some **improvements** but trends have been mostly **stagnant** or **regressive**

Variable	Afghanistan	Bangladesh	India	Maldives	Nepal	Pakistan
Employment (% working)	12%	48%	24%	42%	57%	17%
Decadal change (percentage points)	-2	2	-4	-1	-7	0.3
Education (yrs. of education)	1.2	5.6	6.9	9.5	5.2	4.4
Decadal change (months)	5	15	15	40	17	11
Marriage age (yrs.)	17.9	16	18.3	20.4	17.7	19.4
Decadal change (months)	-6	9	5	15	7	1
Age at first birth (yrs.)	19.3	18	20.3	22.1	19.8	21.3
Decadal change (months)	-7	2	2	8	-1	-4
Son preference (% preferring more boys as ideal)	42%	10%	19%	10%	20%	29%
Decadal change (percentage points)	-2	-7	-4	0.7	-12	-2
Agency (% having say in 1 or more decisions)	64%	88%	84%	97%	73%	61%
Decadal change (percentage points)	-6	-1	-2	-1	-10	-13
Spousal difference in age (yrs.)	5.3	8	4.7	3.6	4.2	4.6
Decadal change (months)	-6	-11	-3	-6	-4	-0.2
Spousal difference in education (yrs.)	2.4	0	1.5	-0.8	2.2	2.1
Decadal change (months)	0.1	-8	-5	-5	-0.4	0.2
Fertility (actual minus ideal # of children)	-0.1	0.8	0.5	-0.2	1	0.4
Decadal change (number)	0.3	-0.6	-0.1	-0.1	-0.1	-0.1
IPV experience (% reporting)	7%	13%*	6%	2%	6%	4%
Decadal change (percentage points)	-0.02	-0.04	-0.1	-1	-3	0.2

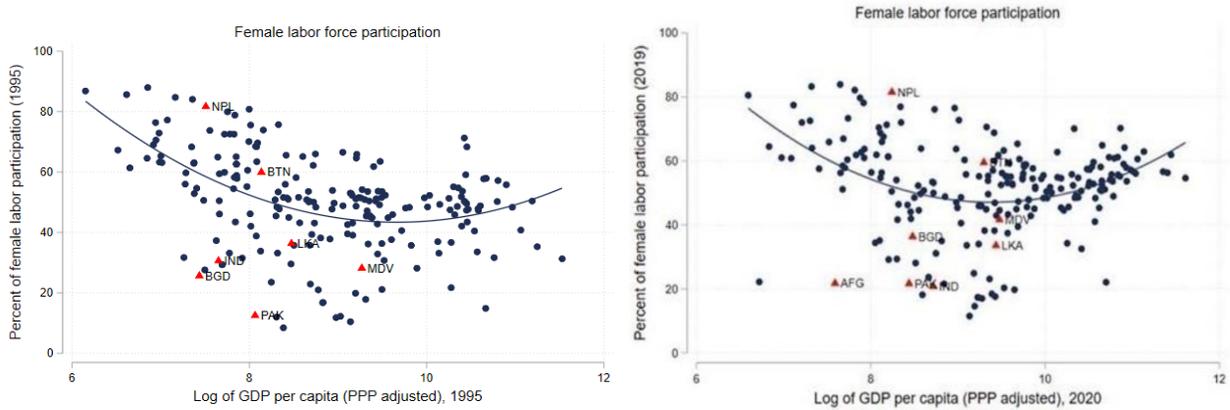
Source: DHS rounds (see, for details, table A2 in the annex). Notes: for each outcome variable, the table reports two rows of numbers. The first row represents the most recent level of the variable, and the second row shows the decadal changes. The levels, in the first rows, are calculated as averages across the full DHS population (i.e. 15 to 50 years old ever married women), and for the most recent survey year; for Afghanistan (AFG) this is the year 2015, for Bangladesh (BGD) is 2017/18, for India (IND) is 2015/16, for Maldives (MDV) is 2016/17, for Nepal (NPL) is 2016/17, and for Pakistan (PAK) is 2017/2018. The * in the cell of IPV for Bangladesh indicates that this value is for 2007, which is the only year for which IPV experience was collected. The decadal changes, in the second row of each variable, are calculated as the difference between two numbers – the average for a recent cohort (mostly women born in 1990) minus the average calculated for an early cohort (mostly women born in 1950) – divided by 4 (the number of decades between 1950 and 1990). Depending on the variable, the decadal change is expressed in percentage points or fraction (months) of a year. The font color of the numbers for the decadal changes, rather than their sign, guides the interpretation of the change. Red means that a specific outcome has worsened in these decades, dark orange means stagnation, and green signals an improvement. There are some exceptions to the birth years used for the calculations of the decadal change. For Afghanistan, for the variable ‘age at first marriage’ the cohorts considered are those of women born in 1970 versus 1990, for fertility outcome, the cohorts are those of 1965 and 1975, for IPV experience, they are 1970 and 1990; and for the remaining variables the cohorts are those of 1965 and 1995. For Maldives, the 1960 and 1990 cohorts are used to calculate the decadal difference in agency (these are also the cohorts used for agency for Bangladesh, India, and Nepal) and IPV justification; the 1960 and 1970 cohorts are used for the decadal change in fertility outcome, the 1970 and 1990 ones for IPV experience; for the remaining variables, the 1960 and 1990 cohorts are used. For Bangladesh, India, Nepal, and Pakistan, 1950 and 1970 are used to calculate the decadal change in fertility outcome, and 1970 and 1990 for IPV justification. For Pakistan, 1970 and 1990 are used to calculate the decadal change in IPV justification.

Table 4: Summary table of cohort trend for attitudes variables (from World Values Surveys)

Variable (percent of men and women who agree)	Afghanistan	Bangladesh	India	Maldives	Nepal	Pakistan
When jobs are scarce, men have more right to a job (%)		83%	69%			92%
Decadal change (percentage points)		5	4			0.5
University edu. more important for boy than for girl (%)		45%	38%			61%
Decadal change (percentage points)		1	-0.2			-2
Both partners/spouses should contribute to hh income (%)		12%	16%			28%
Decadal change (percentage points)		-7	-4			-15
A woman has to have children to be fulfilled (%)		98%	85%			98%
Decadal change (percentage points)		2	-2			2
IPV justification (% justifying)	80%	20%	8%	22%	29%	41%
Decadal change (percentage points)	-2	8	-2	-5	2	9

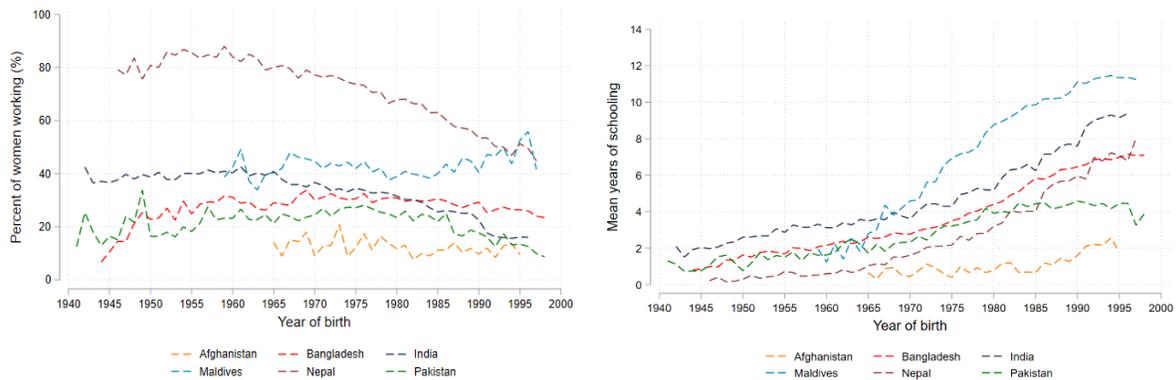
Source: World Value Survey rounds (see table A2 in the annex). Notes: for each question proxying an attitude or belief, the table reports two rows of numbers. The first row represents the most recent level of the variable, and the second row shows the decadal changes. The levels, in the first rows, are calculated as averages across men and women respondents aged 15 to 50 years, and for the most recent survey year; for Bangladesh is 2018 for “jobs for men” and “university education for boys”, and 2002 for “contributions to household income” and “women and children”; for India is 2012 for the first and second variable, and 2001 for the third and fourth variable; and for Pakistan is 2018 for the first and second variables and 2001 for the third and fourth variables. The decadal changes, in the second rows, are calculated as the difference between two numbers – the average for a recent cohort (*mostly* people born in 1990) minus the average calculated for an early cohort (*mostly* people born in 1950) – divided by 4 (the number of decades between 1950 and 1990). The exceptions are as follows: for Bangladesh and India 1950 and 1980 year of births are used to calculate the decadal change for “contributions to household income” and for “women and children”. For Pakistan, 1950 and 1980 years of birth are used to calculate the decadal change for “contributions to household income” while 1955 and 1975 years of birth are used in the case of “women and children”. The color of the numbers for the decadal changes, rather than their sign, guides the interpretation of the change. Red means that a specific outcome has worsened in these decades, brown means stagnation, and green signals an improvement.

Figure 1: The U-shape relationship between FLFP and Economic growth



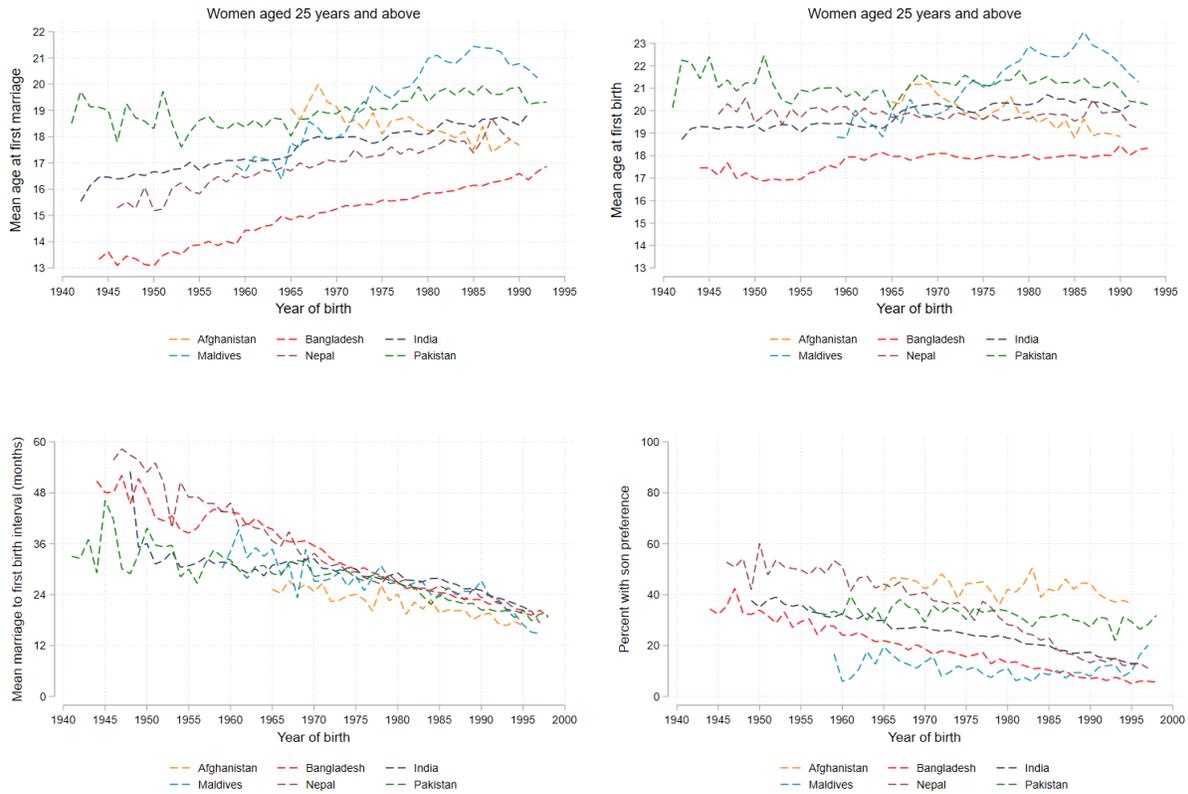
Source: WDI (modeled ILO estimate for FLFP rate). Left graph includes 210 countries and right graph includes 215 countries. Graphs plot the quadratic fit of the two variables. GDP per capita is PPP adjusted at constant 2017 international USD. Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.

Figure 2: Employment and Education – Trends in women's employment (left) and years in education (right)



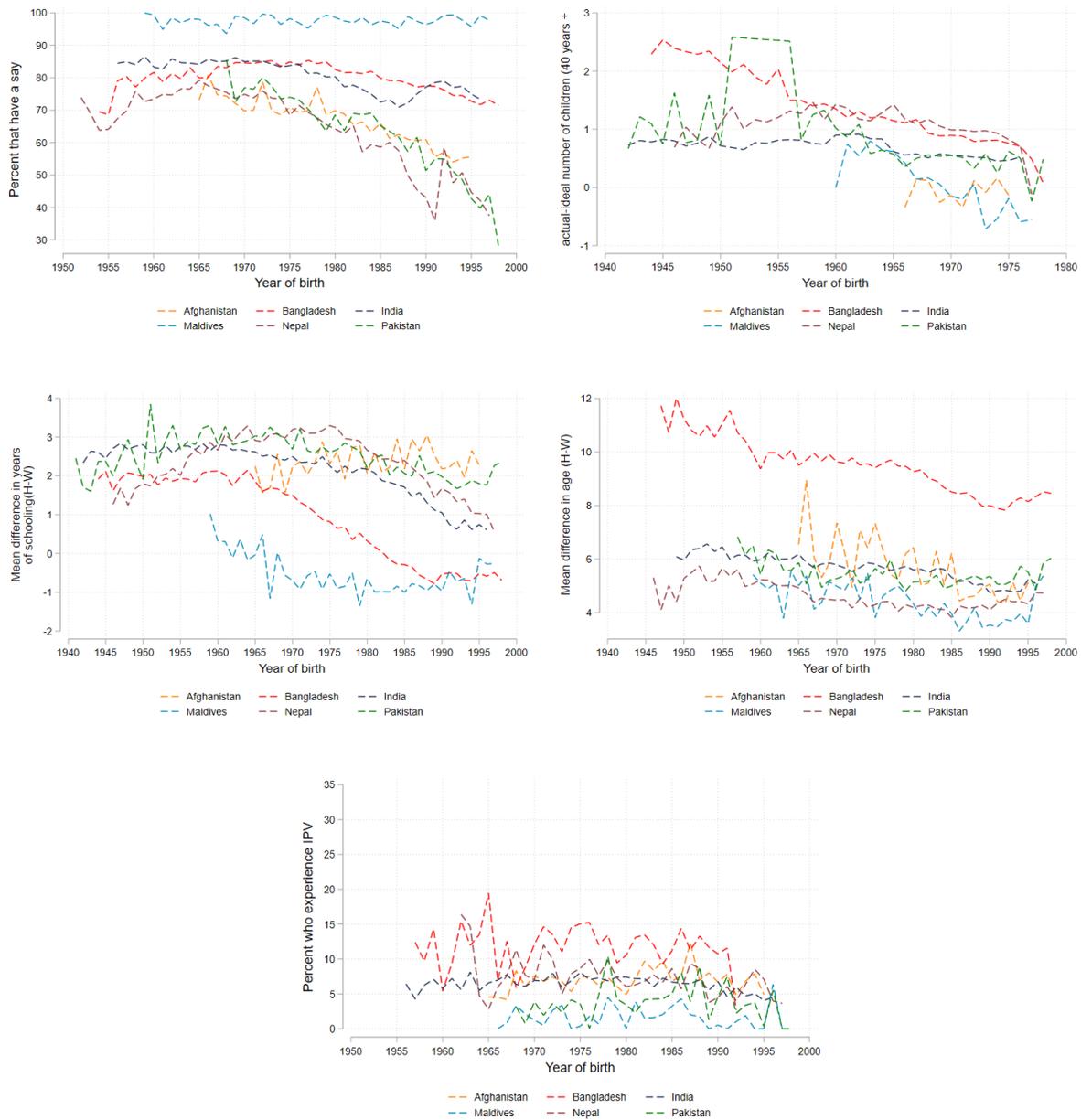
Source: DHS rounds (see, for details, table A2 in the annex). Note: This graph measures the mean value of each variable for each cohort. The left graph measures on the vertical axis the share of working women born in a birth year. The right graph plots on the vertical axis the mean years of education for women born in a birth year.

Figure 3: Marriage and children – Trends in age at first marriage (top left); in age at first birth (top right); marriage to first birth interval (bottom left); and son preference (bottom right)



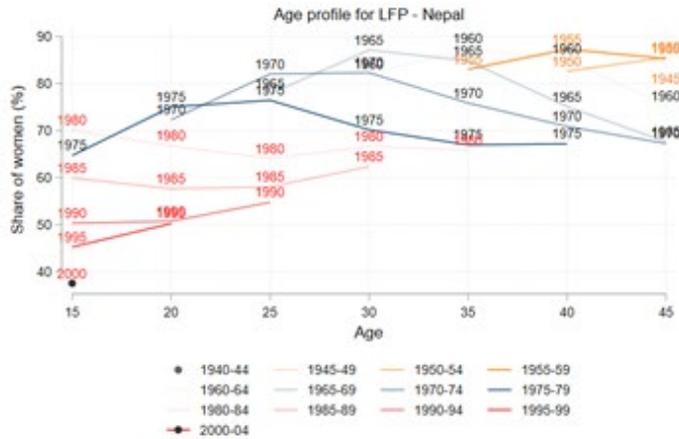
Source: DHS rounds (see, for details, table A2 in the annex). Note: This graph shows the mean value of each variable for each cohort. The top left graph measures on the vertical axis the mean age at first marriage for women born in a birth year. The top right graph measures on the vertical axis the mean age at first birth for women born in each year. The bottom left graph measures on the vertical axis the mean gap between marriage to first birth interval for women born in each birth year. The bottom right graph measures on the vertical axis the percent of women born in each year who have preference for more sons than daughters.

Figure 4: Intrahousehold power/negotiation – Trends in agency (top left); fertility (top right); difference in years of schooling between spouses (middle left); difference in years of age between spouses (middle right); and IPV experience



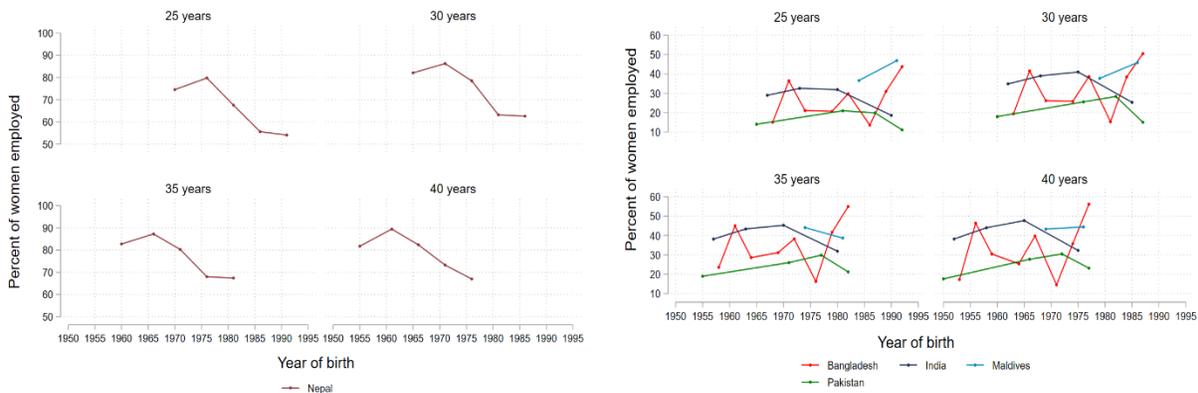
Source: DHS rounds (see, for details, table A2 in the annex). Note: The top left graph measures on the vertical axis the percent of women within each birth year that have a say in at least one of the decisions within the household. The top right graph measures on the vertical axis the difference between self-reported desired fertility and realized fertility. The middle-left graph measures on the vertical axis the mean difference years of education between women and their spouses while the middle right graph measures the mean difference in age between women and their spouses. The bottom graph measures the percent of women born in each year who experience intimate partner violence.

Figure 5: Share of working women: age profiles of different cohorts in Nepal



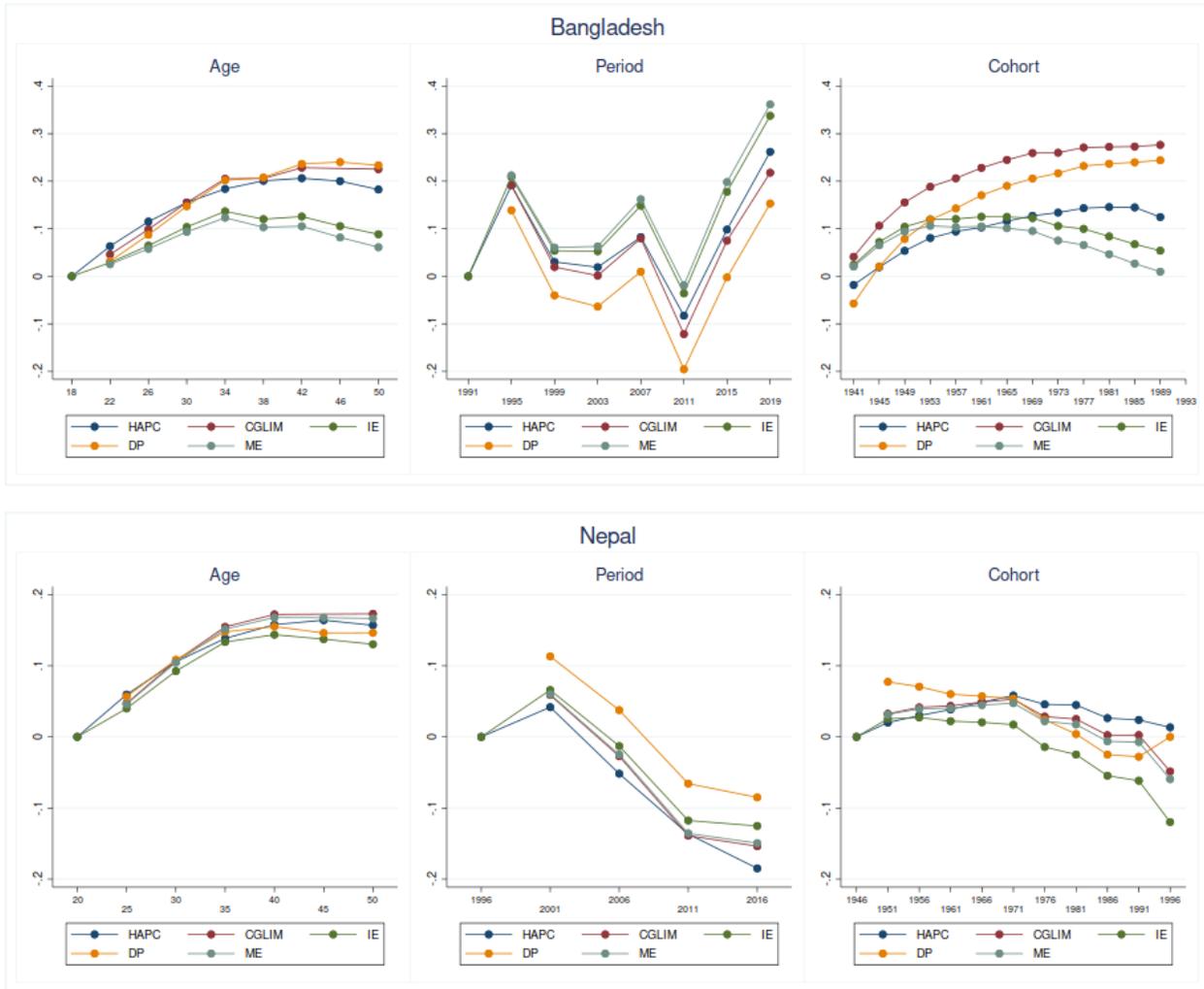
Source: DHS rounds (see, for details, table A2 in the annex). Note: The vertical axis plots the percent of women employed for each year of birth as they age. The horizontal axis plots 5 years age-group, for instance, 15 represents ages 15-19, 20 represents ages 20-24, and so on.

Figure 6: Share of working women, cohort plots for Nepal (left) and for Bangladesh, India, Maldives and Pakistan (right)



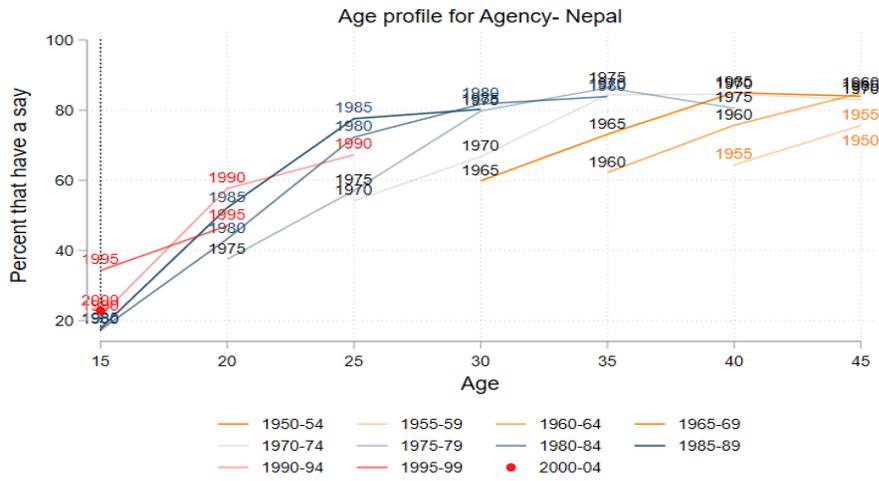
Source: DHS rounds (see, for details, table A2 in the annex). Note: The vertical axis plots the percent of women employed for a specific age group for each year of birth. Notice the difference in the vertical axes of the two graphs.

Figure 7: Estimates of age, period, and cohort effects estimated via five different APC models for Bangladesh (top) and Nepal (bottom)



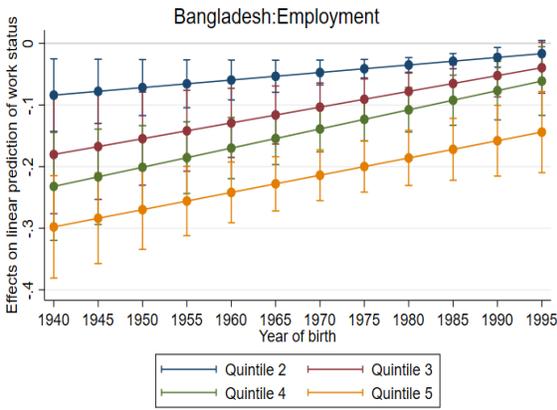
Source: DHS rounds (see, for details, table A2 in the annex). The vertical axis plots the parameter estimates for the age, period, and cohort variables for all the five APC models fitted, except for the HAPC for which we use the Empirical Bayes estimates. The PWA is labeled as CGLIM. Standard errors are omitted for ease of interpretation and are presented in Tables A5 and A6 in the Annex.

Figure 8: Women agency: age by cohort for Nepal

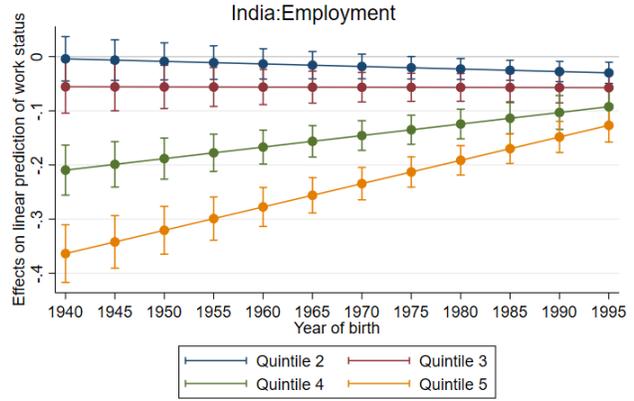


Source: DHS rounds (see, for details, table A2 in the annex). The vertical axis plots the percent of women who have a say in at least one decision within the household for women born within a group of birth years. The horizontal axis plots 5 years age-group, for instance, 15 represents ages 15-19, 20 represents ages 20-24, and so on.

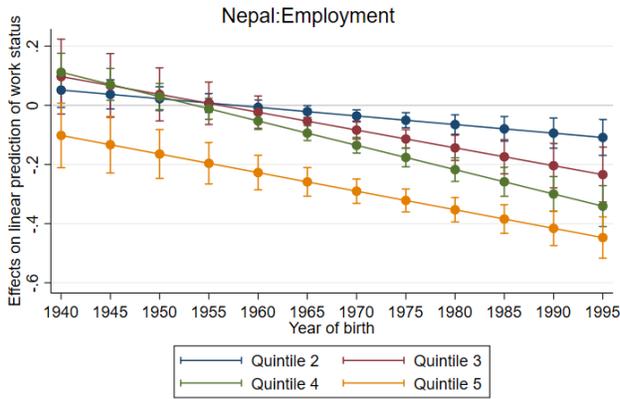
Figure 9: The marginal effect of wealth on employment



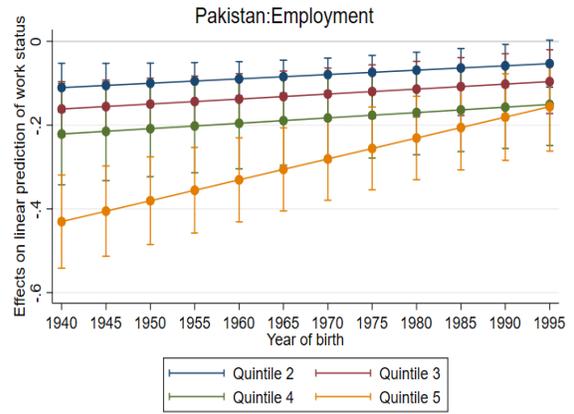
Generated by regressing work status on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing work status on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



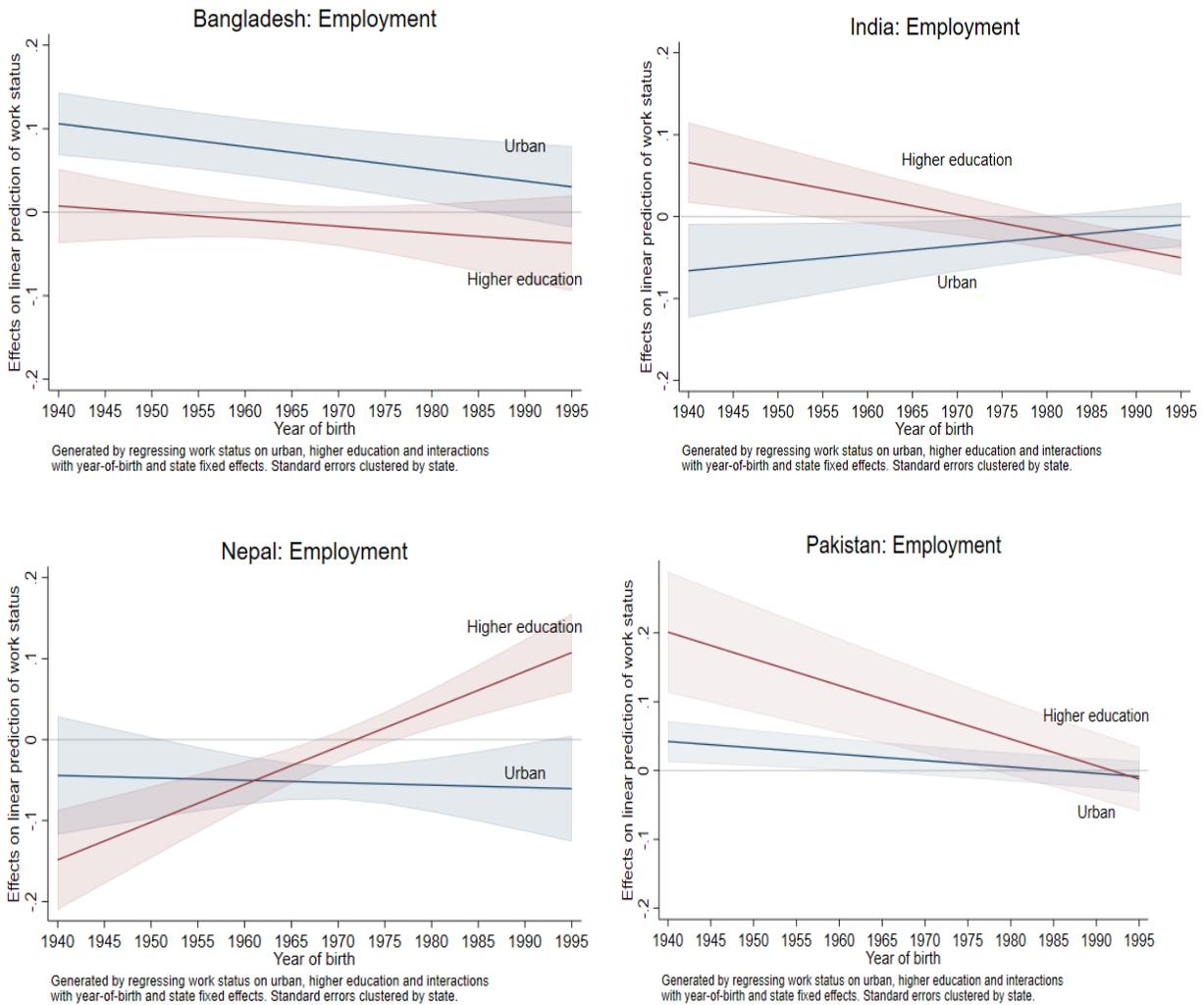
Generated by regressing work status on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing work status on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

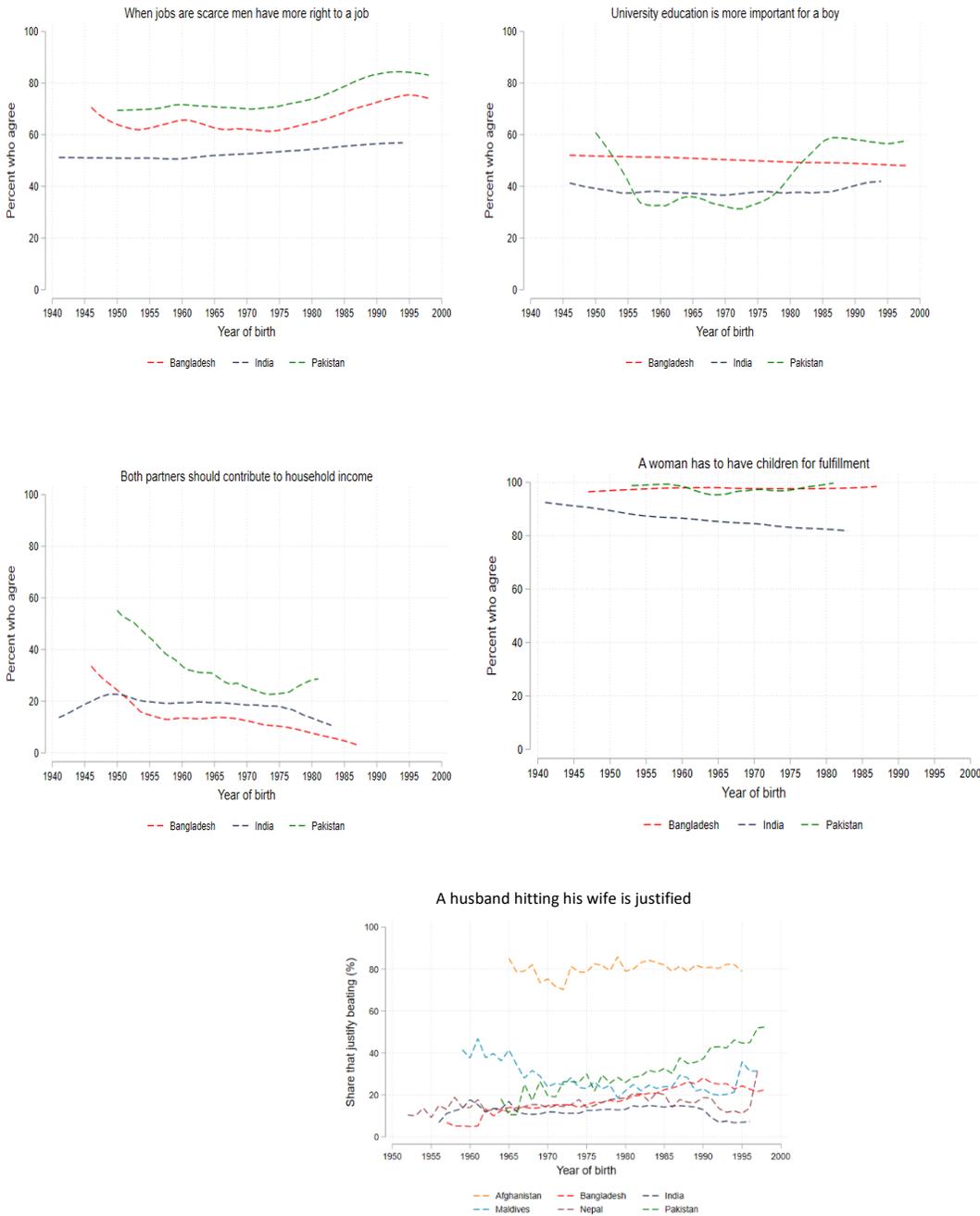
Source: DHS rounds (see, for details, Table A2 in the annex). The marginal effects (measured as percentage points on the vertical axes) are estimated by regression the outcome variable on wealth, its interactions with year of birth, age, and state fixed effects (see equations on page 10 for more details). Standard errors are clustered by state. Each panel shows four lines which represent the difference of quintiles 2, 3, 4 and 5 vis-à-vis the bottom poorest quintile (quintile 1). Moving from left to right allows comparison of these marginal effects between cohorts born in the past and more recent cohorts.

Figure 10: The marginal effect of education and location on employment



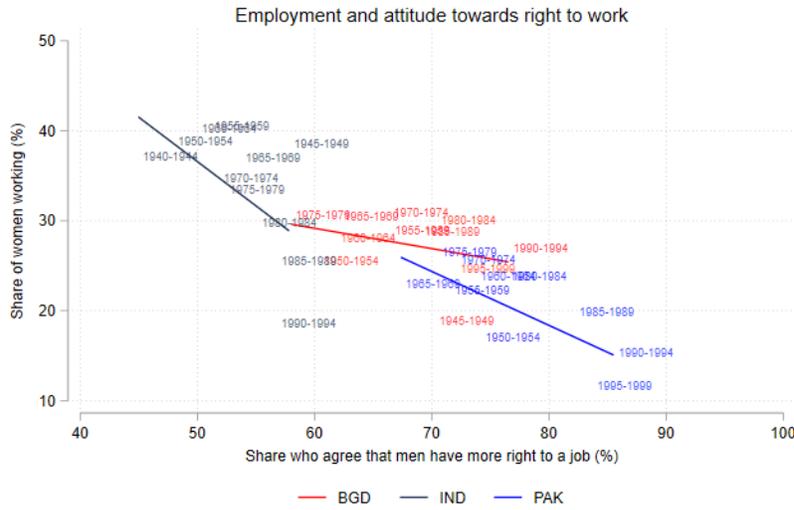
Source: DHS rounds (see, for details, Table A2 in the annex). The marginal effects (measured as percentage points on the vertical axes) are estimated by regression the outcome variable on location (rural versus urban) or higher education (secondary and tertiary education versus no or primary education), its interactions with year of birth, age, and state fixed effects. Standard errors are clustered by the state. We focus on the slope of the marginal effects. Moving from left to right in the graph allows to compare the difference in the marginal effects between old and more recent cohorts who are categorized into urban versus rural resident or higher versus lower education level.

Figure 11: Attitudes towards gender in South Asia have been (almost) fixed for 50 years



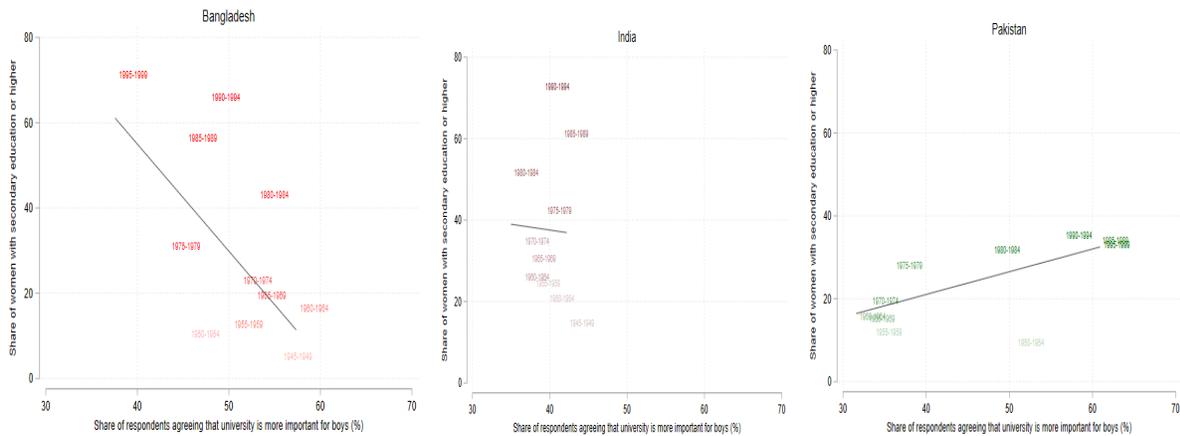
Source: WVS (top four graphs) and DHS rounds (bottom graph); see details in table A2 in the annex. Note. The vertical axes of the graphs show the percentage share of women who agree to the four attitude statements. The response options for the first three statements are “agree strongly”, “agree”, “disagree” and “strongly disagree”, and include “neither agree nor disagree”; while, for the last, the possible responses are simply “necessary” or “not necessary”. The percentage share of agreeing women is thus calculated summing all those who either “agree” or “strongly agree”, or say “necessary”, and dividing these sums for the sum of all possible responses. The bottom graph measures the percent of women born in each year who justify intimate partner violence. The top graphs plot a local polynomial smooth of the y variable on the x variable.

Figure 12: Correlation of the share of respondents agreeing that “when jobs are scarce men have more right to them” and share of women reporting to be working



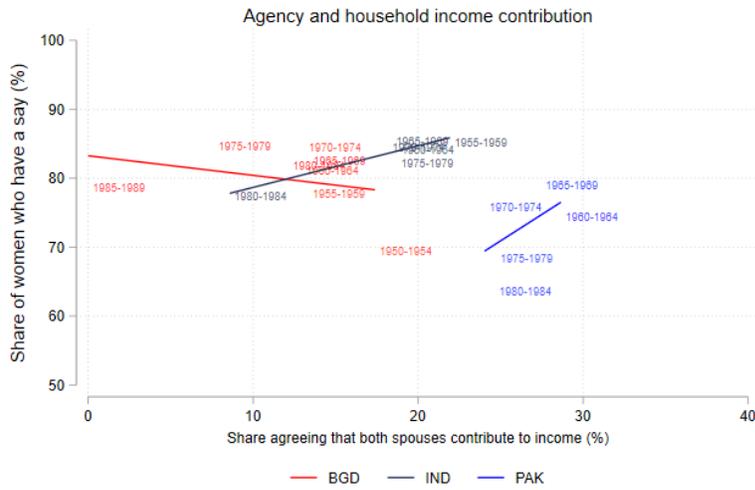
Source: World Value Survey and Demographic and Health Survey. Note: The correlation coefficient (with observations grouped in 5 years birth cohorts) of being employed and agreeing that when jobs are scarce, men have more right to a job than women is -0.36 for Bangladesh with 95% confidence interval (the r to z Fisher transformation is used to approximate the distribution of the correlation coefficient “ r ” to the normal distribution and thus estimate the confidence intervals) of -0.787 to 0.311; -0.57 for India with 95% confidence interval of -0.872 to 0.045; -0.76 for Pakistan with 95% confidence interval -0.941 to -0.255.

Figure 13: Correlations between education attitudes on “whether university is more important for boys” and share of women with higher education in Bangladesh (left), Pakistan (right) and India (bottom)



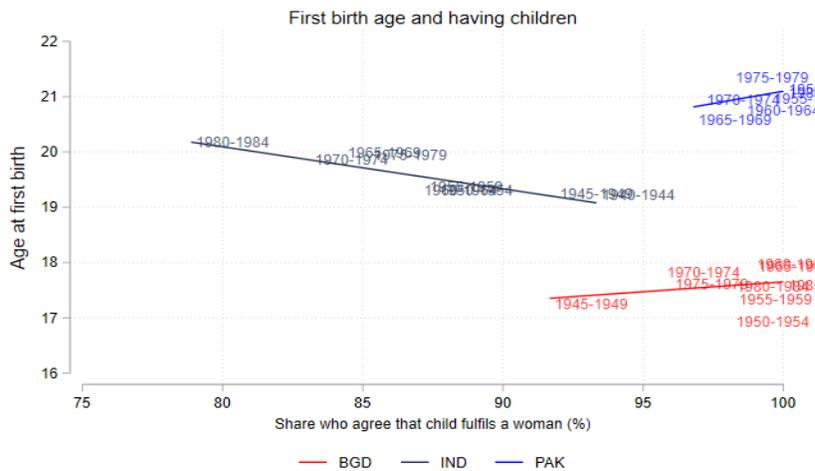
Source: World Value Surveys and Demographic and Health Surveys. Note: The correlation coefficient (with observations grouped in 5 years birth cohorts) of level of education and agreeing that university education is more important for boys is -0.63 for Bangladesh with 95% confidence interval of -0.892 to -0.044; -0.03 for India with 95% confidence interval of -0.650 to 0.608; 0.67 for Pakistan with 95% confidence interval of 0.066 to 0.913

Figure 14: Women agency and spousal co-responsibility in income generation



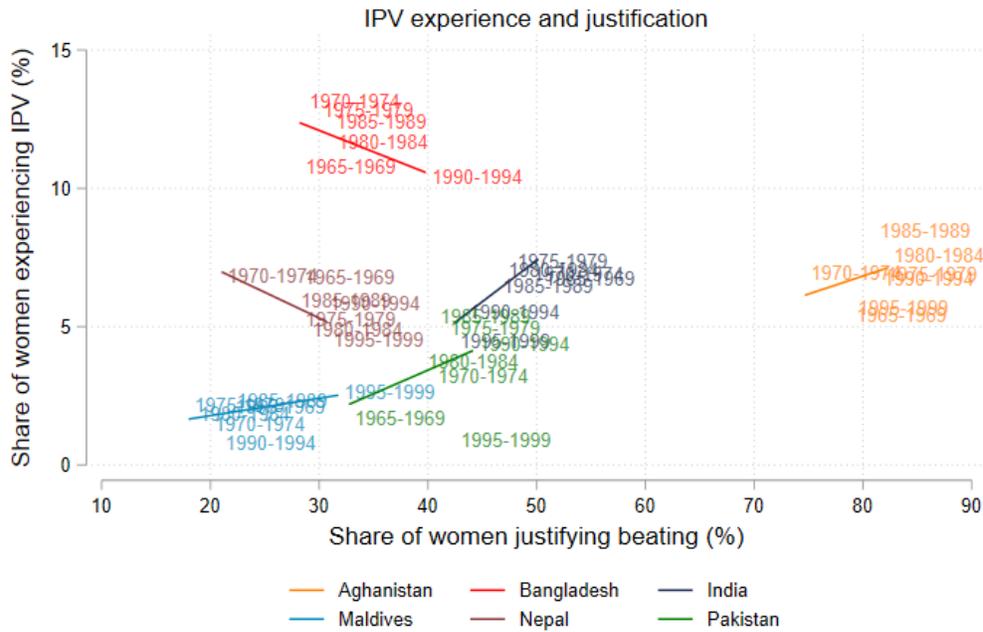
Source: World Value survey and Demographic and Health Survey. Note: The correlation coefficient (with observations grouped in 5 years birth cohorts) of having a say in at least one household decision and agreeing that both spouses should contribute to household income is -0.3 for Bangladesh with 95% confidence interval of -0.830 to 0.511; 0.92 for India with 95% confidence interval of 0.429 to 0.991; 0.50 for Pakistan with 95% confidence interval of -0.681 to 0.960.

Figure 15: First birth age and fulfilment from having a child



Source: World Value Survey and Demographic and Health Survey. Note: The correlation coefficient (with observations grouped in 5 years birth cohorts) of age at first birth and agreeing that a woman has to have a child to be fulfilled is 0.27 for Bangladesh with 95% confidence interval of -0.484 to 0.790; -0.88 for India with 95% confidence interval of -0.974 to -0.515; 0.47 for Pakistan with 95% confidence interval of -0.433 to 0.904

Figure 16: Correlation of share of women experiencing IPV and share of women justifying IPV



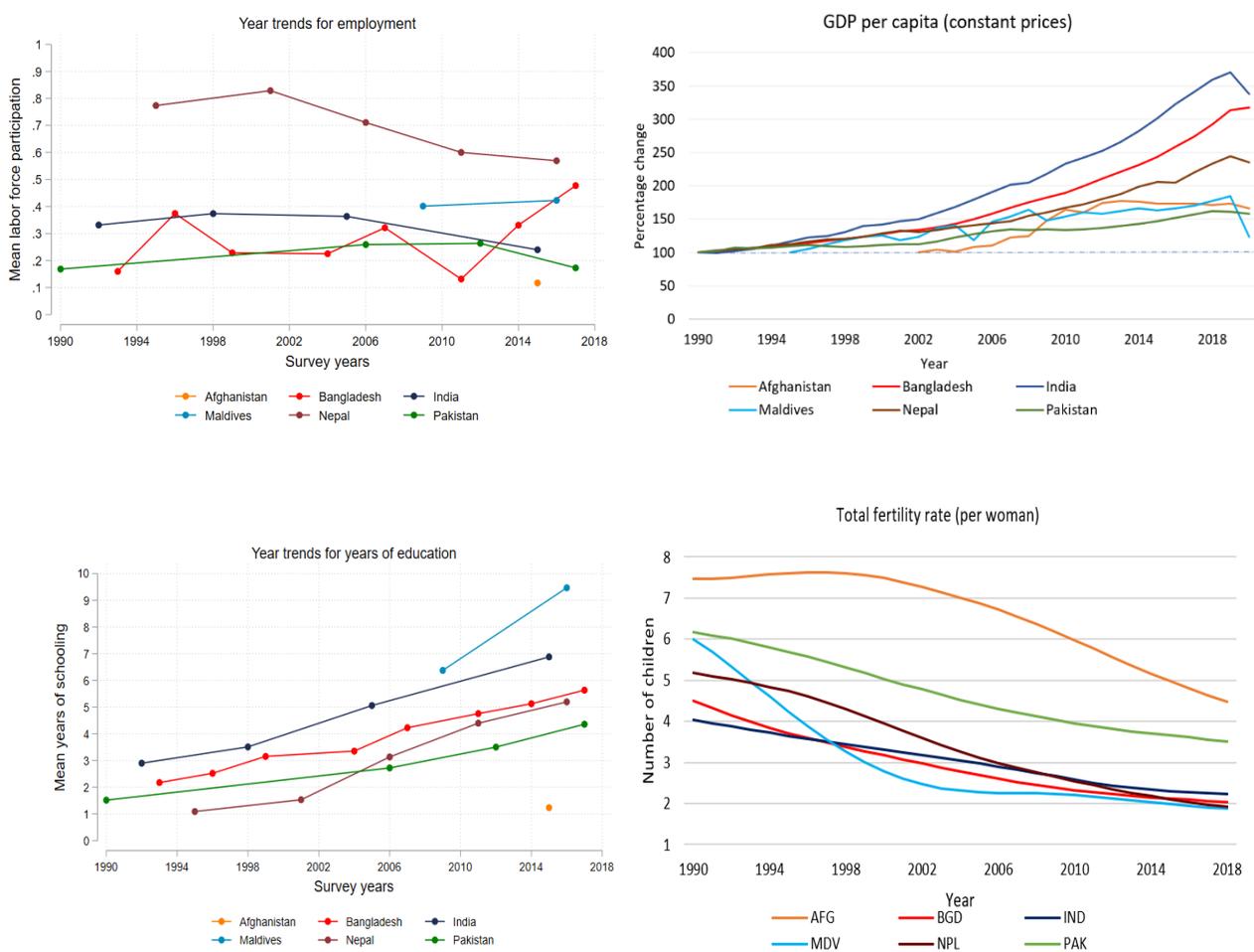
Source: Demographic and Health Survey. The correlation coefficient (with observations grouped in 5 years birth cohorts) of lifetime IPV experience and IPV justification is 0.27 for Afghanistan with 95% confidence interval of -0.529 to 0.822 ; -0.57 for Bangladesh with 95% confidence interval of -0.909 to 0.229; 0.9 for India with 95% confidence interval of -0.607 to 0.975; 0.48 for Maldives with 95% confidence interval of -0.431 to 0.905; -0.68 for Nepal with 95% confidence interval of -0.936 to 0.051; and 0.65 for Pakistan with 95% confidence interval of -0.097 to 0.930.

Annexes

1. Regional Trend in Related Economic and Gender Outcomes

The share of women working in the region, except for Bangladesh, has not increased over the 28 years between 1990 and 2018. In fact, it has experienced substantial decline in India, Pakistan and Nepal. The region, however, recorded substantial growth of GDP per capita, increases in educational attainment of women, and has reduced the total fertility rate considerably (reaching close to replacement level fertility in multiple countries), during the same period.

Figure A1: Year trends in FLFP, GDP growth rate, TFR and education



Source: DHS for the employment and education graphs and the World Development Indicators for the GDP per capita and total fertility rate graphs.

2. Data Sources

Five data sources containing information on gender outcomes and attitudes have been examined:

- Demographic and Health Survey (DHS)
- World Values Survey (WVS)
- Multiple Indicator Cluster Surveys (MICS).
- Gallup Poll
- Gender and Adolescence: Global Evidence (GAGE)

Table A1 below summarizes the availability of data from these surveys across countries in the region and through different time periods.

Table A1: Data Availability by Survey

Country	Years available (by survey)				
	DHS (Cross-sectional)	MICS (Cross-sectional)	WVS (Cross-sectional)	GAGE (Cross-sectional)	Gallup (Panel)
Afghanistan	2010 ⁺ , 2015 (2)	2011 (1)	(0)	None	
Bangladesh	1993-94, 1996-97, 1999-00, 2001 [*] , 2004, 2007, 2011, 2014, 2017 (9)	2006, 2012-2013, 2019 (3)	1994-1998, 1999-2004, 2017-2019 (3)	Baseline survey (2017/2018) Only conducted in Dhaka (1)	Every year between 2005-2020 (15)
India	1992-93, 1998-99, 2005-06, 2015-16 (4)	(0)	1989-1993, 1994-1998, 1999-2004, 2005-2009, 2010-2014 (5)	(0)	Every year between 2005-2020 (15)
Maldives	2009, 2016-17 (2)	(0)	(0)	(0)	2017 (1)
Nepal	1987 ^{**} , 1996, 2001, 2006, 2011, 2016 (6)	2010, 2014, 2019 (3)	(0)	Baseline survey (1)	Every year between 2005-2018 (13)
Pakistan	1990-91, 2006-07, 2012-13, 2017-18 (4)	2010, 2011, 2014, 2016-2017, 2017-2018 (5)	1994-1998, 1999-2004, 2010-2014, 2017-2019	(0)	Every year between 2005-2018 (13)
Sri Lanka	1987 ^{**} , 2006, 2016 (3)	(0)	(0)	(0)	Every year between 2005-2015 and 2017-2019 (13)
Bhutan	(0)	2010 (1)	(0)	(0)	2013, 2014, 2015 (3)

Among these data sources, DHS provided the most comprehensive combination of gender-relevant outcome variables across all countries and time periods. WVS, though not available for all countries in the region, was selected due to availability of gender attitude variables that could serve as proxies for relevant norms. A brief description of each is included below.

⁺ Special DHS data type and not used.

^{*} Special DHS data type.

^{**} Not used in the analysis.

3. Variable Description

Table A3: Variable description

Variables	Definition	Variable name (original)
DHS Variables		
<i>Employment</i>	1 if having worked in the past 7 days, including women who did not work in the past 7 days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason. 0 otherwise	V714
<i>Education</i>	Education in single years	V133
<i>Marriage age</i>	Age at first cohabitation (for women aged above 24 years)	V511
<i>Age at first birth</i>	Age of the respondent at first birth (for women aged above 24 years)	V212
<i>Son preference</i>	1 if respondents' ideal number of sons > ideal number of daughters, 0 otherwise. (Ideal number of each gender that the respondent would have liked to have in her whole life irrespective of the number she already has).	V627 (ideal number of sons)
		V628 (ideal number of daughters)
<i>Agency</i>	1 if a woman has a say in at least one of the three decisions within the household	(i) V743b (large household purchases), (ii) V743a (woman's health care), and (iii) V743d (visit to relative and friends).
<i>Spousal difference in age</i>	Husband/partner's age minus woman's age (both ages are reported by the wife)	V730 (Husband's/partner's age)
<i>Spousal difference in education</i>	Most recent husband or partner's education in single years minus woman's education in single years (both years reported by the wife)	V715 (recent husband or partner's education in single years)
<i>Fertility outcome</i>	Total number of living children minus ideal number of children. This variable is calculated only for women above 40 years	V218 (Total number of living children)
		V613 (Ideal number of children)
<i>IPV justification</i>	1 if a woman responds 'yes' to at least one of the five circumstances that justifies wife beating and 0 if she responds 'no' to all circumstances or missing for all circumstances	(i) V744a (She goes out without telling him)
		(ii) V744b (She neglects the children)
		(iii) V744c She argues with him
		(iv) V744d (She refuses to have sex with him)
		(v) V744e (She burns the food)

<i>IPV experience</i>	Ever experienced any form of physical or sexual violence by past or current partner. Coded 1 if a woman has ever experienced any violence and 0 for no violence and missing for women selected and interviewed for the domestic violence module.	D105a-k (has ever been slapped; punched with fist or hit by something harmful; strangled or burnt; threatened with knife/gun or other weapon; CS physical violence by partner; had arm twisted or hair pulled; physically forced into unwanted sex; forced into other unwanted sexual acts; physically forced to perform sexual acts respondent didn't want to.
World Value Survey Variables		
<i>Men have more right to a job</i>	1 if a woman or man agrees that when jobs are scarce, a man has more right to a job than a woman, and 0 if they disagree or "neither" agree or disagree.	C001_01
<i>University is more important for a boy</i>	1 if a woman or man agrees or strongly agrees that university education is more important for a boy than for a girl, and 0 if they disagree or strongly disagree.	D060
<i>A woman has to have children to be fulfilled</i>	1 if a woman or man thinks that for a woman to be fulfilled, it is necessary that she has children, and 0 if they think that it is not necessary.	D019
<i>Both spouses should contribute to household income</i>	1 if a woman or man agrees or strongly agrees that both spouses/partners should contribute to household income, and 0 if they disagree or strongly disagree.	D058a

Source: DHS and WVS

4. Cohort and age statistics

Table A4: Share of men and women who believe that a woman has to have children to be fulfilled in India

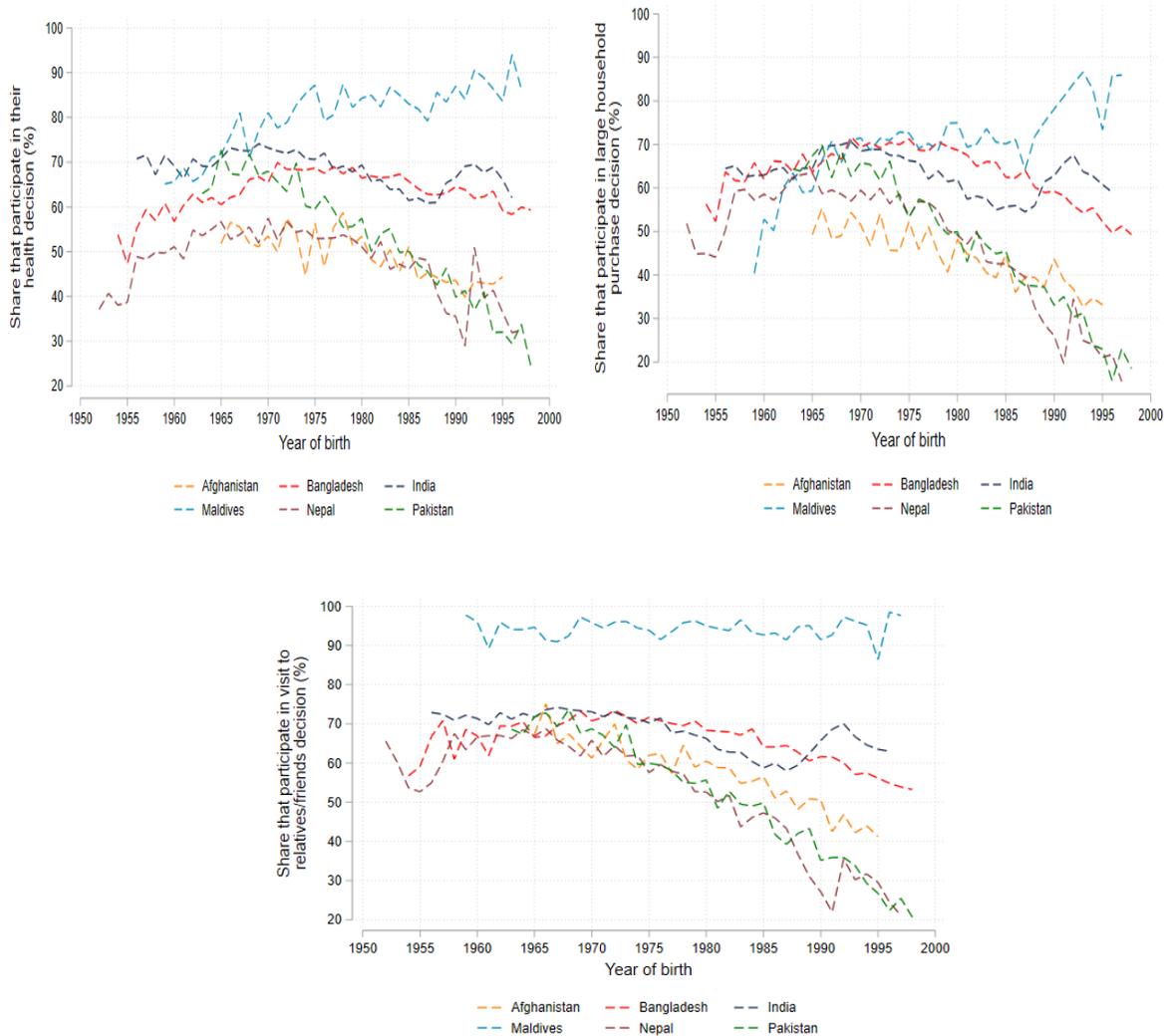
Age group	Statistics	Cohort										Wgt Ave
		1940-44	1945-49	1950-54	1955-59	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	
15-19	Share							84%	84%	82%		84%
	N							177	63	11		
20-24	Share						87%	83%	81%	78%		84%
	N						332	289	201	60		
25-29	Share					89%	80%	80%	91%			84%
	N					265	294	245	162			
30-34	Share				87%	85%	85%	86%				86%
	N				215	299	276	118				
35-39	Share			89%	86%	89%	85%					88%
	N			276	287	225	142					
40-44	Share		91%	88%	87%	82%						87%
	N		143	197	249	111						
45-49	Share	93%	93%	84%	91%							90%
	N	90	176	162	93							
<i>Weighted average</i>		93%	92%	88%	87%	87%	84%	83%	85%	79%		

Source: WVS for India. Note: The number, N, of each cell counts the number of women in each cell who responded to the question, excluding counting missing responses. This variable has high share of missing values. For Bangladesh, there is about 28 percent missing values, for India, 46 percent missing values and for Pakistan, 72 percent missing values. A closer look at the data shows that this question was not asked in more recent survey rounds. For Bangladesh, the question was not asked in 2018, for India, the question was not asked in 2006, and for Pakistan, it was not asked in 2012 and 2018.

5. Cohort graphs

Agency for the three household decisions

Figure A2: The cohort graphs for decision on health care (top-left), decision on large household purchases (top-right), and visits to relatives/friends (bottom-center).



Source: DHS rounds (see, for details, table A2 in the annex). Note: The three variables are derived from women's response when asked about their participation in decision making within the household. The questions are: 1) if a woman participate in decision about her health care (top left graph), 2) about large household purchases (top right), and 3) about their visit to their relatives/friends (bottom). The vertical axis measures the share of women who have a say in each of these questions out of women who responded to the questions.

6. Age profile graphs

Figure A3 illustrates the age profiles of three birth cohorts for different types of variables. The panel on the left shows a stylized example for 'years of education', a variable with no age profile. After age 'z', the years of education achieved by a person remains constant throughout the life cycle. Clearly there are differences in years of education for persons belonging to different cohorts. However, because there is no age effect, the measurement of the cohort effect is unaffected if one compares cohorts at different ages. As the cohorts are parallel lines after age 'z', measuring the vertical distance between cohorts '1', '2' and '3' is the same at ages 'a', 'b' or 'c'. This is not the case for a variable such as labor force participation which has an inverted U age profile. For this type of variable, measuring the cohort effect correctly requires comparing cohorts at the same age. The right panel clearly shows that the cohort effect is (incorrectly) much larger if cohorts 1 and 2 are compared when cohort 1 is at age 'a' and cohort 2 is at age 'b', rather than when they are both at age 'c'.

Figure A3: Age profiles for different types of variables

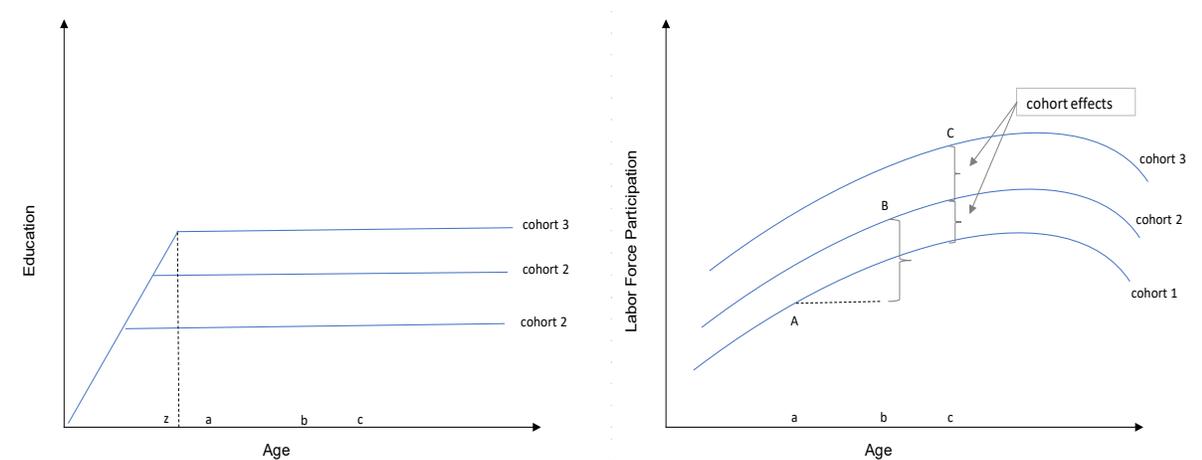
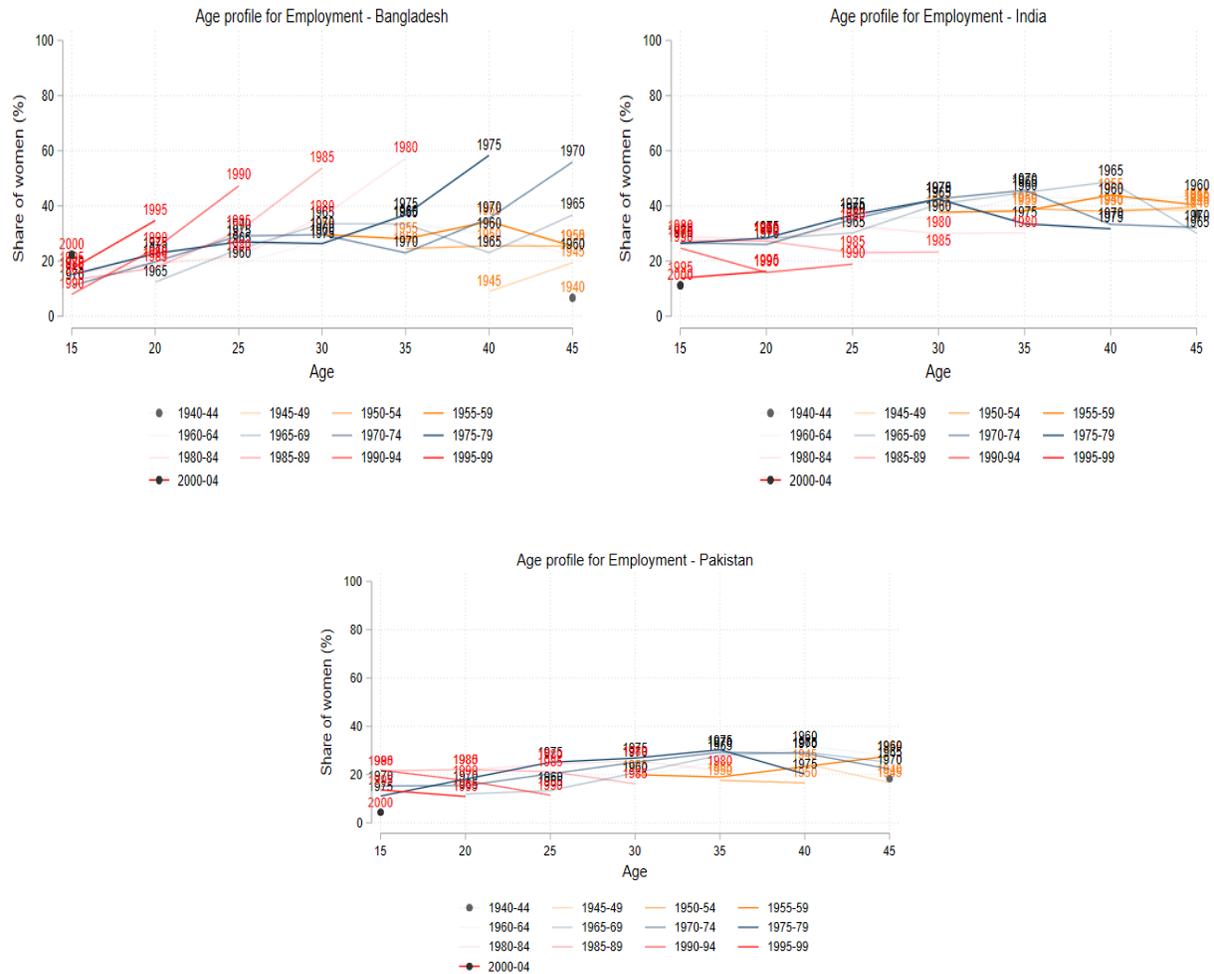
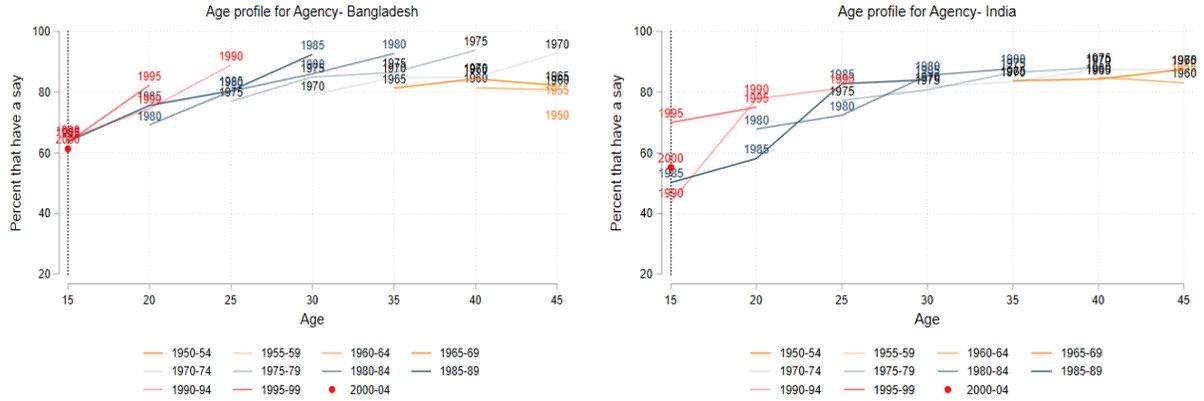


Figure A4: The age profile graphs for employment for Bangladesh (top-left), India (top-right), and Pakistan (bottom-center)



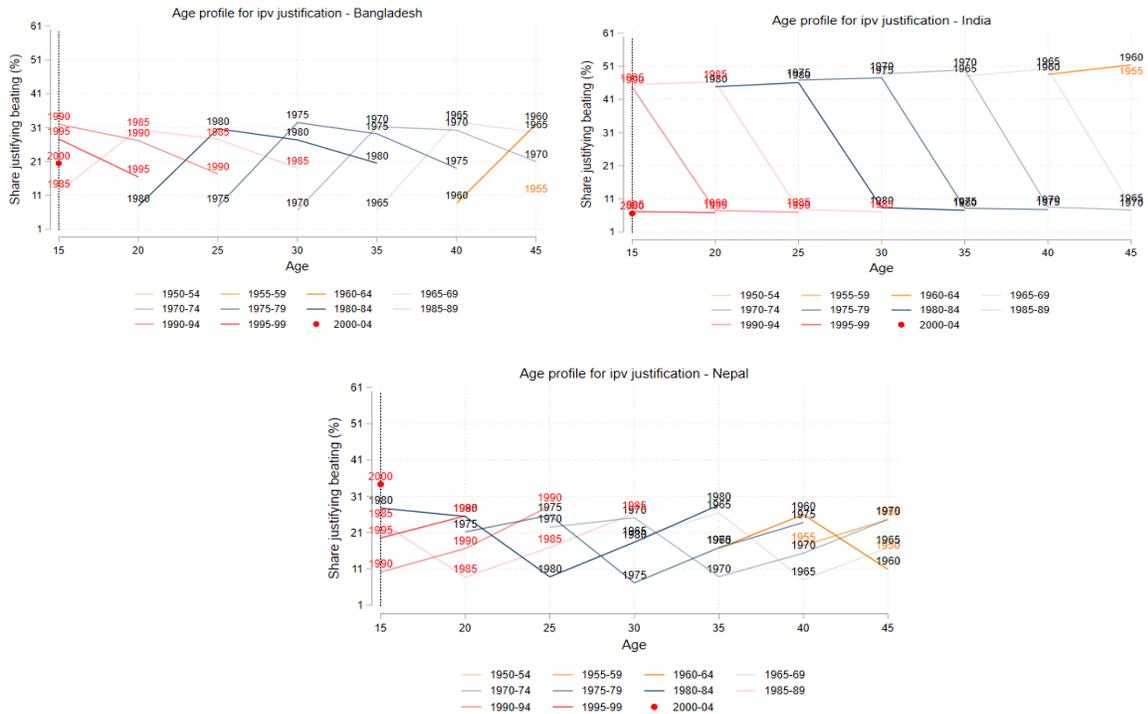
Source: DHS rounds (see, for details, table A2 in the annex). Note: We show the age profile of employment for Bangladesh, India, and Pakistan (and Nepal which is shown in figure 10 in the main text), as these countries have a sufficient number of cross sections enabling to trace cohorts as they age.

Figure A5: The age profile graphs for agency for Bangladesh(left) and India (right)



Source: DHS rounds (see, for details, table A2 in the annex). Note: We show the age profile of agency for Bangladesh, India (and for Nepal, see figure 9 in the main text) because these countries have a sufficient number of repeated cross sections enabling to trace cohorts as they age.

Figure A6: The age profile graphs for IPV justification for Bangladesh(top-left), India (top-right), and Nepal (bottom-center)



Source: DHS rounds (see, for details, table A2 in the annex). Note: We show the age profile of intimate partner violence justification for Bangladesh, India, and Nepal because these countries have a sufficient number of cross sections enabling to trace cohorts as they age.

7. Age-period-cohort analysis

The literature has offered different methods to solve the identification issue of age-period-cohort (APC) decompositions. The PWA model is one of these specific solutions used in analyses of female labor force participation (Nientker and Alessie, 2019). This model assumes a constant effect of age for women in their 40s, thus imposing the needed further restriction on two dummy variables. The equating of coefficients of two adjacent age groups falls within the wider family of constrained APC models, where any two coefficients of two adjacent dummies (that being from the age, period, or cohort set) are set to be equal. The theoretical intuition and the preliminary evidence in our data for both countries suggest that this is a worth-considering assumption. While the restriction is non-testable in the full APC model, the fit of simple age-only regression model, and age-period and age-cohort models, all revealed similar coefficients for the dummies in these age groups (42-46 and 47-50 for Bangladesh; 41-45 and 46-50 for Nepal). The HHDP model, first proposed by Hanoch and Honig (1985) and Deaton and Paxson (1994) applies a restriction on the period effects. In particular, this is done by applying a detrending, such that the period effect is orthogonal to a trend and sums to zero. This approach relies on the assumption of unanticipated business cycle shocks and usually requires several survey years to sufficiently separate trend and cycle.

While the previous two models impose specific restrictions, the approaches of IE and ME suggest two different generalized solutions to the APC identification problem. The IE approach, proposed by Fu (2000) and Yang et al. (2004), makes use of least squares by applying a Moore-Penrose generalized inverse to deal with the collinearity in the design matrix and estimated via a principal component regression algorithm. The estimator provides a general solution without imposing specific restrictions on any of the dummy variables, but which depends on several choices made in the optimization algorithm. Similarly, the approach of ME proposed by Browning et al. (2012) suggests the use of maximum-entropy principle to address the problem. This is a general framework that represents the uncertainty around the parameters as a probability distribution and using an entropy measure to select the probabilities that represent the information in the data the best. This approach falls within the wider family of solutions using maximum-entropy estimation and is more appropriate when the set of possible solutions is bounded.

Finally, the HAPC, first proposed for APC models by Yang and Land (2006), is a solution that uses the principles of standard multilevel analysis, that is using a mixed (fixed and random) effects model and relies on non-linearity. Age and age-squared enter as fixed effects, whereas period and cohort enter as cross-classified random effects. These mixed effects models are popular within economics (as random effects models or random coefficients models in panel data analysis) and education research (e.g., students cluster in classrooms, which further cluster in schools). In this application, the random effects are crossed, in the sense that they are not nested (e.g., students clustered in their primary schools and in their subsequent secondary schools). These models rely on the distributional assumptions made on the error

terms, being zero-mean normally distributed, thus interpreting period and cohort effects as deviations or shocks.

Tables A5 and A6 present the parameter estimates and their standard errors for all the five APC models. While for PWA, HHDP, IE, ME these include the estimates for the age, period, and cohort dummies, for HAPC we have the coefficients for age and age-squared, along with the estimates of the variances for the random effects of period and cohort.

Table A5: Age-period-cohort effects using five different models for Bangladesh

	(1)		(2)		(3)		(4)		(5)	
	PWA		HHDP		IE		ME		HAPC	
	Coef.	(SE)	Coef.	(SE)	Coef.	(SE)	Coef.	(SE)	Coef.	(SE)
age									0.0303	(0.0013)
age-squared									-0.0004	(0.0000)
age 22	0.046	(0.022)	0.032	(0.023)	0.029	(0.010)	0.025	(0.015)		
age 26	0.099	(0.035)	0.087	(0.024)	0.065	(0.010)	0.058	(0.016)		
age 30	0.155	(0.049)	0.147	(0.025)	0.104	(0.010)	0.093	(0.017)		
age 34	0.205	(0.064)	0.202	(0.027)	0.137	(0.010)	0.123	(0.018)		
age 38	0.206	(0.079)	0.208	(0.029)	0.12	(0.010)	0.103	(0.020)		
age 42	0.228	(0.094)	0.236	(0.030)	0.126	(0.010)	0.105	(0.021)		
age 46	0.225	(0.116)	0.240	(0.032)	0.106	(0.010)	0.082	(0.023)		
age 50	0.225	(0.116)	0.233	(0.032)	0.088	(0.010)	0.061	(0.022)		
period 1995	0.192	(0.020)	0.139	(0.017)	0.209	(0.009)	0.212	(0.014)		
period 1999	0.020	(0.033)	-0.040	(0.016)	0.054	(0.009)	0.061	(0.014)		
period 2003	0.001	(0.047)	-0.064	(0.015)	0.053	(0.009)	0.063	(0.015)		
period 2007	0.080	(0.062)	0.010	(0.014)	0.148	(0.009)	0.162	(0.016)		
period 2011	-0.121	(0.077)	-0.196	(0.015)	-0.036	(0.009)	-0.019	(0.017)		
period 2015	0.075	(0.092)	-0.002	(0.016)	0.178	(0.009)	0.198	(0.018)		
period 2019	0.218	(0.108)	0.153	(0.017)	0.338	(0.010)	0.361	(0.020)		
cohort 1945	0.041	(0.038)	-0.057	(0.052)	0.024	(0.019)	0.020	(0.036)		
cohort 1949	0.106	(0.042)	0.020	(0.049)	0.072	(0.017)	0.065	(0.032)		
cohort 1953	0.155	(0.051)	0.078	(0.046)	0.104	(0.015)	0.094	(0.029)		
cohort 1957	0.188	(0.063)	0.119	(0.044)	0.12	(0.014)	0.106	(0.026)		
cohort 1961	0.206	(0.076)	0.143	(0.042)	0.121	(0.013)	0.103	(0.024)		
cohort 1965	0.228	(0.090)	0.170	(0.041)	0.126	(0.012)	0.105	(0.021)		
cohort 1969	0.245	(0.104)	0.190	(0.039)	0.125	(0.011)	0.101	(0.019)		
cohort 1973	0.259	(0.118)	0.206	(0.039)	0.123	(0.011)	0.095	(0.017)		
cohort 1977	0.260	(0.134)	0.217	(0.039)	0.106	(0.012)	0.075	(0.016)		
cohort 1981	0.271	(0.149)	0.232	(0.040)	0.1	(0.012)	0.066	(0.015)		
cohort 1985	0.272	(0.164)	0.237	(0.041)	0.084	(0.013)	0.046	(0.015)		
cohort 1989	0.273	(0.179)	0.240	(0.042)	0.068	(0.014)	0.027	(0.015)		
cohort 1993	0.276	(0.194)	0.244	(0.045)	0.054	(0.016)	0.010	(0.017)		
Var(period)									0.0108	(0.0054)
Var(cohort)									0.0030	(0.0017)

Table A6: Age-period-cohort effects using five different models for Nepal

	(1)		(2)		(3)		(4)		(5)	
	PWA		HHDP		IE		ME		HAPC	
	Coef.	(SE)								
age									0.0239	(0.0017)
age-squared									-0.0003	(0.0000)
age 25	0.047	(0.011)	0.057	(0.026)	0.04	(0.005)	0.046	(0.008)		
age 30	0.107	(0.018)	0.108	(0.027)	0.093	(0.005)	0.104	(0.008)		
age 35	0.155	(0.025)	0.148	(0.030)	0.134	(0.005)	0.151	(0.009)		
age 40	0.172	(0.032)	0.155	(0.032)	0.144	(0.005)	0.168	(0.009)		
age 45	0.173	(0.043)	0.146	(0.035)	0.138	(0.005)	0.167	(0.010)		
age 50	0.173	(0.043)	0.146	(0.034)	0.131	(0.005)	0.166	(0.009)		
period 2001	0.059	(0.009)	0.113	(0.015)	0.066	(0.004)	0.060	(0.006)		
period 2006	-0.027	(0.016)	0.038	(0.013)	-0.013	(0.004)	-0.025	(0.006)		
period 2011	-0.139	(0.023)	-0.066	(0.013)	-0.118	(0.004)	-0.136	(0.007)		
period 2016	-0.154	(0.031)	-0.085	(0.015)	-0.125	(0.004)	-0.149	(0.007)		
cohort 1951	0.033	(0.015)	0.077	(0.046)	0.025	(0.007)	0.031	(0.014)		
cohort 1956	0.041	(0.018)	0.071	(0.043)	0.027	(0.007)	0.039	(0.012)		
cohort 1961	0.043	(0.023)	0.060	(0.040)	0.022	(0.006)	0.040	(0.011)		
cohort 1966	0.049	(0.029)	0.057	(0.037)	0.02	(0.005)	0.045	(0.009)		
cohort 1971	0.053	(0.036)	0.054	(0.038)	0.017	(0.006)	0.047	(0.008)		
cohort 1976	0.028	(0.044)	0.024	(0.036)	-0.014	(0.005)	0.022	(0.007)		
cohort 1981	0.025	(0.051)	0.004	(0.037)	-0.025	(0.006)	0.017	(0.007)		
cohort 1986	0.002	(0.059)	-0.025	(0.040)	-0.055	(0.006)	-0.006	(0.007)		
cohort 1991	0.003	(0.067)	-0.028	(0.043)	-0.062	(0.007)	-0.007	(0.008)		
cohort 1996	-0.048	(0.075)	0.000	(0.000)	-0.12	(0.012)	-0.059	(0.010)		
Var(period)									0.0071	(0.0045)
Var(cohort)									0.0004	(0.0002)

8. Heterogeneity in trends of norm-related outcomes

This section discusses in detail the marginal effects of wealth, location, and education (the independent variables) on outcome variables (the dependent variables, see for more details the equations and explanations of page 10 in the main text). We estimate the marginal effects by regressing the outcome variables on wealth, location (rural versus urban), higher education (secondary and tertiary education versus no or primary education), their interactions with year of birth, and state fixed effects. Standard errors are clustered by state.

For variables that have a life cycle, i.e., variables that change as an individual ages, for example employment, we control for age in the regression. We run the heterogeneity analysis for Bangladesh, India, Nepal, and Pakistan. Data in Afghanistan (and Maldives) were collected only in one (and two) surveys, and this does not permit to trace cohorts as they age.

As the independent variables are categorical, the marginal effects are represented as the impact of moving from the reference category to one of the other categories. In the case of wealth, the reference is the poorest quintile; for the urban group, the reference is rural; for education, the higher education group is compared against the lower or no education group. Thus for example, if moving from the poorest quintile (the reference category for the wealth variable) to a richer quintile does not produce any effects, then the plotted marginal effect will be at the zero level on the vertical axis, meaning that there is no statistically significant difference between one category with respect to the reference category.

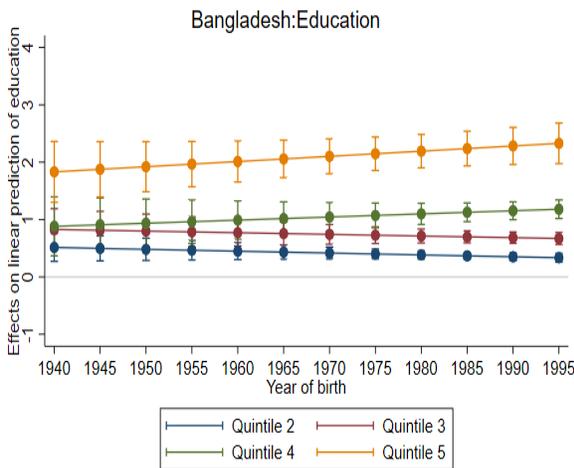
For each of the outcomes variables the marginal effect figures include four panels, one for each country. Each panel provides information about the level of the marginal effect (the position of the line) and whether this is different for different cohorts (the slope of the line). More in detail, moving from left to right allows to compare marginal effects between cohorts born in the past and more recent cohorts.

In extreme synthesis, a common finding across different outcomes is that wealth seems to have some marginal effect, but that urban location and education do not tend to be associated with better outcomes, as pointed out in stylized fact 2. However, there is quite a bit of heterogeneity across outcomes and countries. The details are discussed in the remainder of this section.

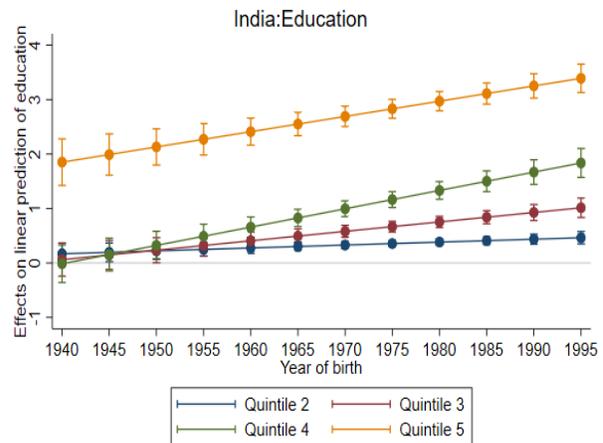
i. Education

Figure A7: The marginal effect of wealth on years of education

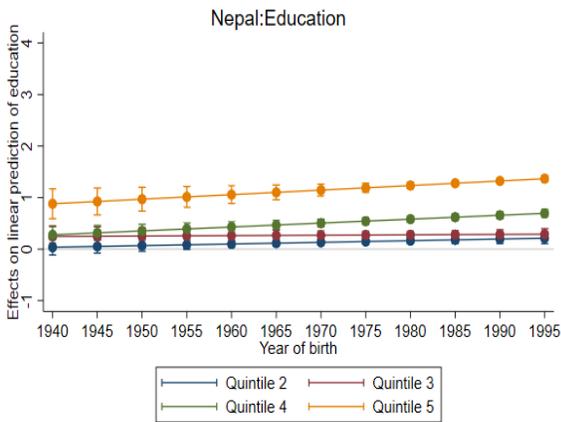
The graphs show that for Bangladesh, India, Nepal, and Pakistan, the richest women have fared better than other women in years of education. The yellow (or quintile 5) line is positioned above the other lines. Also, the slope of the lines for the fourth and fifth quintiles are upwards sloping and steeper than the slopes of the lines for the other quintiles which means that the distance in education outcomes between richer and poorer women has increased in more recent cohorts. In other words, across cohorts, a richer woman has fared better in terms of educational progress than the average woman.



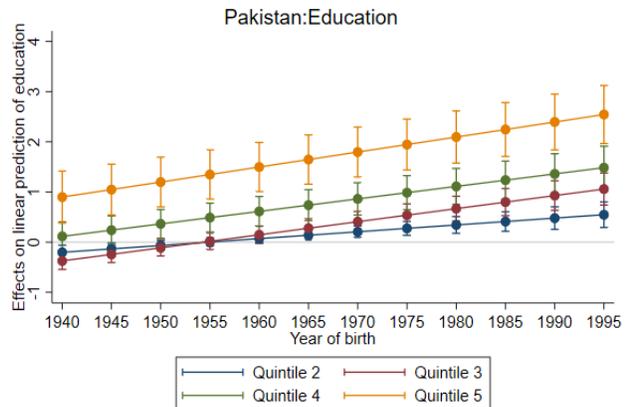
Generated by regressing years of education on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing years of education on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing years of education on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

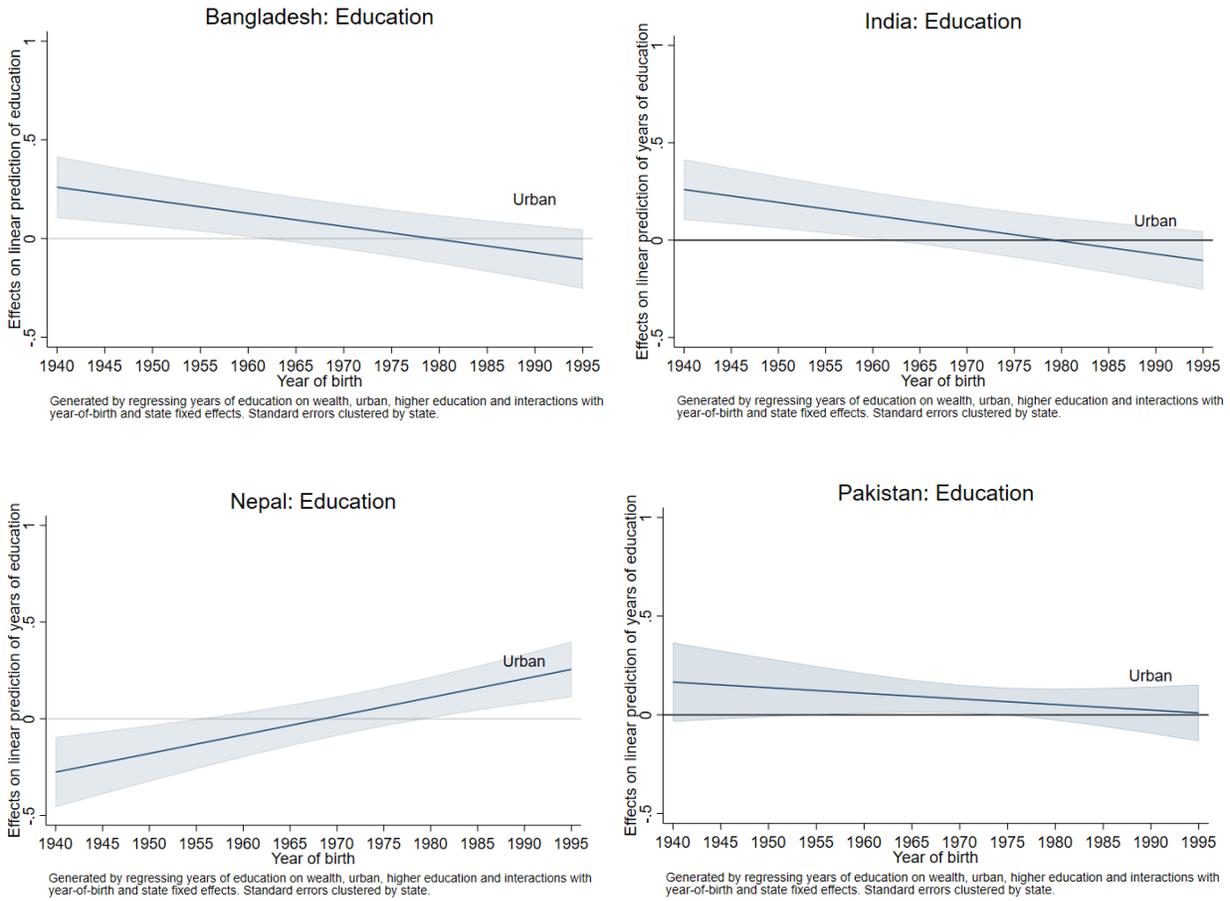


Generated by regressing years of education on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A8: The marginal effect of education and location on education

Unlike wealth, women who live in urban areas have not experienced markedly different progress in terms of years of schooling vis-à-vis rural women, as education expansion seems to have benefitted almost everyone in these South Asian countries.

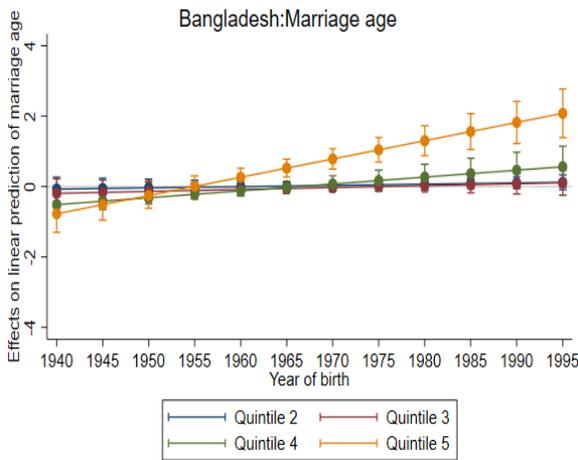


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

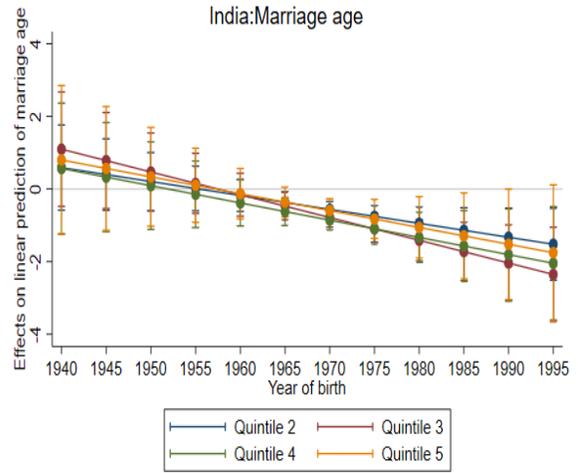
ii. Marriage age

Figure A9: The marginal effect of wealth on marriage age

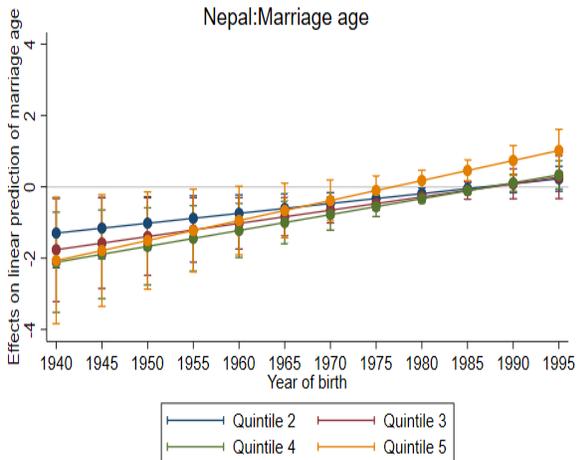
Women in the fifth quintile have fared better than other women in marriage age in Bangladesh, Nepal, and Pakistan across cohorts. While the differential effect of wealth was initially negative to zero for richer women born in the early years, this effect turns positive and increases faster for the richest women born in more recent years. This is not the case for India, where there is no significant difference in marriage age for women across quintiles.



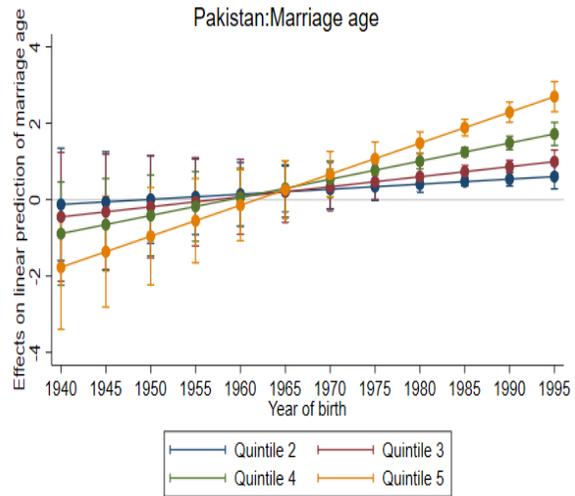
Generated by regressing marriage age on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing marriage age on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing marriage age on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

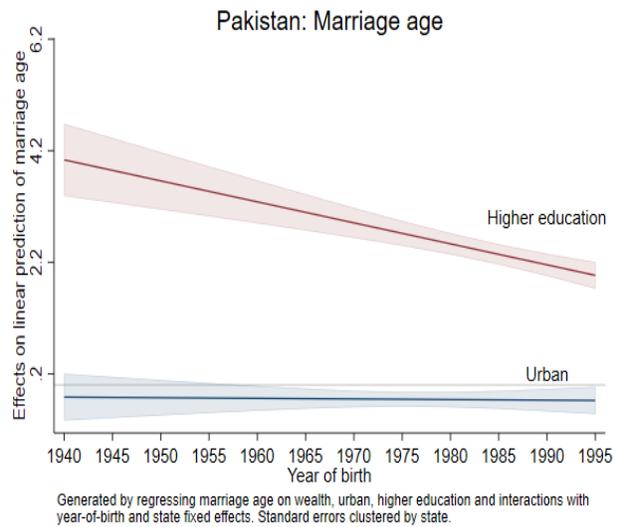
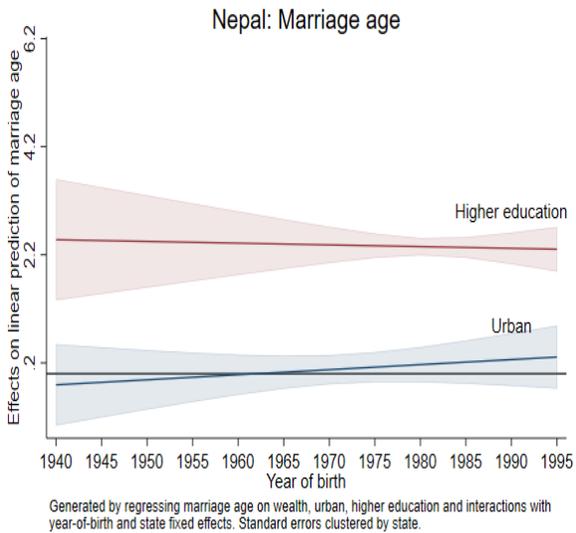
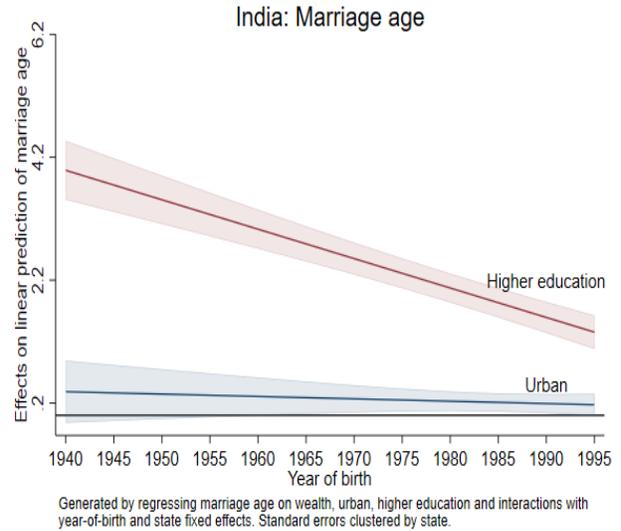
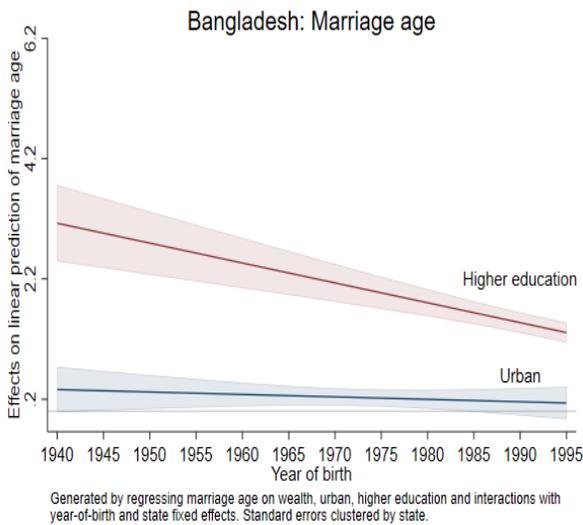


Generated by regressing marriage age on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A10: The marginal effect of education and location on marriage age

Unlike wealth, women with higher education and women who reside in urban areas have not fared better in marriage age, vis-à-vis, lower education and rural women respectively. In fact, we observe a declining marginal effect of education in Bangladesh, India, and Pakistan.

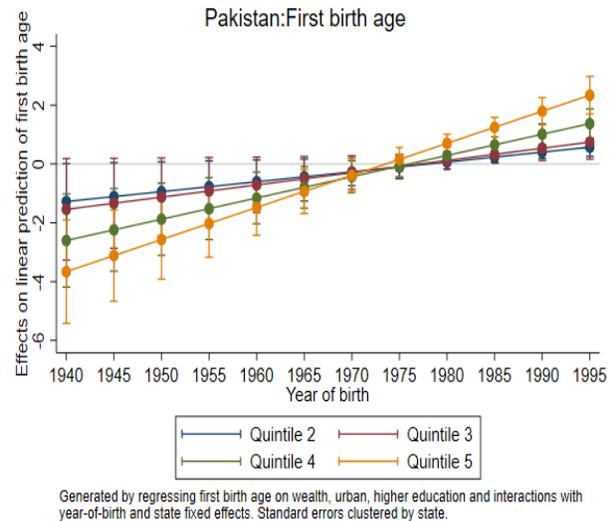
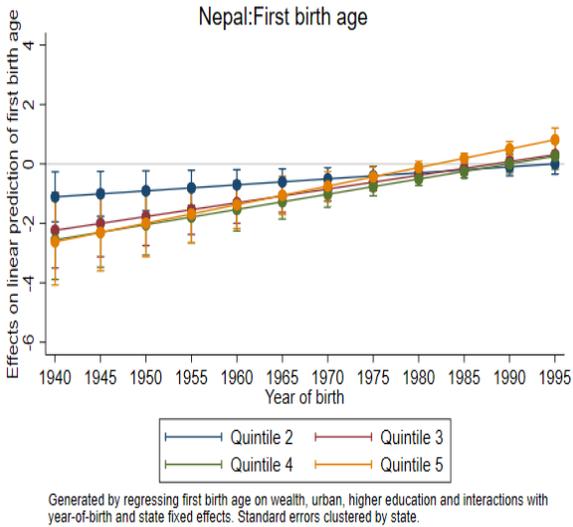
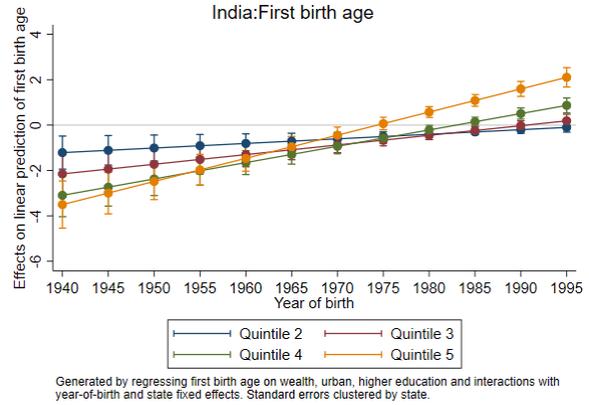
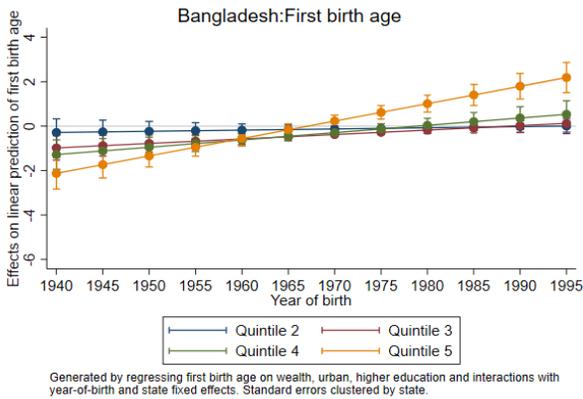


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

iii. First-birth age

Figure A11: The marginal effect of wealth on first birth age

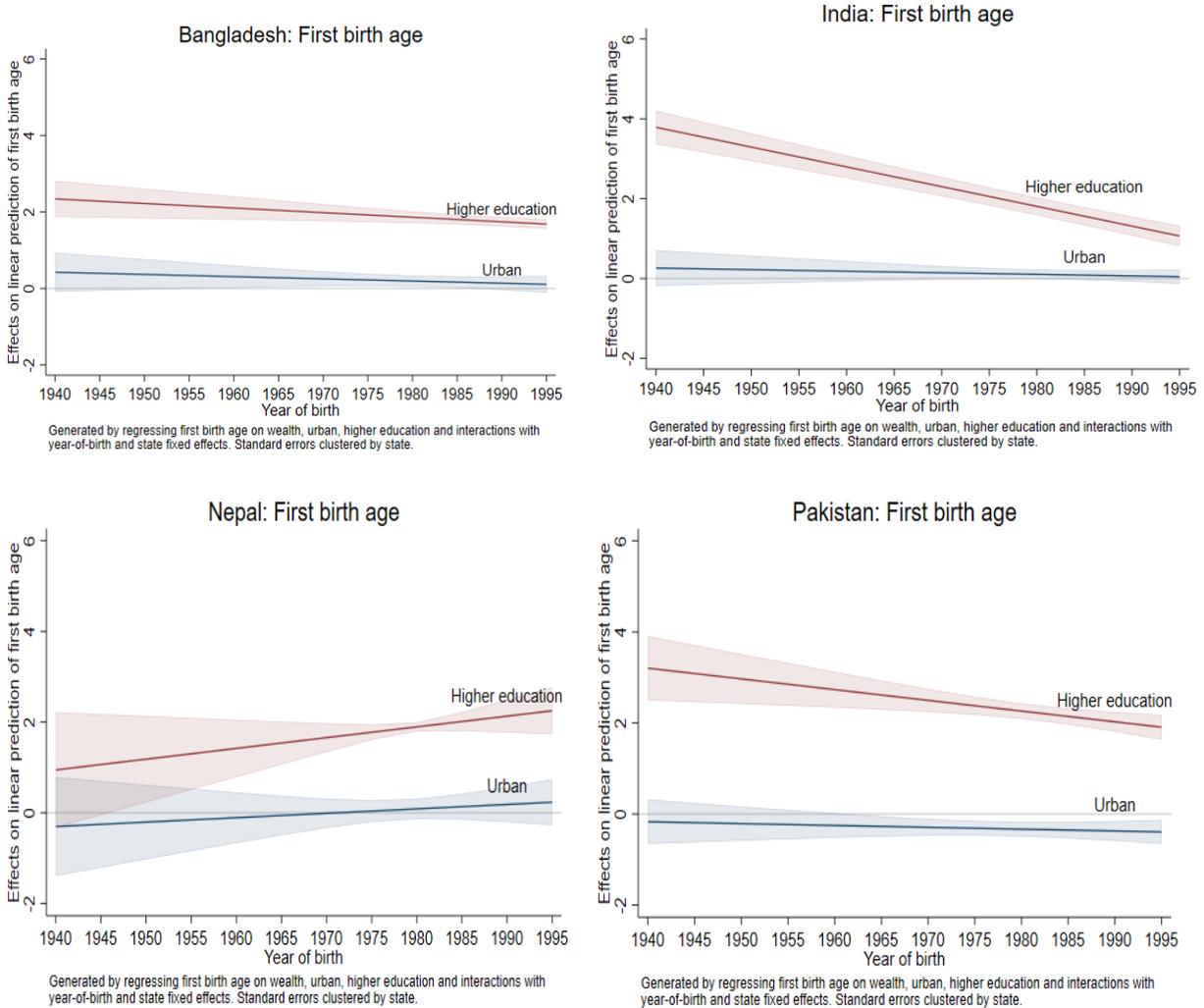
Women in the fifth quintile have fared better than other women in the age at first birth in all four countries. While the differential effect of wealth was initially negative to zero for richer women born in the early years, this effect turns positive and increases faster for the richest women born in more recent years.



Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A12: The marginal effect of education and location on first birth age

Except Nepal, women with higher education and urban women have not fared better in age at first birth. We observe a declining marginal effect of education in Bangladesh, India, and Pakistan.

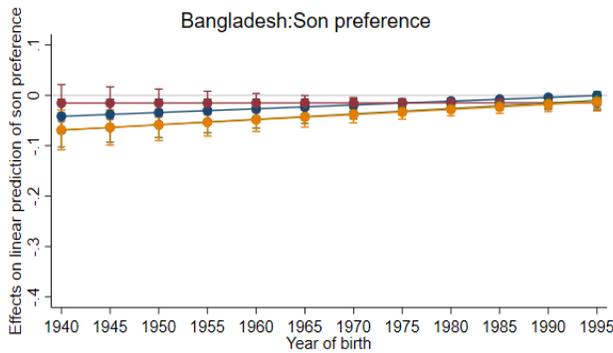


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

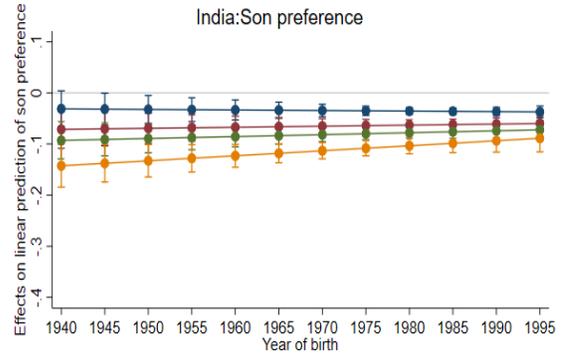
iv. Son preference

Figure A13: The marginal effect of wealth on son preference

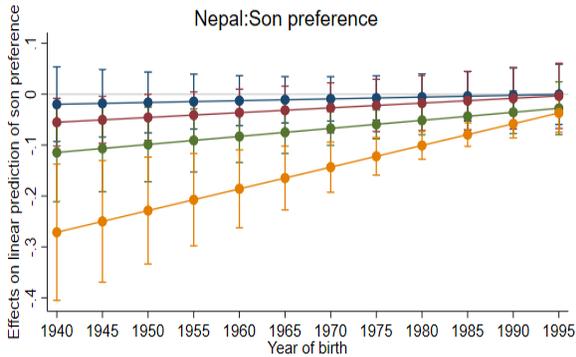
Women in the fifth quintile have not fared significantly better than other women in preferring more sons than daughters. The slope of the marginal effect for the richest quintile is increasing alongside other quintiles for all countries.



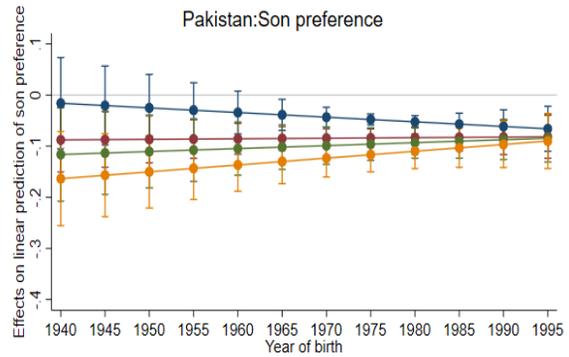
Generated by regressing son preference on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing son preference on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing son preference on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

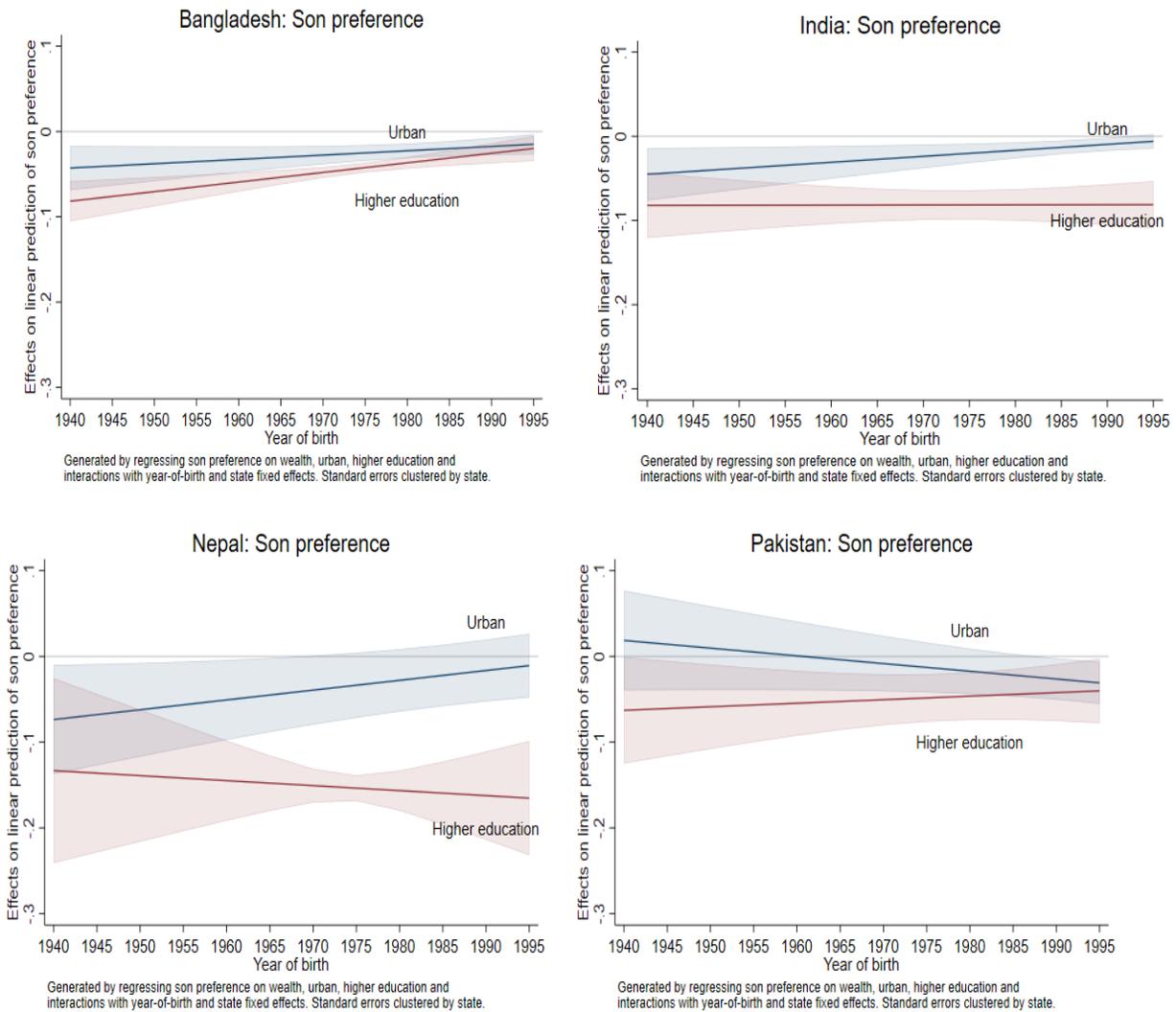


Generated by regressing son preference on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A14: The marginal effect of location and education on son preference

For location, urban women in Nepal and Pakistan have not fared better in terms of son preference. In Nepal and Pakistan, the marginal effect is mostly zero. In Bangladesh and India, the trend is slightly upwards sloping moving towards zero, indicating that urban women had a slightly lower son preference than rural ones, but that this difference is disappearing. For education, except Nepal — where higher educated women made slight progress— more educated women in the other countries have not progressed more than less educated in son preference.

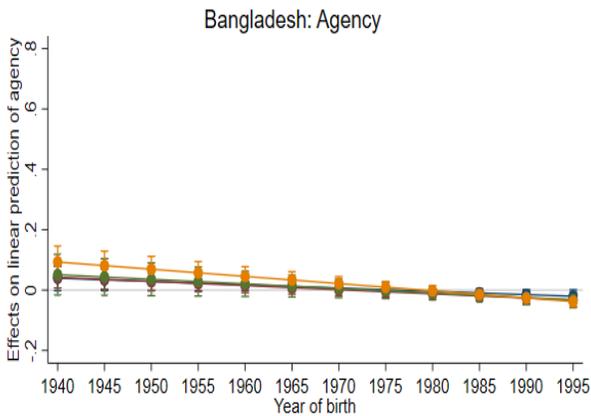


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

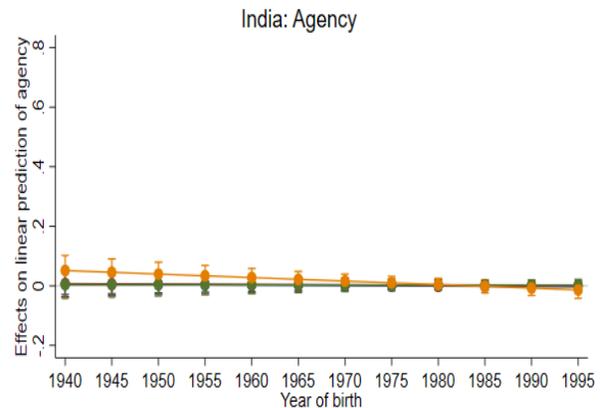
v. Agency

Figure A15: The marginal effect of wealth on agency

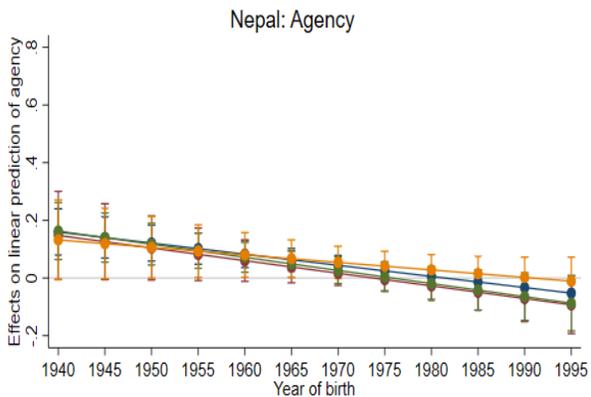
Women in the fifth quintile have not fared differently from other women in participating in at least one decision within the household in all countries. The line of the wealthiest quintile slopes downward, especially in the case of Pakistan. This means that richer women had more agency than poorer women among cohorts born in the past, but that this advantage has eroded in more recently born cohorts.



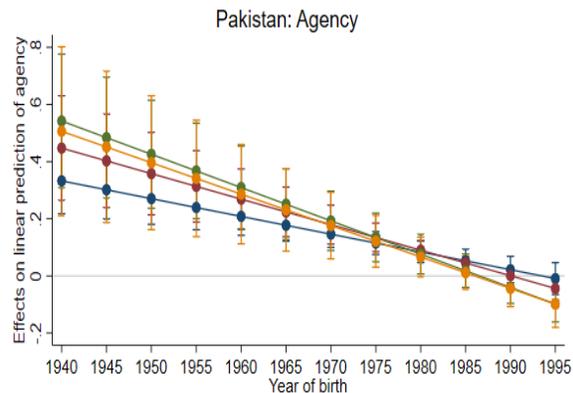
Generated by regressing agency on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing agency on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing agency on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

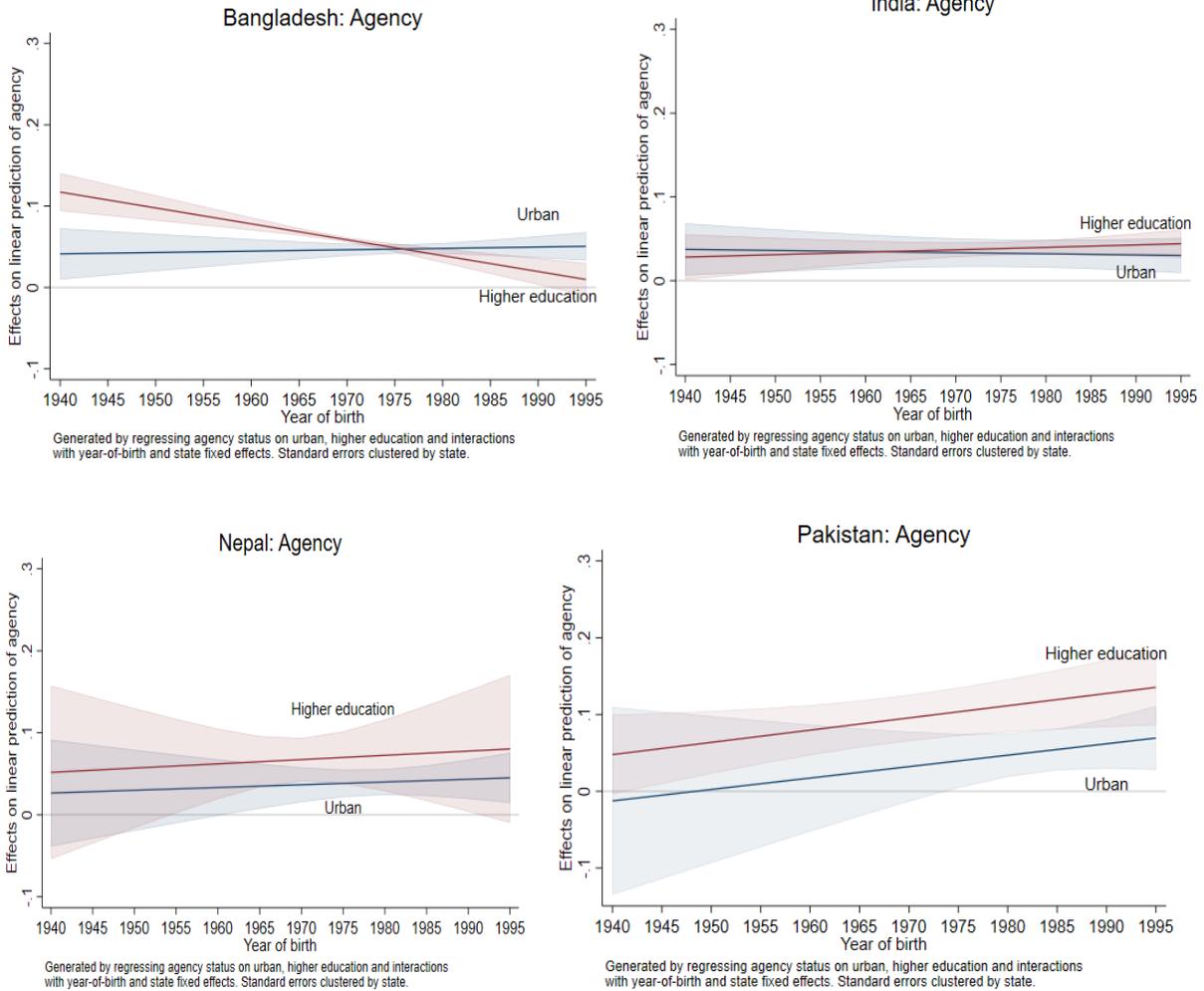


Generated by regressing agency on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A16: The marginal effect of education and location on agency

Except Pakistan, urban women have not progressed faster than rural women in decision making within the household. Similarly, except Pakistan, more educated women have not progressed faster than less educated women in decision making.



Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

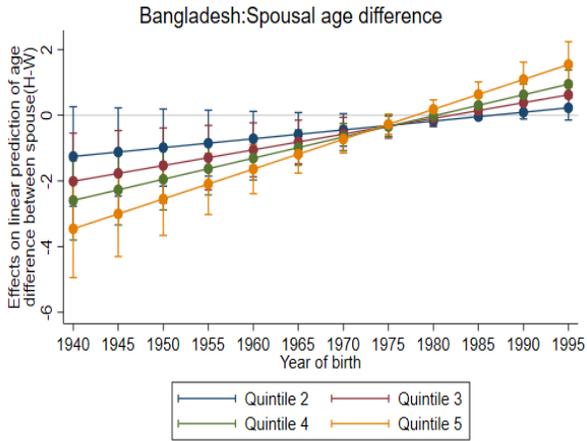
vi. Spousal Difference in Age and Education

Figure A17: The marginal effect of wealth on spousal difference in age

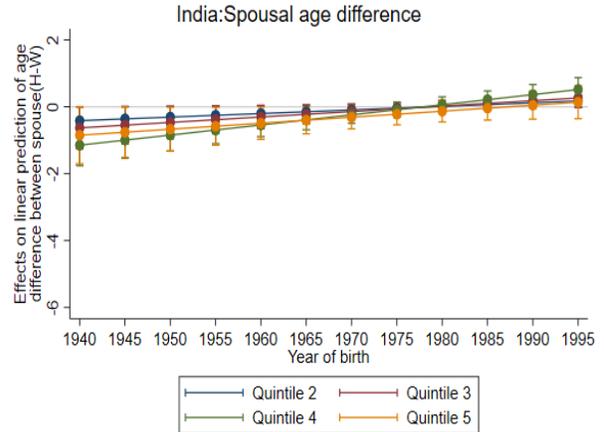
This graph considers a triple difference: women versus men, rich and poor quintiles, and early versus recent cohorts. The first difference is the age gap between husbands and wives measured as the age of the husband minus the age of the wife (this is the left-hand side variable in the equation of page 10 of the main text). The second is the difference between this age gap across quintiles for each cohort (this is the actual marginal effect of wealth on the spousal age gap). For a specific cohort, a negative marginal effect in the graphs below thus means that the difference in age between husbands and wives is smaller for richer quintiles vis-à-vis the poorest quintile. Consider, for example the richest quintile in the 1950 cohort in Bangladesh. The spouse age gap for this quintile is almost 3 years smaller than the spouse age gap for the poorest quintile. For the poorest quintile, this spouse age gap was about 14 years, while for the richest quintile this differential was 10 years²⁸. Now, we can consider the third difference: the (i) age difference between spouses of (ii) a rich quintile versus the poorest quintile (iii) across time. This third difference is 'visible' by considering the slope of the lines. Again, considering Bangladesh as an example, and moving along the yellow (richest quintile) line from left to right, the differential is becoming smaller. From the initial 4 years it becomes 0 years for the 1975 birth cohort, i.e., there is no more difference between richer and poorer cohorts²⁹. So, we can say that richer cohorts (and women in these cohorts) are not progressing – in terms of reducing the age differential between spouses – more rapidly than the poorest cohort. In fact, these richer cohorts seem to be losing the initial 'advantage' of having a smaller age differential. And these losses seem to continue for the most recent cohorts. Also, the pace at which the initial advantage is reduced (the steepness of the lines) is largest for the richest quintiles. And this is true across all countries, even if, in Pakistan and India, everything seems quite compressed around the zero level (no effects at all).

²⁸ Note that the marginal effect of 3 years is not the same as 14 years minus 10 years. This is because the marginal effect is estimated in a regression setting where other controls are held constant, while the 14 and 10 years are unconditional means.

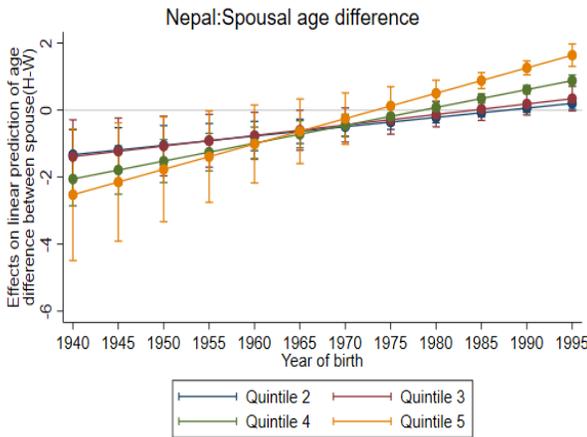
²⁹ Indeed, the unconditional mean for the spouses age gap for the poorest quintile in the 1975 cohort was equal to 10.8 years and that for the richest quintile in the same cohort was equal to 9.1.



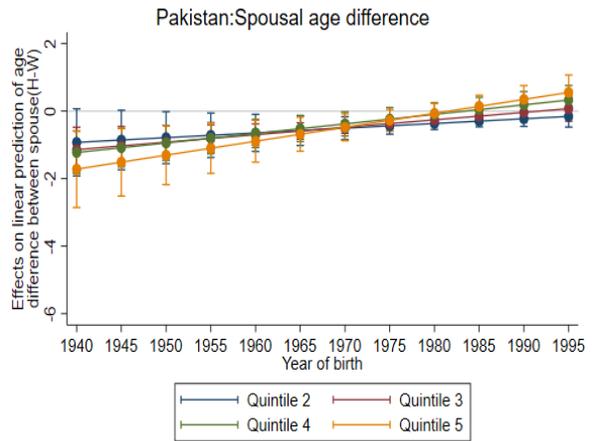
Generated by regressing age difference of spouse on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing age difference of spouse on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing age difference of spouse on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

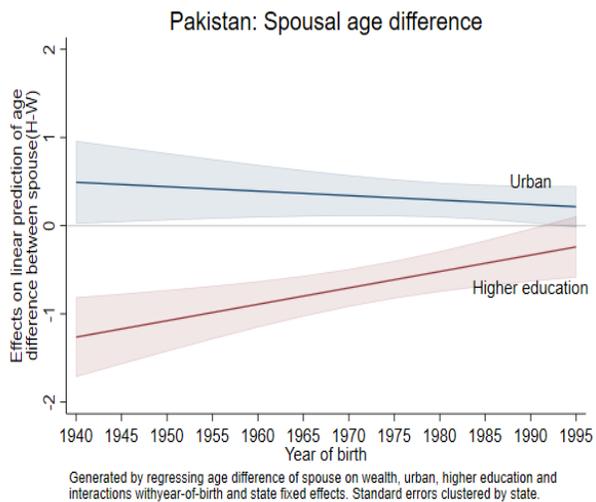
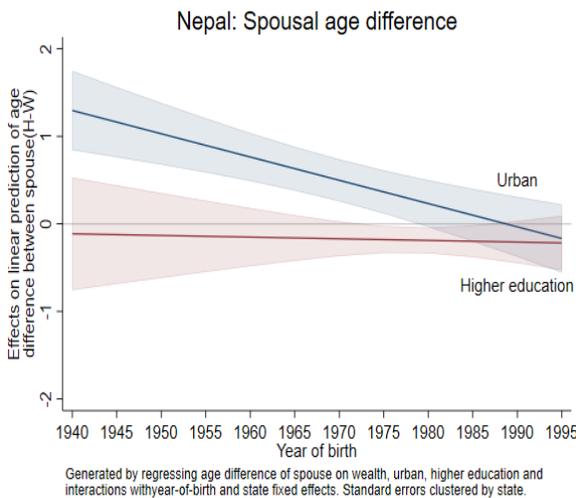
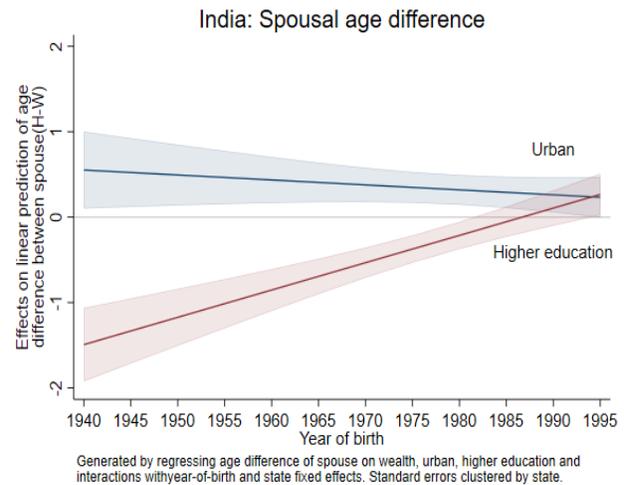
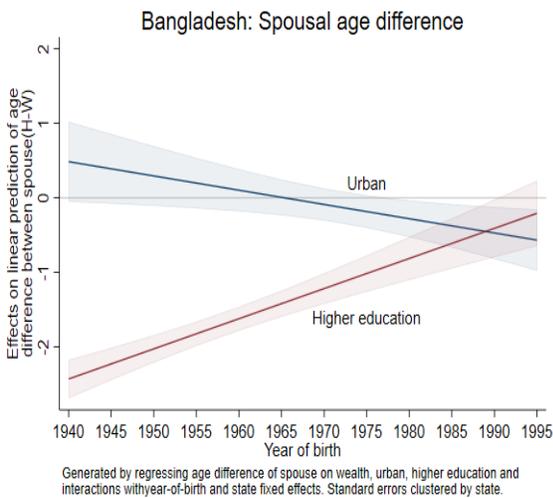


Generated by regressing age difference of spouse on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A18: The marginal effect of education and location on spousal difference in age

The same explanation used for figure A17 applies for these graphs. More educated women have not fared better than less educated women in age gap between spouses. The differential between more educated and less educated groups in terms of the age gap between spouses is shrinking when moving from early to more recent cohorts. Or, in other words, the initial smaller age gaps between educated spouses are converging vis-à-vis the larger age gaps of non-educated spouses. Or, still in other words, the education marginal effect is becoming less and less important. Similarly, except in Bangladesh and Nepal, urban women have not improved their situation in terms of age gap with their husband more than rural women.

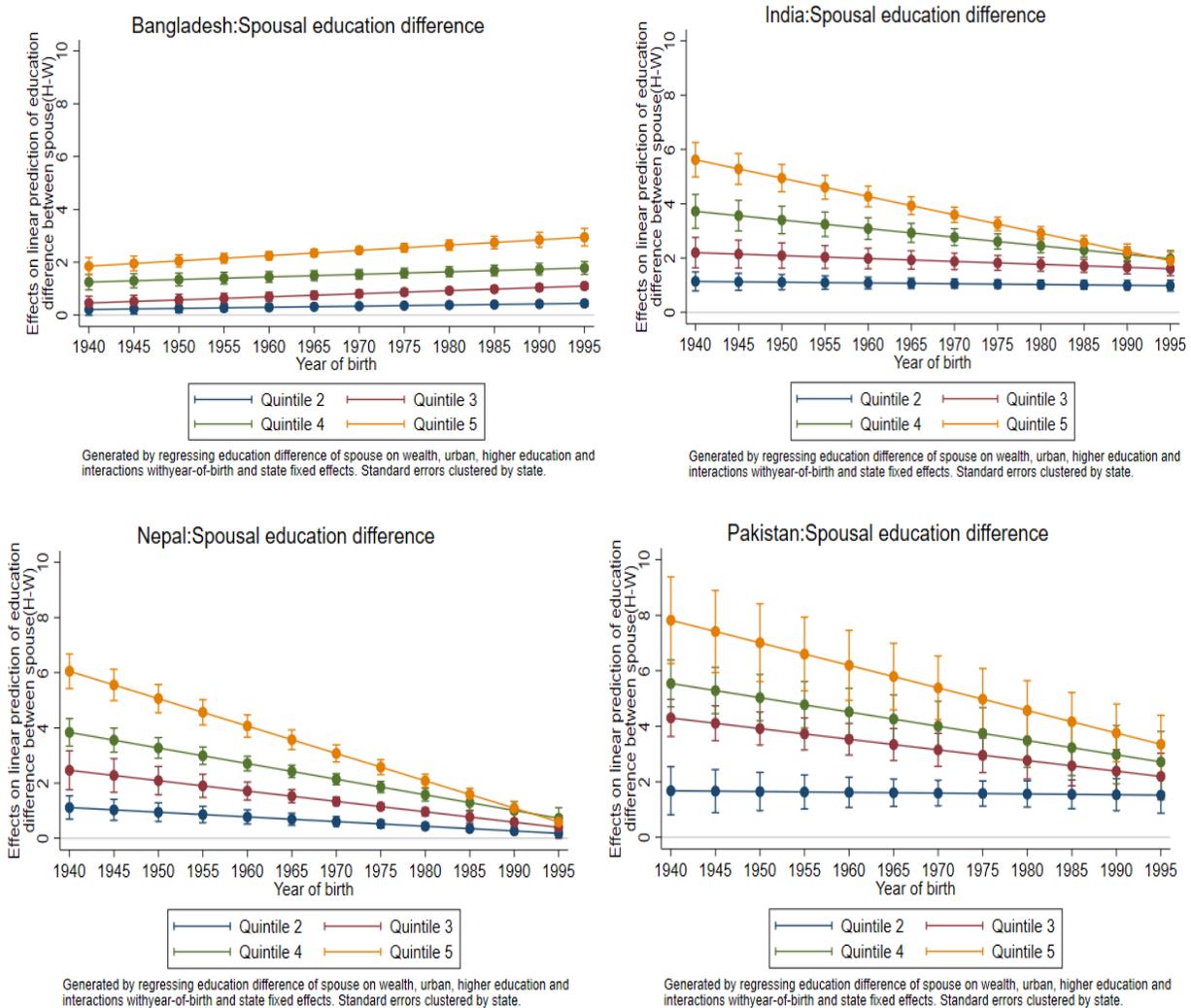


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

vii. Spousal Difference in Education

Figure A19: The marginal effect of wealth on on spousal difference in education

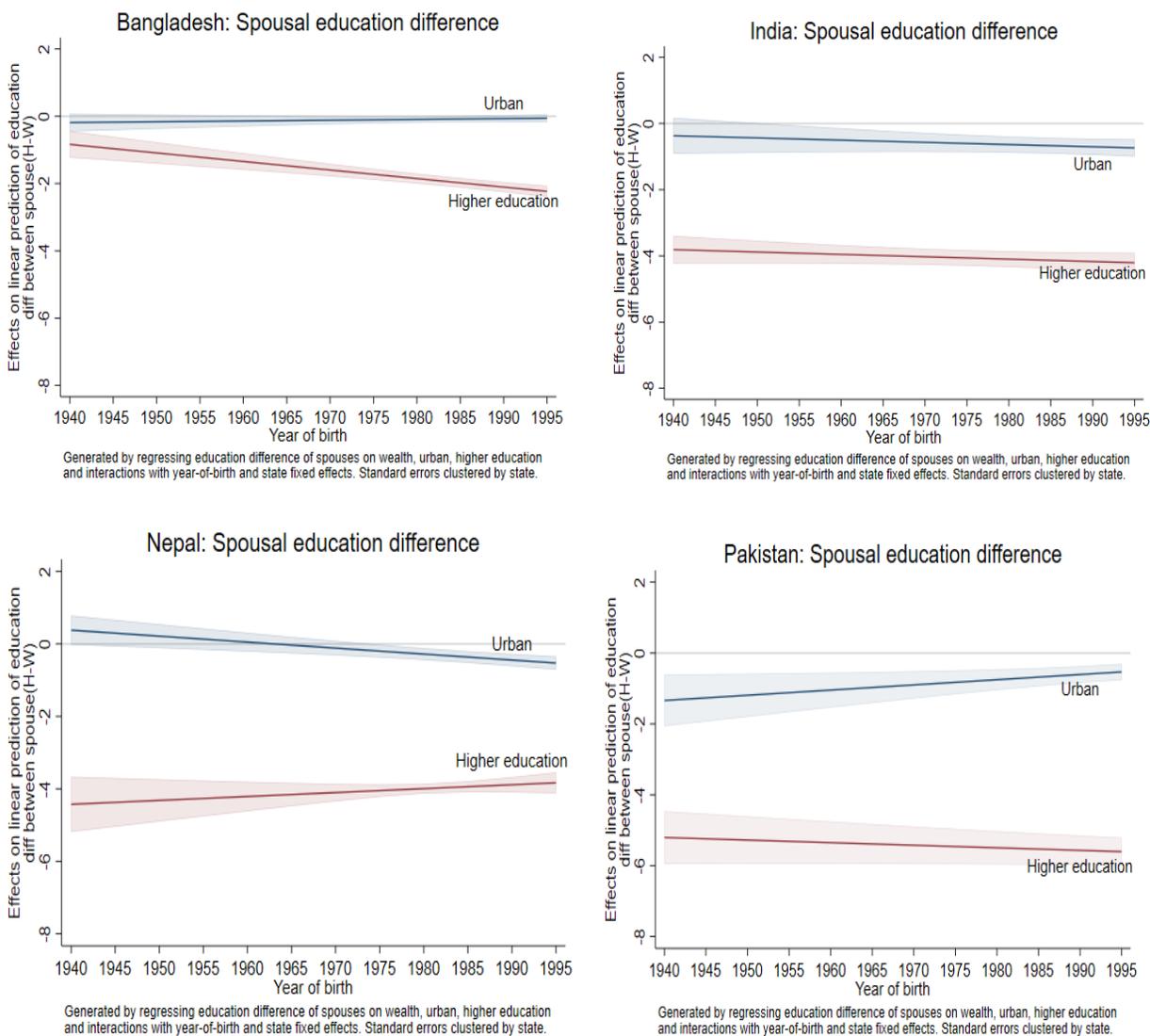
As for the case of the previous set of figures on spousal age difference, this set of figures – about the spousal differentials between husbands and wives in education (expressed as number of years of education of the husband minus years of education of the wife) – is also showing a triple difference. Here the main result is as follows. Richer women, when compared with poorer ones, tend to have a larger educational gap vis-à-vis their husbands. However, this larger gap is eroding in all countries apart from Bangladesh. This happens because the years of education of richer women is increasing faster than the years of education of the poorer women as we move from earlier to more recent cohorts. So, this erodes the spousal educational gap across cohorts, as shown by the downward sloping lines in the graph. As mentioned, in the case of Bangladesh rich and poor women close their educational gap with the men at similar pace across cohorts, so the graph shows almost flat lines for the marginal effects.



Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A20: The marginal effect of education and location on spousal difference in education

The same explanation as in figure A19 applies for these graphs. Only in Bangladesh do we observe that more educated women have experienced progress (a fall) in education gap between spouses. For urbanization, except Nepal and India where the progress is minimal, urban women have not progressed better in spousal gap in education vis-a-vis rural women.

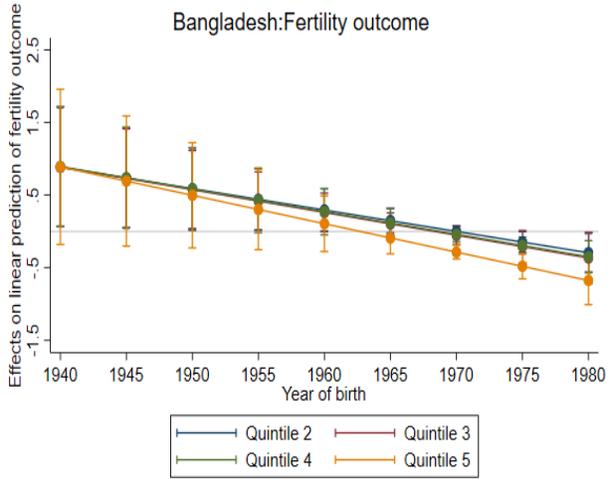


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

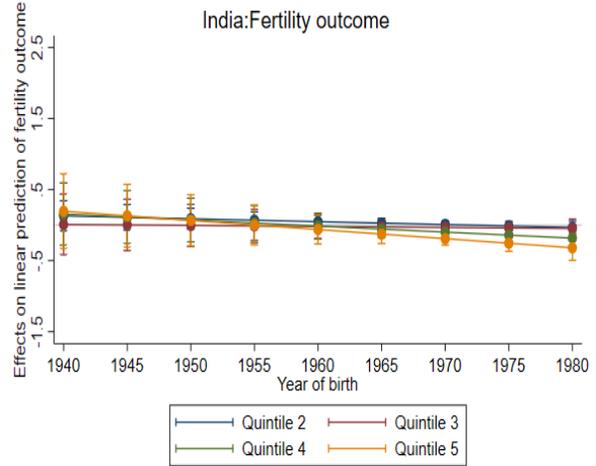
viii. Fertility outcome

Figure A21: The marginal effect of wealth on fertility outcome

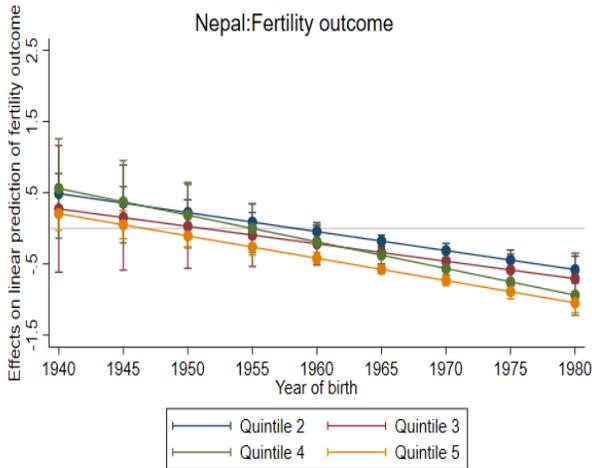
Fertility outcome is expressed as actual minus ideal number of children; hence, a positive number means that a woman has more children than she desires, and this may suggest lack of agency or control over her fertility choices. As for the two previous sets of variables, the figures below represent the marginal effects as a triple difference: (i) actual minus desired number of children (fertility gap), (ii) the fertility gap of rich quintile vis-à-vis the poorest quintile (iii) fertility gap between the rich and poor quintiles across time. Consider the case of Nepal. For the 1955-59 cohort, the differential between actual and desired children was 1.21 for women in the bottom quintile and 1.18 for women in the top quintile. This means that the difference between the rich and poor women's differentials is close to zero (as shown in the graph), or that the gap between actual and desired number of children is the same for both groups of women. For more recent cohorts, for example the one of 1975-79, the differential is 1.41 for the poor women and 0.52 for the rich ones. The difference between these two differentials thus becomes -0.89 (as shown in the graph). This means that while the gap between actual and desired number of children is closing for the richer women, this gap is widening for poorer women. This is reflected in the negative (downward) slope of the yellow line that indicates that women in the top quintile have made some progress in their fertility outcomes. However, note that this improvement is only recorded for the case of Nepal. Even if Bangladesh graph looks similar, the confidence intervals are much larger, and the marginal effect is not statistically different from zero. A similar lack of impact is seen for the cases of India and Pakistan.



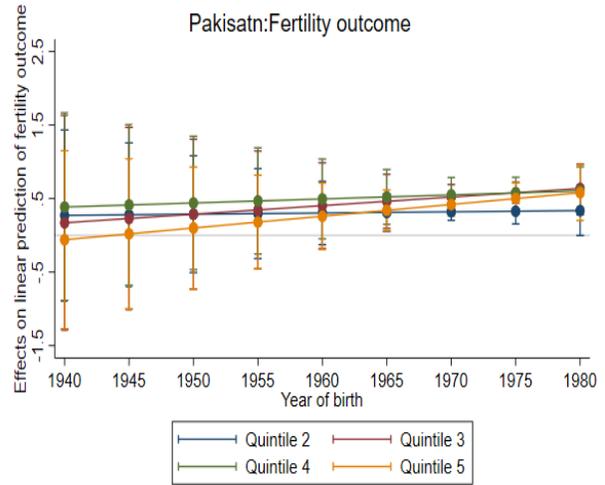
Generated by regressing fertility outcome on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing fertility outcome on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing fertility outcome on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



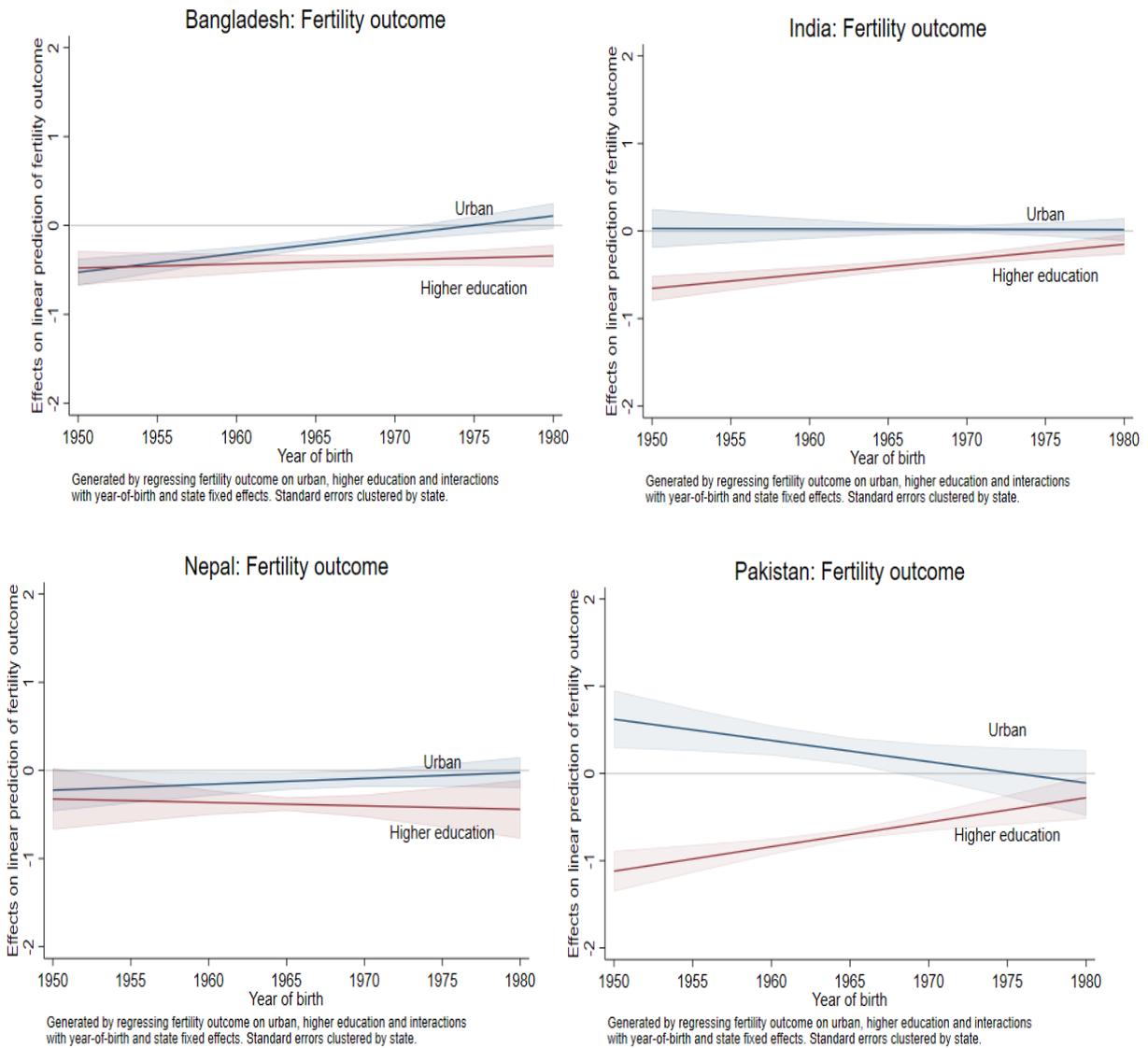
Generated by regressing fertility outcome on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A22: The marginal effect of education and location on fertility outcome

The same explanation as in figure A21 applies for these graphs. In all countries more educated women have not progressed better in fertility outcome than less educated women (although they have a small gap between ideal and actual number of children). In fact, for the cases of India and Pakistan, the more educated women seem to shrink their initial lower gap vis-à-vis the poorest group, i.e. they fared a little

worse. In the case of location, urban women have not fared better than rural ones, apart from those in living in Pakistan.

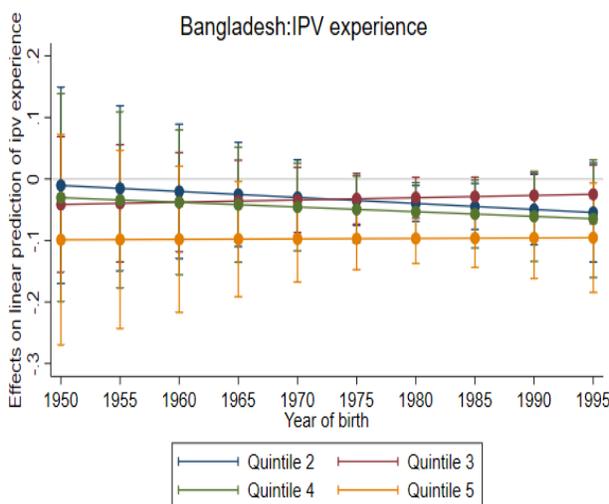


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

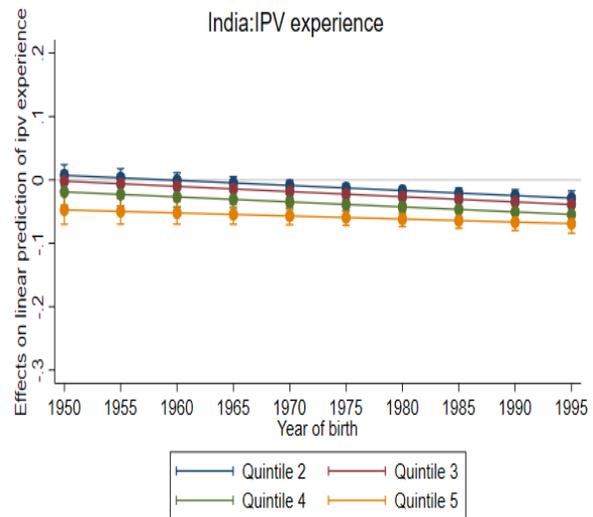
ix. IPV experience

Figure A23: The marginal effect of wealth on IPV experience

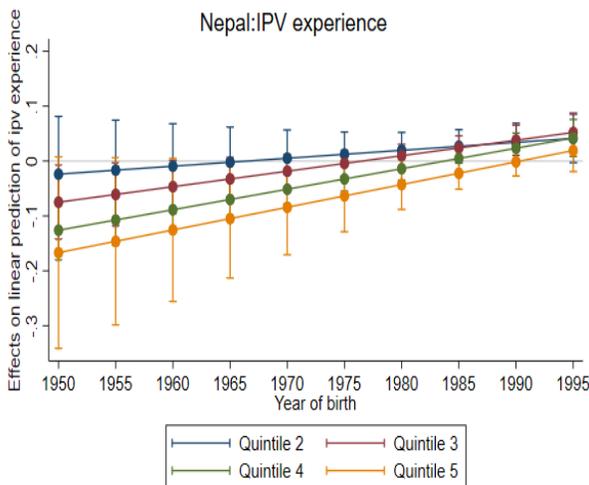
A negative differential means that richer women are less likely to experience IPV. Except for India, where the marginal effects are statistically different from zero for women in the fifth quintile, richer women in the other three countries have not fared better – in terms of levels and trends – than other women in intimate partner violence experience. For the case of India, the marginal effect is downward sloping indicating that the richer women’s better outcome (their lower experience of IPV) vis-à-vis the poorest women is further improving across time.



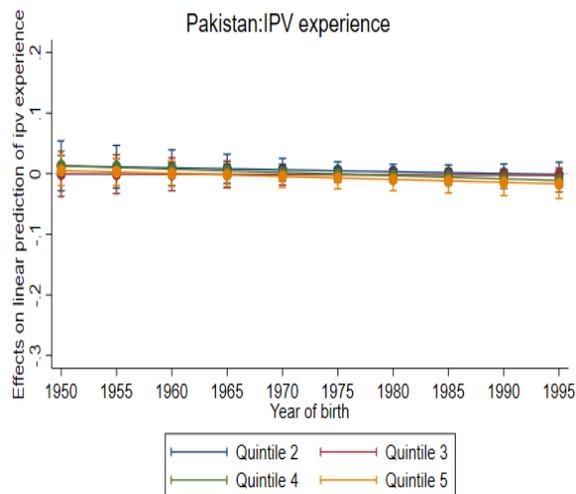
Generated by regressing ipv experience on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing ipv experience on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.



Generated by regressing ipv experience on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

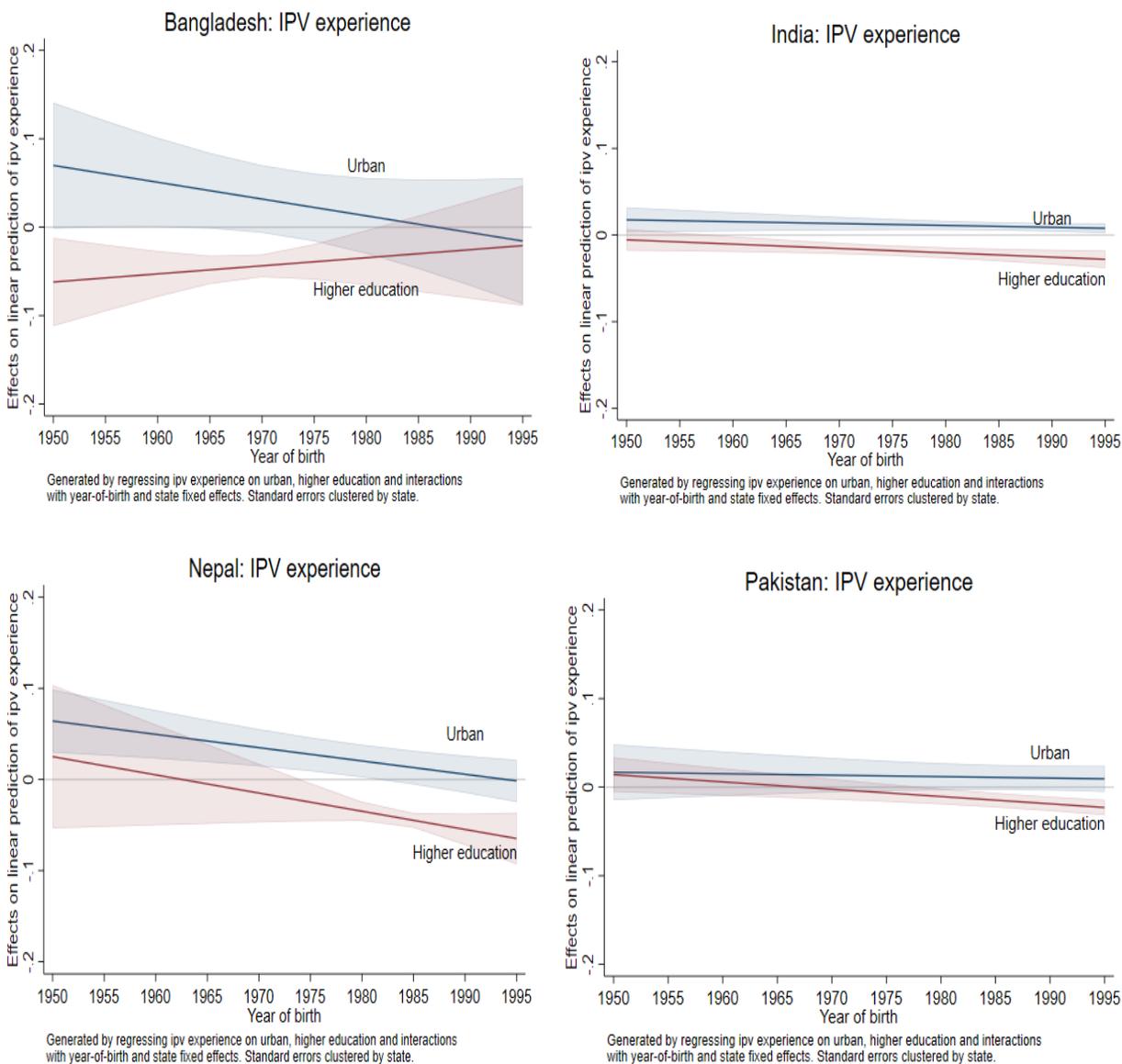


Generated by regressing ipv experience on wealth, urban, higher education and interactions with year-of-birth and state fixed effects. Standard errors clustered by state.

Source: DHS data and authors’ regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A24: The marginal effect of education and location on IPV experience

More educated women in India, Nepal and Pakistan have fared (marginally) better than less educated women in intimate partner violence experience. This is not the case for Bangladesh. Except Nepal, urban women have not fared better in intimate partner violence experience vis-à-vis rural women.

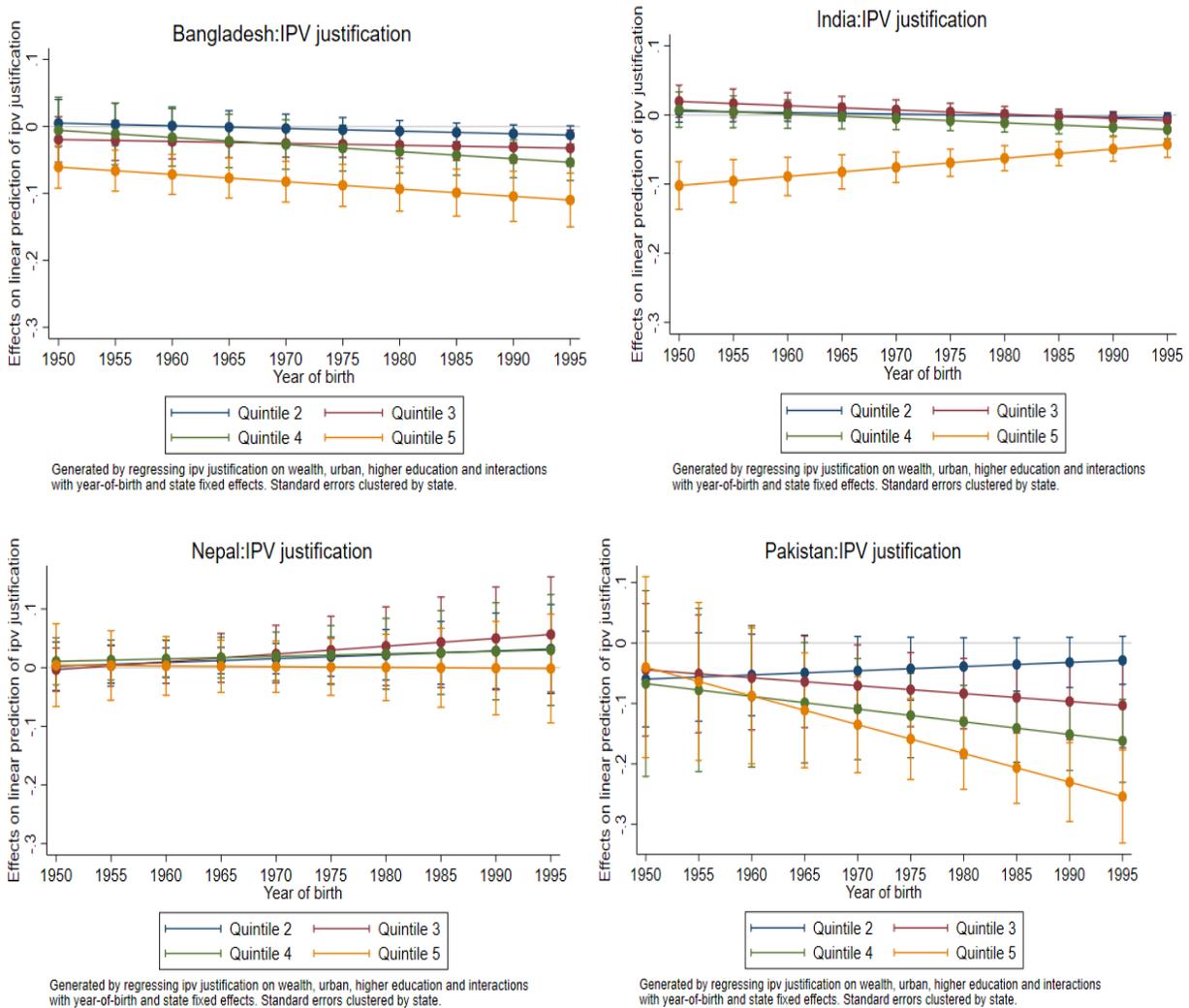


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

x. IPV Justification

Figure A25: The marginal effect of wealth on IPV justification

A negative differential shows that richer women are less likely to justify IPV. In Bangladesh and Pakistan, where the line for the richest women is sloping downward, the richest women are making progress in terms of IPV justification faster than the poorest women. In other words, fewer rich women are justifying IPV than the poorest women as we move from early to more recent cohorts. For India, the marginal effect differential is decreasing showing that the richest women have not fared better than the poorest women over time. For Nepal, the differential is insignificant.

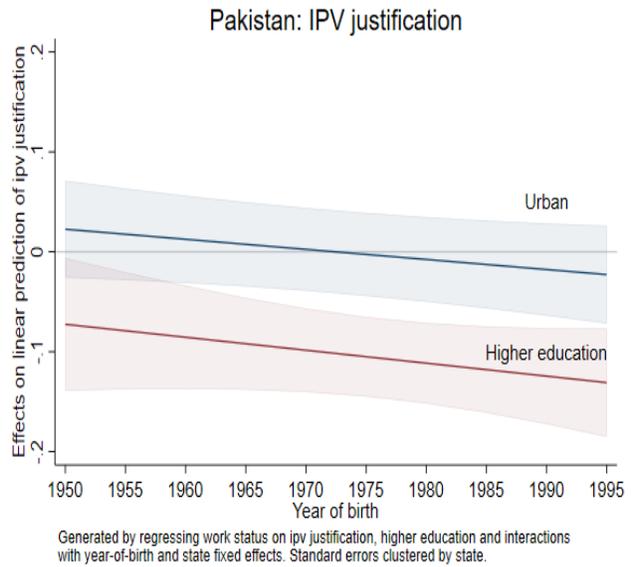
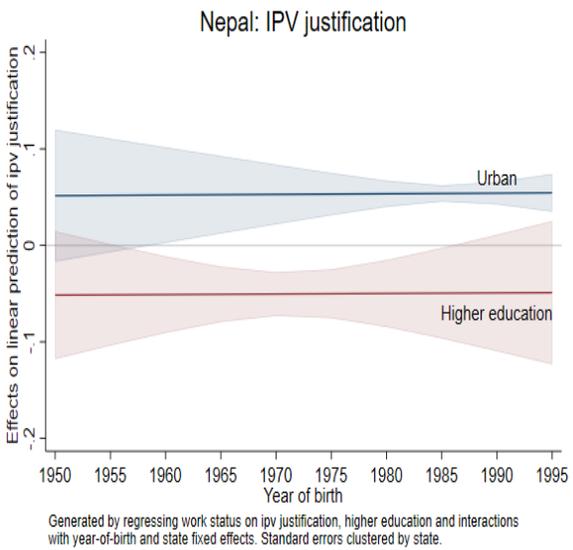
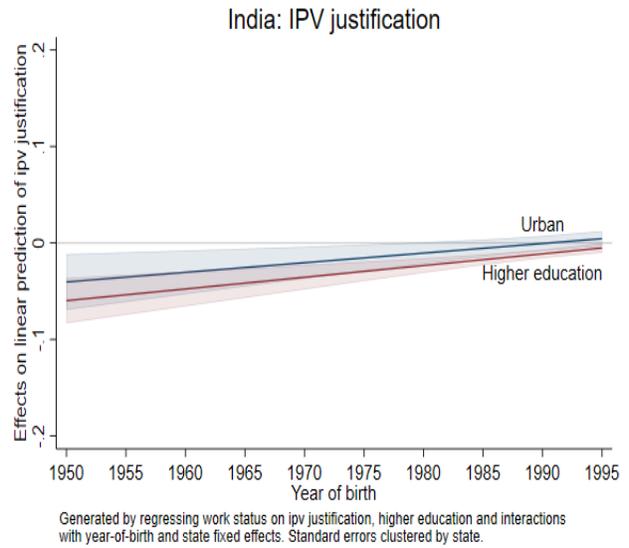
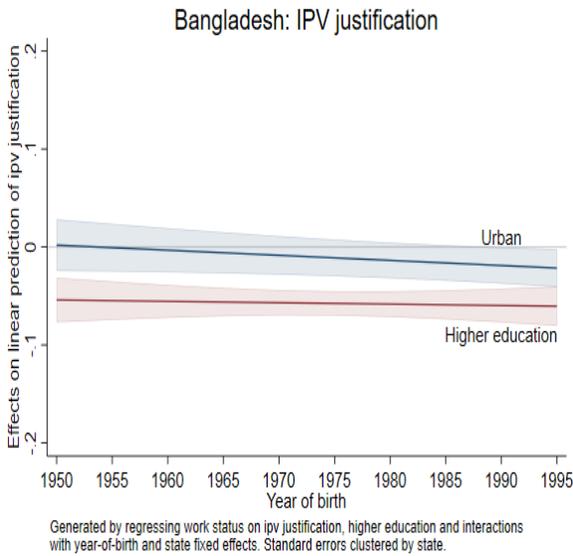


Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.

Figure A26: The marginal effect of education and location on IPV justification

Apart from Pakistan, more educated women have not fared better vis-à-vis less educated women in intimate partner violence justification and, in the case of India, they are doing slightly worse. Similarly,

urban women have not fared better vis-à-vis rural women in intimate partner violence justification over time in all countries.



Source: DHS data and authors' regression results. The marginal effects are measured as percentage points on the vertical axes.