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Harnessing Family Planning to Accelerate Fertility Transition and Realize Pakistan's Demographic Dividend

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Abstract

Pakistan has been slow to reap the benefits of its demographic dividend, despite the onset of fertility decline in the 1990s. However, the opportunity remains significant as total fertility rates have largely stagnated over the past 10 to 15 years, limiting the pace of demographic and economic transformation. This study explores the crucial role of family planning in accelerating fertility transition, enhancing female labor force participation, and unlocking Pakistan's demographic dividend for sustainable economic growth. The analysis draws on nationally representative data from the Pakistan Demographic and Health Survey (PDHS 2017-18), Population Census (2017), Labor Force Surveys, and reports from international and national agencies. Using these diverse data sources alongside economic projections and relevant literature, the study identifies persistent challenges, including high unmet need for contraception and low contraceptive prevalence. The findings underscore that expanding family planning access, investing in human capital, and promoting women's empowerment are essential to overcome stagnation, reduce dependency ratios, and achieve Pakistan's demographic and economic potential. Coordinated policy action is critical for improving health outcomes and fostering long-term sustainable development.

Key Words: Family planning; Fertility transition; Demographic dividend; Economic growth; Female labor force participation; Pakistan

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INTRODUCTION

Demographic transitions hold profound implications for national development trajectories, shaping economic growth, social progress, and political stability. One of the most significant outcomes of this process is the demographic dividend, a period during which a country's working-age population grows relative to the dependent population (children and elderly), potentially unlocking accelerated economic growth. Historical evidence from various regions emphasizes the critical contribution that changing age structures, fostered by declining fertility, can have on a nation's economic prospects.

This dynamic was particularly evident in East Asia during the latter half of the twentieth century. Researchers widely recognize that the "East Asian miracle", in countries such as South Korea, Singapore, Taiwan, and Thailand, was inextricably linked to the demographic dividend (Bloom & Williamson, 1998; Bloom, Canning, & Malaney, 1999; Mason, 2001). Analysts estimate that demographic changes

contributed to between a quarter and two-fifths of the total economic growth in East Asia during this era (Bloom & Williamson, 1998; Mason, 2001).

Pakistan stands at a similar crossroads today. Over the past few decades, the country has witnessed steady, albeit gradual, demographic changes. The proportion of the population in the working-age bracket has been on the rise, while overall dependency ratios have shown a corresponding decrease (Bloom, Chen, & Sathar, 2015; Sathar, Royan, & Bongaarts, 2013; Nayab, 2008). This structural shift presents a unique opportunity for Pakistan to harness its demographic dividend and leapfrog toward higher economic growth. However, capitalizing on this potential is not automatic. It requires a conducive policy environment, substantial investments in human capital, and, crucially, a robust commitment to family planning.

Family planning, defined as enabling individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births, is a fundamental driver of fertility decline. International experiences consistently highlight the wide-ranging economic and social returns on investment in these programs. For example, in Egypt, each dollar allocated to family planning translates into savings of two to six dollars across a suite of health and socioeconomic indicators (Moreland, 2006; PSI, 2018). In Bangladesh, expansion in access to voluntary family planning services has been linked to improved health outcomes, increased educational attainment, higher income levels, and greater asset accumulation among households (Schultz, 2009). Similarly, the United States' family planning initiatives between 1964 and 1973 were associated with a measurable increase, nearly 2.8 percent, in average household incomes (Bailey et al., 2017).

Beyond these economic advantages, family planning wields influence in the political and social spheres. Political demographers suggest that nations with large youth populations often face greater risks of social unrest, instability, and even violence. When fertility falls and the so-called 'youth bulge' contracts, pressures on educational systems, job markets, and public services become more manageable, fostering political stability and social cohesion (Cincotta, Engelman, & Anastasion, 2003). Thus, investments in family planning not only facilitate the demographic transition necessary for economic take-off but also contribute to a more stable and secure political environment.

Despite its promising demographic profile, Pakistan's path toward reaping the demographic dividend has been beset by challenges. While demographic trends suggest the onset of the dividend, several structural impediments, such as sluggish job creation, inadequate investment in education and skills, and limited labor force reallocation, have impeded its full realization (Amjad, 2013). Moreover, the transition itself has been slower than anticipated; recent analyses indicate that the window for optimal demographic rewards, initially projected for 1980-2030, has been extended due to modest declines in fertility and a gradual reshaping of the age structure (Navaneetham & Dharmalingam, 2012). For Pakistan to convert its demographic potential into concrete developmental gains, accelerating the pace of fertility decline must be a centerpiece of public policy.

Strategic investments in family planning alone, however, are not a panacea. To fully leverage the demographic dividend, Pakistan must complement these policies with expanded educational opportunities, particularly for women and girls, vocational training, job creation initiatives, and sound economic management. These complementary measures will ensure that the burgeoning working-age population is

healthy, skilled, and productively engaged in the labor market. Moreover, integrating family planning into broader health and development frameworks can create synergistic effects, amplifying the overall impact on economic growth and social welfare (Population Council, 2016).

FERTILITY TRANSITION IN PAKISTAN

Over the past three decades, Pakistan's population has more than doubled, driven by persistently high fertility rates and rapid population growth. The country's annual growth rate remains among the highest in South Asia, at approximately 2.4%, whereas most other countries in the region have reduced their growth rates to around 1% (PDHS 2017-18). Pakistan's total fertility rate (TFR) has declined from above six children per woman in the late 1980s to 3.6 in recent years (Sathar & Casterline 1998; PDHS 2017-18). While this decline signals the onset of a demographic transition, the process has slowed considerably since the early 2000s, raising concerns that Pakistan is becoming stalled mid-transition.

However, this national picture masks significant provincial disparities that reveal the uneven progress of the demographic transition across the country. According to the PDHS (2017-18), Punjab and Sindh have shown relatively greater success in reducing fertility, reflecting better access to family planning services, higher literacy rates, and more urbanized populations. In contrast, provinces such as Khyber Pakhtunkhwa (KP) and particularly Balochistan continue to lag behind. Balochistan, for instance, has a TFR of 4.0, the highest among all provinces, and the lowest contraceptive prevalence rate at just 17.6%. These gaps are largely attributable to limited access to reproductive health services, deeply rooted conservative norms, and weak health infrastructure.

Figure 1 illustrates TFR trends across South Asia, highlighting Pakistan's slow trajectory. Since the mid-1990s, only Afghanistan has consistently recorded a higher TFR than Pakistan. However, projections indicate that Afghanistan will achieve a lower fertility level by 2045–2050, leaving Pakistan with the region's highest fertility if current trends persist. This slow pace of transition is alarming, as it compounds the challenges of a youth-heavy population structure. The country already faces immense pressure to provide quality education, healthcare, and employment for a growing cohort of adolescents and young adults. Each year, nearly 1.5 million individuals enter the labor force, straining the economy's ability to generate sufficient employment opportunities. With a TFR of 3.6 and a projected gradual decline, Pakistan risks a continued population momentum that could exacerbate unemployment, resource scarcity, and social pressures if not urgently addressed.

One of the principal drivers of Pakistan's high fertility is its persistently low contraceptive prevalence rate (CPR), which remains the lowest in the region except for Afghanistan. Figure 2 shows Pakistan's low CPR and the sizable unmet need for family planning. This gap between women's reproductive intentions and access to contraception is a critical constraint on the country's ability to complete its fertility transition.

Underlying these patterns are strong cultural and religious norms that vary in intensity across regions. In many communities, particularly in areas like Balochistan and KP, large families are culturally valued, and contraceptive use may be discouraged due to religious concerns or social stigma. Male resistance, misinformation, and the belief that family planning conflicts with Islamic teachings

further limit uptake. Yet, there are also promising examples where local religious leaders have endorsed birth spacing on health grounds, demonstrating the potential of culturally tailored approaches to shift attitudes and improve access.

Recognizing this challenge, the Government of Pakistan has pledged to increase CPR to 50% by 2025 and 60% by 2030. These targets aim to accelerate fertility decline through improved availability and accessibility of family planning and reproductive healthcare (NHSR&C and LJCP 2018). Achieving these ambitious goals will require not only scaling up service delivery but also addressing socio-cultural resistance, improving public awareness, and enhancing the quality of family planning programs.

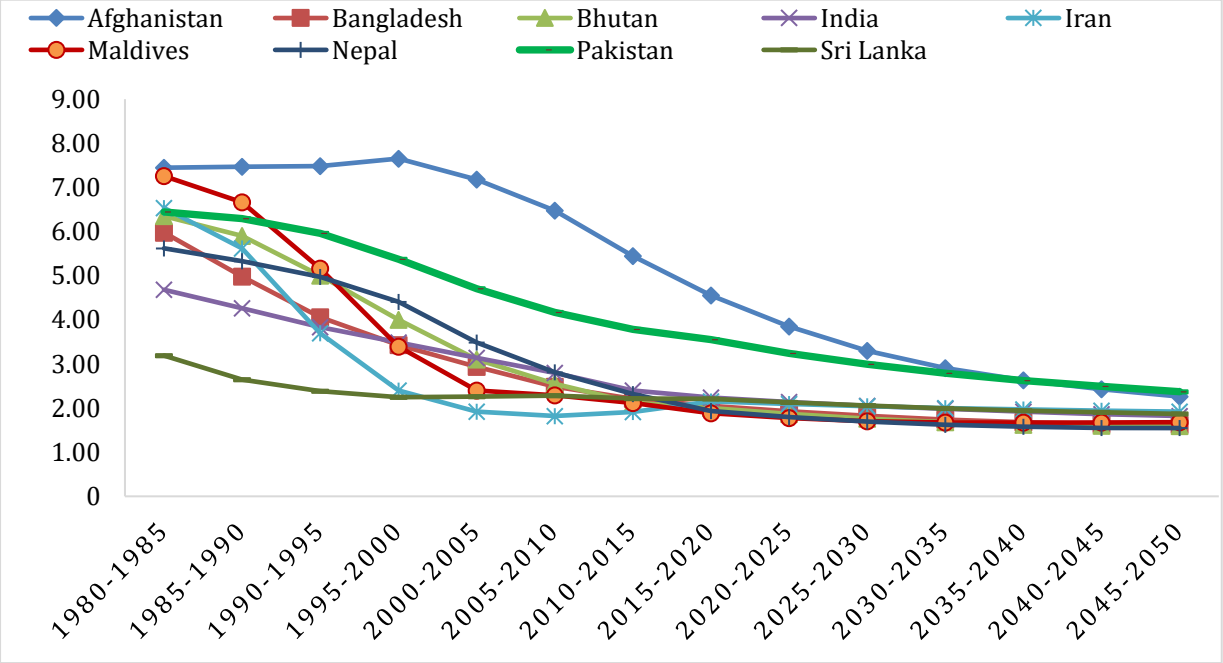

Figure 1: Fertility Trends and Projections in Southern Asia

*Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019.

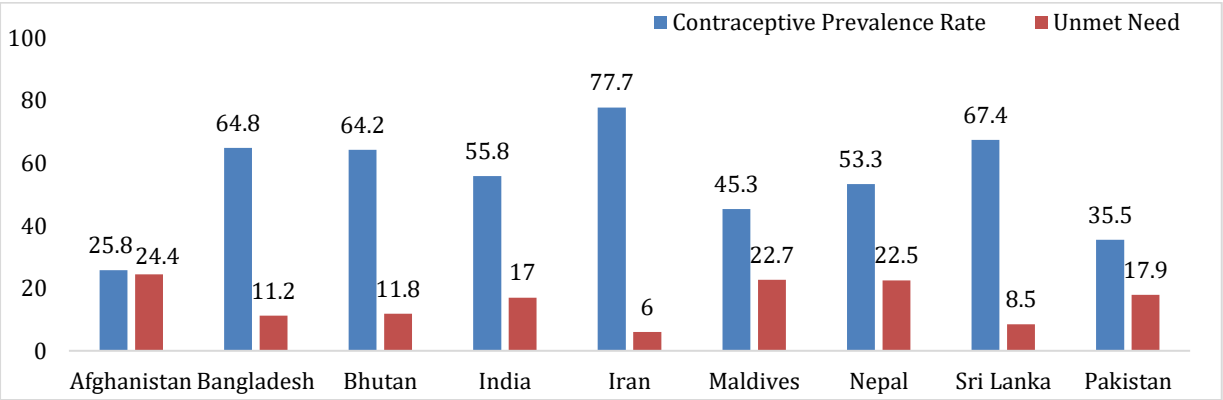

Figure 2: Contraceptive Prevalence and Unmet Need in Southern Asia – 2019

*Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). Estimates and Projections of Family Planning Indicators 2019. New York: United Nations.

A faster reduction in fertility will have transformative demographic and economic implications. Lower fertility reduces the child dependency ratio and increases the share of the working-age population, creating what's known as a "demographic window" of opportunity. Figure 3 clearly illustrates how Pakistan still lags behind the region in reducing its youth dependency burden. Currently, the proportion of children (aged 0–14 years) in Pakistan remains significantly higher than in other South Asian countries, while the working-age share is relatively low. Projections suggest that by around 2050, Pakistan's working-age population will surpass that of neighboring countries, offering a unique but time-limited opportunity to leverage this demographic shift.

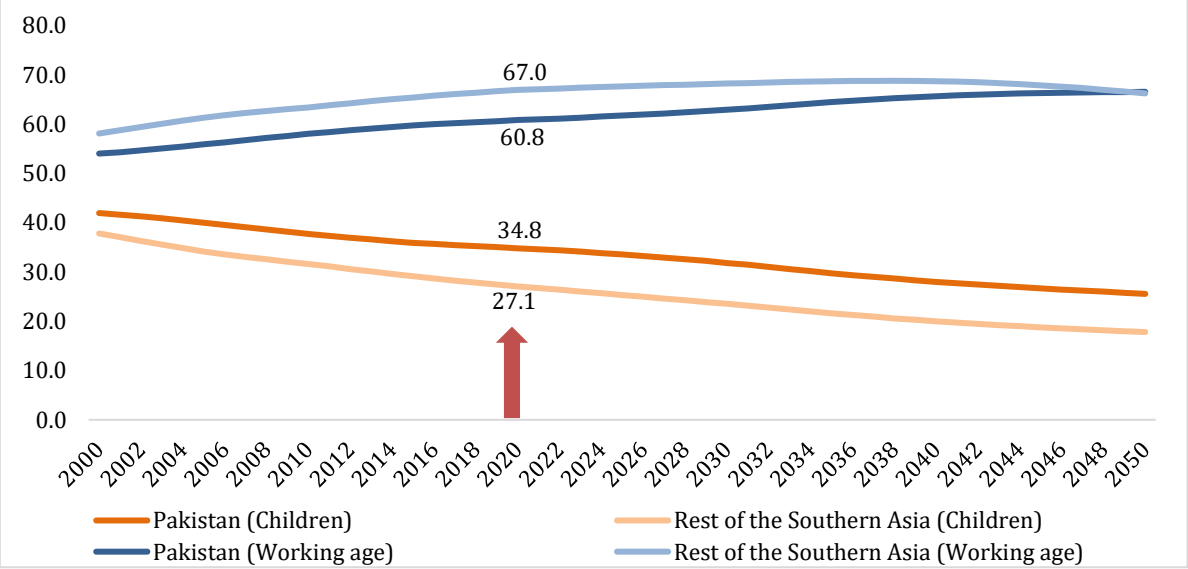

Figure 3: Proportion of Children (age 0–14) and Working-Age (15–64) Population in Pakistan and the Rest of Southern Asia – Trends and Projections (2000–2050)

*Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019.

To fully capitalize on this opportunity, Pakistan must intensify efforts to accelerate fertility decline, particularly through investments in family planning. Global evidence demonstrates that reducing fertility not only slows population growth but also enhances economic development by enabling households and governments to allocate resources more efficiently (Cleland et al. 2006, 2012; PSI 2018). For Pakistan, strengthening family planning programs will be central to completing its stalled fertility transition and creating the conditions necessary to reap the demographic dividend.

THE ROLE OF FAMILY PLANNING IN REAPING THE DEMOGRAPHIC DIVIDEND

Family planning is widely recognized as a powerful catalyst for economic growth and sustainable development. By enabling couples to control the timing and number of their children, family planning reduces population growth rates, alleviates pressure on public resources, and enhances human capital investments. Evidence from

multiple countries shows that satisfying the unmet need for family planning can have transformative macroeconomic effects. For example, a recent study estimated that per capita income in Kenya, Nigeria, and Senegal could increase by 47–87% by 2050 if all women with an unmet need for contraception were able to access family planning services (PSI 2018).

In the context of Pakistan, the economic implications of fertility reduction are particularly profound. According to Bloom, Chen, and Sathar (2015), if Pakistan's demographic structure were to remain unchanged, per capita gross domestic product (GDP) would rise by 194% by 2050 compared to 2015 levels. However, under a scenario of rapid fertility decline, GDP per capita could increase by as much as 430 percentage points above 2015 levels (Figure 4). This stark contrast highlights the substantial economic dividends that could be unlocked through accelerated fertility transition. Simply put, the faster Pakistan reduces fertility, the greater its potential gains in per capita income, household savings, and overall economic productivity.

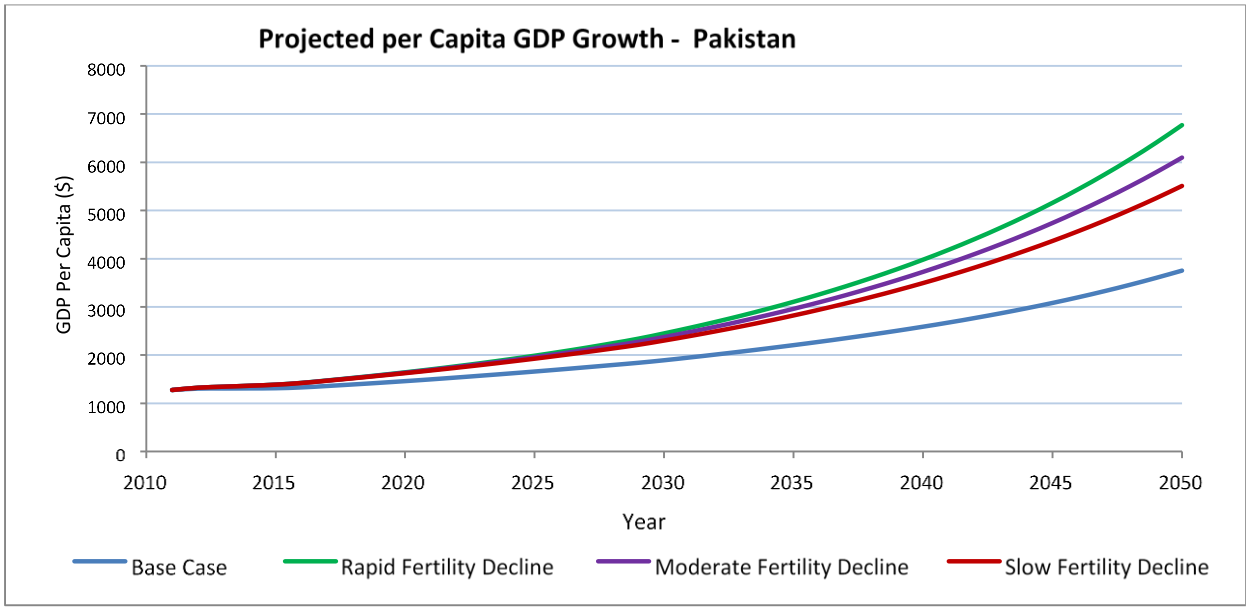

Figure 4. Economic Projections for Pakistan Based on Alternative Demographic Scenarios

Source: Bloom, Chen & Sathar (2015)

Beyond macroeconomic benefits, expanding access to family planning also delivers significant social and health advantages, particularly for women and children. Bloom, Chen, and Sathar (2015) emphasize that millions of Pakistani women, and even larger numbers of children, would experience improvements in health, education, and overall well-being if family planning services were universally accessible. Figure 5 powerfully illustrates the impact of meeting contraceptive demand on unintended pregnancies. According to the figure, meeting the current unmet need for modern contraceptive methods in Pakistan would lead to an 82% reduction in unintended pregnancies, decreasing their number from 3.8 million to just 0.7 million annually. The resulting decline in unplanned births, induced abortions, and miscarriages

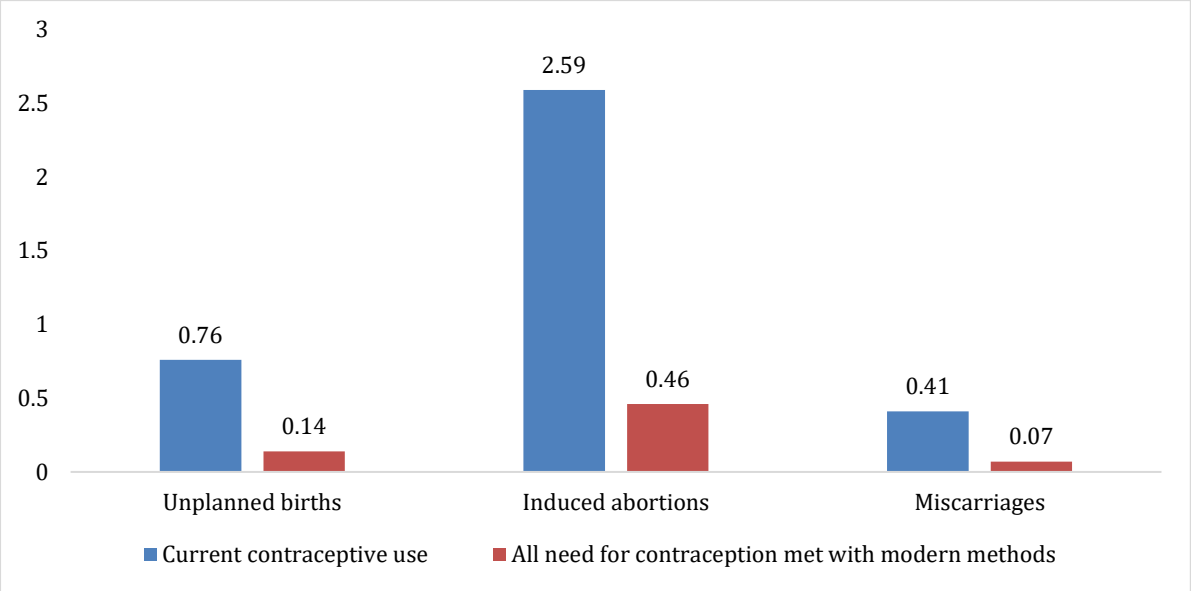

Figure 5: Outcomes of Unintended Pregnancies in Pakistan Under Two Scenarios of Modern Contraceptive Use (Sundaram et al., 2019)

Investments in family planning have ripple effects that extend beyond fertility reduction. Preventing unintended pregnancies improves maternal and child health outcomes, lowers maternal mortality, and reduces the financial burden on healthcare systems (Sathar et al. 2014). These improvements in health and well-being also create favorable conditions for human capital development, as smaller family sizes allow parents, especially mothers, to invest more in each child's education and health.

Despite these benefits, Pakistan's family planning landscape remains characterized by significant gaps in access and demand. Strengthening the national family planning program is essential for expediting the fertility transition and capturing the demographic dividend (Bloom 2013; Bongaarts, Mir, & Mahmood 2013). Data from the Pakistan Demographic and Health Survey (PDHS 2017-18) indicate that among nearly 34 million currently married women of reproductive age, almost half report no demand for family planning methods. Of the remaining women, approximately 8.5 million use modern contraceptive methods, while 3 million rely on less effective traditional methods. Alarmingly, nearly 6 million women have an unmet need for contraception.

Age-specific data in Figure 6 reveal that unmet need is most pronounced among women aged 20–39, the peak reproductive years. Women aged 25–29 account for the highest absolute number of unmet need cases (1.5 million) and also have the largest share of women with no demand for family planning (3.7 million). Addressing these gaps is critical, as this age group contributes significantly to the overall fertility rate. Furthermore, ensuring access to family planning is a key prerequisite for enabling women's broader social and economic engagement. The connection between reproductive autonomy and labor force participation is explored in greater detail in the next section.

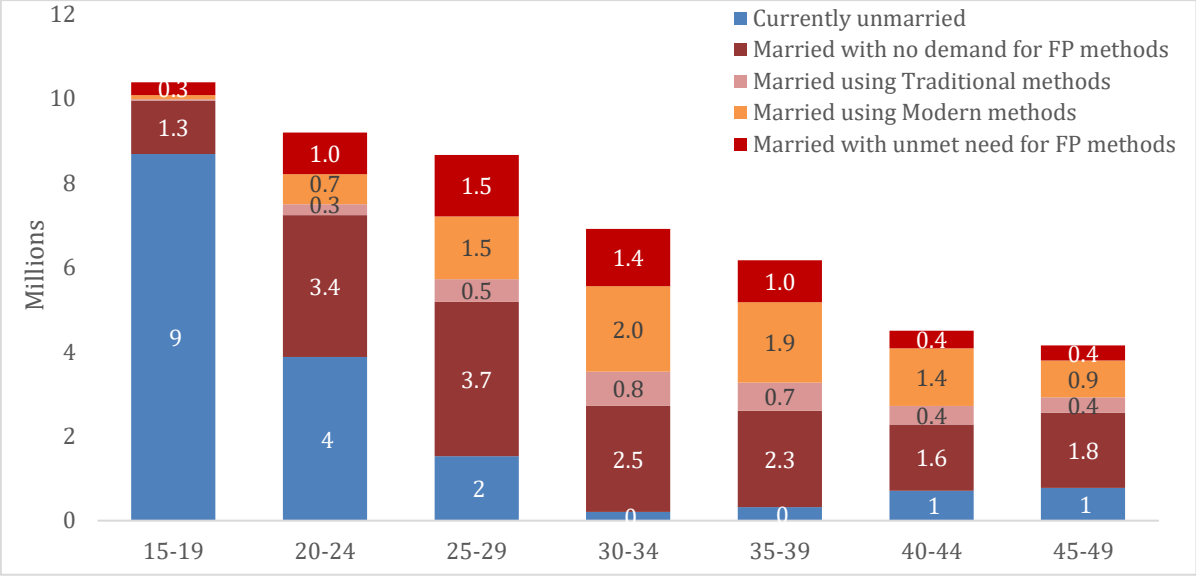

Figure 6. Distribution of Women in Pakistan by Age, Marital Status, and Demand, Use, and Unmet Need for Family Planning

Source: Population Census, 2017 and Pakistan Demographic and Health Survey (PDHS) 2017-2018

FEMALE LABOR FORCE PARTICIPATION AND FAMILY PLANNING

To meet the demands of its rapidly expanding population, Pakistan's economy needs to sustain an annual growth rate of at least 6% (British Council 2009). However, economic growth in recent years has been insufficient to generate adequate employment opportunities for the burgeoning labor force (Asian Development Bank 2015). Each year, approximately 1.5 million young people enter the labor market, contributing to an annual labor force expansion of 3.5%. Pakistan's youth workforce, which is growing at an annual rate of 4.3%, is expanding far more quickly than the regional average of 2.7% in South Asia (Asian Development Bank 2015). This demographic reality underscores the urgency of creating productive employment opportunities to fully capitalize on the demographic dividend.

Women make up nearly half of Pakistan's total population, yet their economic participation remains strikingly low. Harnessing the demographic dividend will be impossible without integrating women into the labor force. As illustrated in Figure 7, the majority of working-age women are neither employed nor actively seeking employment. Among women of reproductive age (15–49 years), more than 44 million remain outside the labor force, while approximately 1.5 million are unemployed. This gendered labor gap not only constrains household incomes but also limits the overall economic potential of the country.

Research shows that each additional birth reduces a woman's labor force participation by nearly two years over her reproductive lifespan (Bloom et al. 2009). By preventing unintended pregnancies, investments in family planning free women from prolonged childbearing responsibilities, enabling them to pursue education, engage in paid work, and contribute to household and national economic growth. This shift also has intergenerational benefits, as families, particularly women, are more likely to invest in the education of their children, including daughters, when family sizes are smaller (Galor & Weil 2000; Bloom et al. 2009; Cleland et al. 2006, 2012).

Figure 7: Distribution of Pakistan's Population in 2017 by Age, Sex, and Employment Status

Source: Population Census of Pakistan, 2017 and Pakistan Labour Force Survey 2014-2015

Family planning also improves workforce productivity by reducing disease burdens. According to Sundaram et al. (2019), meeting all contraceptive needs with modern methods in Pakistan could prevent approximately 350,000 disability-adjusted life years (DALYs), resulting in a healthier and more productive labor force.

However, an increase in female labor force participation will also intensify the demand for new employment opportunities (World Bank 2013). This challenge underscores the importance of complementing family planning initiatives with investments in human capital development, particularly for women. As Sathar (2011) notes, young people in Pakistan, including girls, are highly receptive to skill development and can acquire new competencies with minimal inputs. Nevertheless, Pakistan lacks robust mechanisms for identifying and developing the skills required in emerging economic sectors, leading to a mismatch between labor market needs and workforce capabilities.

Of the 122 million individuals in Pakistan's working-age population, a significant majority reside in rural areas where education, healthcare, and employment opportunities remain scarce (British Council 2009; Hou 2010). Rural women, in particular, are disproportionately excluded from educational and vocational training programs. Expanding family planning services in rural areas is critical, not only to help women achieve their reproductive goals voluntarily but also to enable them to improve their health, invest in their families, and seize employment opportunities. By reducing unplanned pregnancies and lowering fertility, family planning can raise living standards and facilitate the integration of women into the formal labor market.

DISCUSSION

This study highlights the persistent barriers Pakistan faces in accelerating its fertility transition, despite decades of gradual decline. Pakistan's slow progress, driven by persistently low contraceptive use and high unmet need (NIPS & ICF, 2019; Sathar & Casterline, 1998) demonstrates that family planning remains a critically underutilized tool for national development. This study reinforces that these demographic delays carry economic, social, and health costs that are increasingly difficult to ignore.

While targets like raising CPR to 60% by 2030 are laudable, they often outpace current institutional capacities. Pakistan's health system suffers from chronic underfunding, fragmented service delivery, and weak interprovincial coordination. Supply chains are inconsistent, and trained personnel are often unavailable in remote districts. Political commitment also fluctuates with changes in government.

Globally, evidence shows that effective family planning policies can dramatically hasten fertility declines and yield significant economic gains (Cleland et al., 2006; Moreland, 2006). In this context, Pakistan's stagnation signals missed opportunities both for boosting economic growth and for improving health outcomes.

Findings also emphasize that social and cultural norms, especially surrounding gender and fertility, continue to suppress demand for contraception. This suggest that supply-side interventions alone are insufficient. Shifting deep-seated norms requires multifaceted strategies, robust community engagement, mass communication, and policy advocacy (Population Council, 2016; Cleland et al., 2006). Additionally, existing regional disparities in contraceptive uptake and unmet need suggest that the one-size-fits-all policy model has failed to account for Pakistan's diverse sociocultural and economic landscape. Provinces like Balochistan and KP require far more investment in outreach, community engagement, and religious leader involvement than more urbanized Punjab or Sindh. Policy effectiveness will depend on provincial devolution and capacity-building at local levels.

Beyond fertility reduction, family planning produces broad benefits, ranging from improved maternal and child health to increased educational investment and enhanced women's economic participation (Bloom et al., 2009; Galor & Weil, 2000; Cleland et al., 2012; PSI, 2018). However, Pakistan's capacity to fully capitalize on these benefits remains constrained by low female labor force participation, limited vocational training, and sluggish job growth (British Council, 2009; World Bank, 2013). These findings reinforce arguments that family planning programs must be integrated into a broader set of policies aimed at human capital development and gender equity (Sathar, Royan, & Bongaarts, 2013). Strengthening family planning in isolation will not be enough unless paired with systemic investments in women's education, skills, and employment opportunities.

CONCLUSION

To unlock the demographic dividend, Pakistan must focus on the three core priorities below.

Strategic Priority 1: Expand Family Planning Access

To accelerate fertility decline, Pakistan must prioritize expanding contraceptive access in high-need provinces such as Balochistan and Khyber Pakhtunkhwa. Family planning should be fully integrated into primary healthcare, with consistent contraceptive supply at the community level. Strengthening the Lady Health Worker

network, through enhanced training, supervision, and logistics, is essential. Addressing socio-cultural resistance requires engagement with local influencers, including religious leaders. Additionally, continuous mass media campaigns in regional languages can support demand generation and shift fertility norms.

Strategic Priority 2: Invest in Women's Human Capital

Fertility transition is closely tied to female education and labor market integration. Expanding secondary schooling for girls, particularly in underserved areas, is critical. Technical and vocational training programs should be scaled with a gender-sensitive approach. Family planning must also be framed as a right, ensuring informed choice and reproductive autonomy. Supportive labor policies, such as maternity protection, flexible work, and childcare, are necessary to facilitate women's economic participation.

Strategic Priority 3: Strengthen Institutional and Economic Foundations

Effective demographic policy requires institutional capacity and economic absorption. Job creation, especially for youth and women, should be embedded in macroeconomic planning. Health governance reforms, such as increased funding, decentralization, and performance-based management are vital for service delivery. Establishing a national monitoring system to track contraceptive prevalence, unmet need, and service equity will enable timely, data-driven interventions.

Together, these priorities form a cohesive roadmap for transforming Pakistan's demographic challenge into an opportunity for inclusive and sustainable development.

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Conflicts of Interest

None declared.

Author's Contributions

All the authors equally contributed to this work.

REFERENCES

Amjad, R. (2013). Why Has Pakistan Not Reaped Its Demographic Dividend? In Z. A. Sathar, R. Royan, & J. Bongaarts (Eds), *Capturing the Demographic Dividend in Pakistan* (pp. 41-53). Islamabad: Population Council.

Asian Development Bank. (2015). "*Economic Analysis (Summary)". Available at:* https://www.adb.org/sites/default/files/linked-documents/cps-pak-2015-2019-ea.pdf

Bailey, M. J., Malkova, O., & McLaren, Z. M. (2017). *Does Parents' Access to Family Planning Increase Children's Opportunities? Evidence from the War on Poverty and the Early Years of Title X* (No. w23971). National Bureau of Economic Research.

Bloom, B. R., Canning, D., & Malaney, P. (1999). *Demographic Change and Economic Growth in Asia* (No. 15A). Center for International Development at Harvard University.

Bloom, D. E., & Williamson, J. G. (1998). Demographic transitions and economic miracles in emerging Asia. *The World Bank Economic Review*, 12(3):419-455.

Bloom, D. E., Canning, D., Fink, G., & Finlay, J. E. (2009). Fertility, female labor force participation, and the demographic dividend. *Journal of Economic growth*, 14(2):79-101.

Bloom, D.E. (2013). *Foreword*. In Z. A. Sathar, R. Royan, & J. Bongaarts (Eds), *Capturing The Demographic Dividend in Pakistan* (pp. vii- ix). Islamabad: Population Council.

Bloom, D.E., Chen S., & Sathar, Z.A. (2015). *Prospects for Reaping a Demographic Dividend in Pakistan*. Geneva: World Economic Forum.

Bongaarts, J., Mir, A. M., & Mahmood, A. (2013). Policies for Capturing the Demographic Dividend in Pakistan. In Z. A. Sathar, R. Royan, & J. Bongaarts (Eds), *Capturing the Demographic Dividend in Pakistan* (pp. 91-99). Islamabad: Population Council.

British Council. (2009). *Pakistan: The Next Generation, Report*. Islamabad: British Council.

Cincotta, R. P., Engelman, R., & Anastasion, D. (2003). *The security demographic: Population and civil conflict after the Cold War*. WASHINGTON DC: Population Action International.

Cleland, J., Bernstein, S., Ezeh, A., Faundes, A., Glasier, A., & Innis, J. (2006). Family planning: the unfinished agenda. *The Lancet*, 368(9549):1810-1827.

Cleland, J., Conde-Agudelo, A., Peterson, H., Ross, J., & Tsui, A. (2012). Contraception and health. *The Lancet*, 380(9837):149-156.

Galor, O., & Weil, D. N. (2000). Population, technology, and growth: From Malthusian stagnation to the demographic transition and beyond. *The American Economic Review,* 90(4):806–828.

Hou, X. (2010). Challenges for Youth Employment in Pakistan: Are They Youth-Specific? *The Pakistan Development Review*, 49(3):193-212

Mason, A. (2001). *Population change and economic development in East Asia: Challenges met, opportunities seized*. Stanford University Press.

Moreland, S. (2006). *Egypt's population program: assessing 25 years of family planning*. Brief prepared for the US Agency for International Development (USAID). Available at: https://pdfs.semanticscholar.org/f8eb/637d14cd8985d74eef720b5b78b465c0cbe4.pdf

National Institute of Population Studies (NIPS) [Pakistan] and ICF. (2019). Pakistan Demographic and Health Survey 2017-18. Islamabad, Pakistan, and Rockville, Maryland, USA: NIPS and ICF.

Navaneetham, K., & Dharmalingam, A. (2012). A review of age structural transition and demographic dividend in South Asia: Opportunities and challenges. *Journal of Population Ageing*, 5(4):281-298.

Nayab, D. (2008). Demographic Dividend or Demographic Threat in Pakistan? *The Pakistan Development Review*, 47(1):1-26.

NHSR&C and LJCP. (2018). Investing in Sustainable Population Growth - National Symposium on Alarming Population Growth in Pakistan: Call for Action. Islamabad: Ministry of National Health Services Regulations and Coordination (NHSR&C) & Law and Justice Commission of Pakistan (LJCP).

Pakistan Bureau of Statistics (PBS). (2015). *Labour Force Survey 2014-2015*. Islamabad: Statistics Division, Pakistan Bureau of Statistics, Government of Pakistan.

Pakistan Bureau of Statistics (PBS). (2017). *6th Population and Housing Census 2017*. Pakistan Bureau of Statistics, Government of Pakistan: Islamabad, Pakistan.

Population Council. (2016). *Landscape Analysis of Family Planning Situation in Pakistan*. Islamabad: Population Council.

PSI. (2018). *Investing in Family Planning for A Lifetime of Returns*. Available at: https://www.psi.org/2018/11/investing-in-family-planning-for-a-lifetime-of-returns/

Sathar, Z. A. and Casterline, J. (1998). *The onset of fertility transition in Pakistan. Population Development Review*. 24(4):773-796.

Sathar, Z. A., Royan, R., & Bongaarts, J. (eds) (2013). *Capturing The Demographic Dividend in Pakistan*. Islamabad: Population Council.

Sathar, Z. A., Singh, S., Rashida, G., Shah, Z., & Niazi, R. (2014). Induced Abortions and Unintended Pregnancies in Pakistan. *Studies in family planning*, 45(4):471-491.

Sathar, Z.A. (2011). Demographic Doom or Demographic Dreams: Pakistan at the Crossroads. In M. Kugelman and R. M. Hathaway (Eds), *Reaping the Dividend: Overcoming Pakistan's Demographic Challenges* (pp. 32-45). Woodrow Wilson International Center for Scholars.

Schultz, T. P. (2009). *How does family planning promote development? Evidence from a social experiment in Matlab, Bangladesh, 1977-1996*. Yale University, Economic Growth Center, New Haven, Conn.

Sundaram, A., Hussain, R., Sathar, Z.A., Hussain, S., Pliskin, E., and Weissman E. (2019). Adding It Up: Costs and Benefits of Meeting the Contraceptive and Maternal and Newborn Health Needs of Women in Pakistan. New York: Guttmacher Institute.

World Bank. (2013). *Pakistan - Finding The Path to Job-Enhancing Growth: A Country Economic Memorandum*. Washington DC: World Bank.