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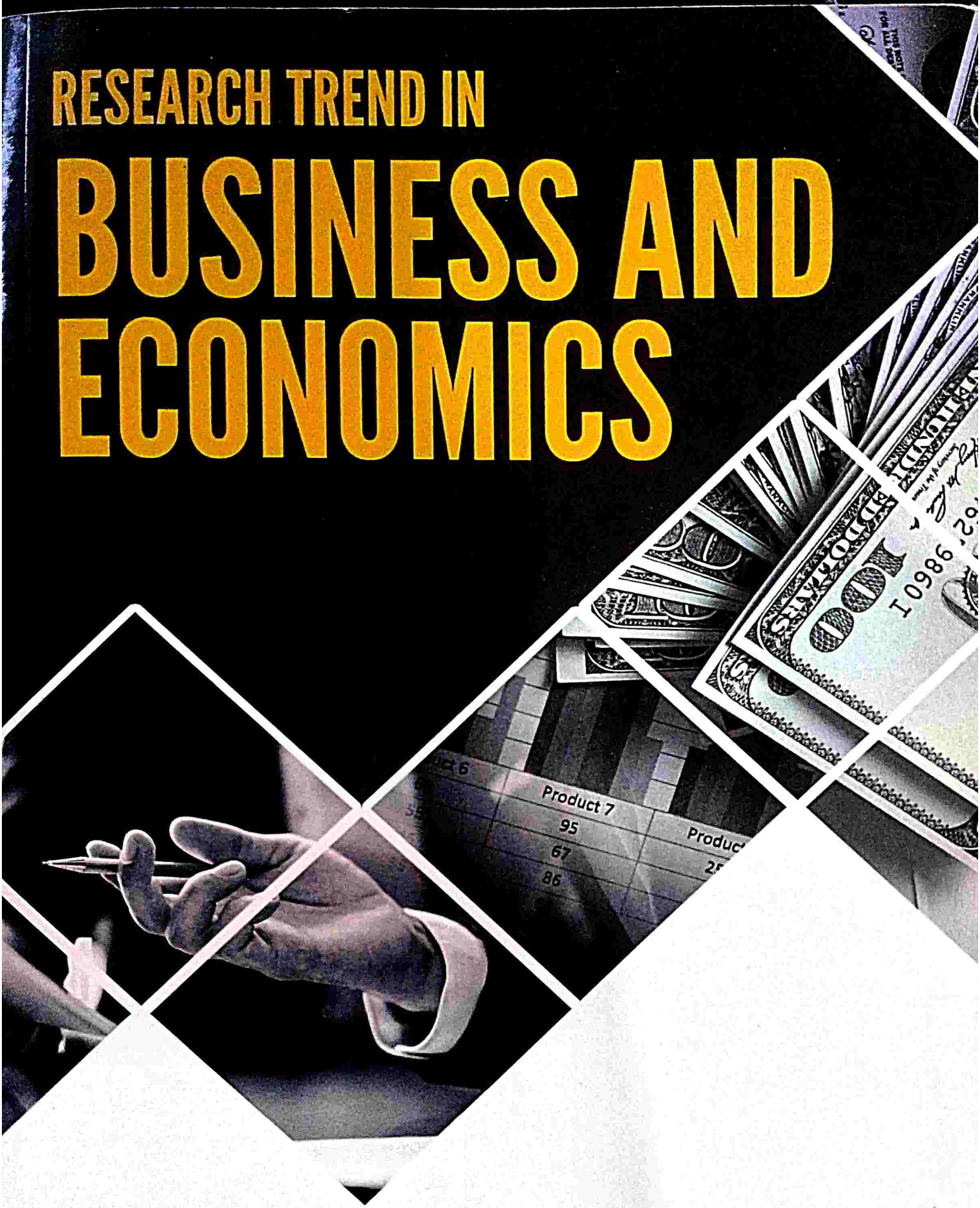

Dr. Nitashree Barman

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Edited by: Dr. Nitashree Barman

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CONTENTS

CHAPTER 2

FAMILY PLANNING AND WOMEN EMPOWERMENT IN INDIA: AN EMPIRICAL EXPLORATION USING STATE LEVEL NFHS DATA

Ms. Susmita Das, Ritwik Mazumder

Abstract

Using fourth and fifth rounds of NFHS fact sheet data we empirically investigate how family planning practices among women across Indian states are influenced by socio-economic factors, especially those related to women empowerment and gender bias. Findings based on correlation and panel regressions suggest that family planning practices are found to be significantly better in the more urbanized and relatively richer states of India while relatively poorer and agricultural states are lagging. Our results suggest that family planning services of state health departments have insignificant impacts. Moreover, factors associated with women's empowerment significantly enhance women's family planning practices while gender bias has dampening effects. We conclude that family planning practices of women can be significantly improved through formal education and skill formation of women, controlling the rate of early marriage and encouraging women's work participation. In our view, the real challenge lies in the Hindi heartland states where gender bias is severe in the presence of open and blatant patriarchy.

Keywords: *Family Planning, Gender Bias, Women Empowerment*

Introduction and Objectives

According to the World Health Organization (WHO, 2008), family planning is defined as "the ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through the use of contraceptive methods and the treatment of involuntary infertility". The

World Population Day, 2008 outlined the five advantages of family planning. These are: (i) improving maternal health and child survival, (ii) reducing the number of abortions overall, especially unsafe abortion, (iii) preventing sexually transmitted infections (STIs), including HIV/AIDS, (iv) empowering women, and finally (v) promoting social and economic development and security. In the Indian and South Asian context (i), (iv) and (v) are particularly important. India has been a very high fertility country throughout the period 1951-81, naturally having high population growth rates and high population density (total population being almost 1.4 billion, only second to China). Thus, the fundamental objective of family planning in India has traditionally been birth control. But are family planning measures equally accepted and implemented throughout all states and regions of the country? If not, why? A systematic and statistically credible answer to this question can be provided by analysing the NFHS factsheet data which provides us with several dimensions of women empowerment.

The key aspect we study in this paper is the impact or influence of women empowerment on family planning practices of married women in the reproductive age group in India. The NFHS-4 and 5 give us fact sheet data on family planning practices among married women across Indian states and union territories. There are appropriate reasons to believe that adoption of family planning measures is something that is endogenously determined by married women in the household although there could be exogenous influencing factors like the government's birth control policies. Firstly, educationally accomplished women are likely to be aware of the economic hardships of raising a child without compromising on his/her health, basic education and skill formation. Secondly, economically empowered women are naturally more likely to go for active family planning because fewer children make work participation easier. The third crucial point is that optimum spacing between two births is required more by working women as child birth in quick succession hampers the employment prospects apart from its obvious fallouts on mother's health. Although the choices of family planning practices, at least as far as the adoption of various methods go, is purely an endogenous

decision of the women concerned, exogenously determined policies can also have significant impacts. But the success rate of exogenously imposed policies is likely to depend on empowerment levels of married women in the household along with education and awareness of the intimate partner.

But with a lack of education and awareness, empowerment levels fall. With lower empowerment comes economic dependence on in-laws and the intimate partner and women lose autonomy in intra-household decision-making. Resistance against birth control measures from the intimate partner that is the husband, and in-laws along with lack of autonomy in decision making are potential obstacles in the path of successful family planning practices by married women. In other words, gender bias and patriarchy are empowerment suppressing factors and hence are likely to play negative roles in the adoption of family planning methods by the married woman in the reproductive age group.

But a pertinent question, which are the states and regions of India that are under the scanner when it comes to studies on family planning? The richer and more urbanised states and regions of the country with high human development indicators are already under a very low fertility rate regime with low birth and death rates, low infant mortality and maternal mortality rates. General levels of education and awareness in these states are quite at par with those in western/OECD nations.

Understandably about family planning the focus is on the BIMARU states and adding to it, states like Odisha, Jharkhand, Chhattisgarh, and a few others where fertility rates are high along with infant and maternal mortalities. These Hindi-heartland states are still comparatively socio-economically backward with typically lower female educational attainments, high gender gaps in education, poor sex ratio and low levels of women empowerment and autonomy in household-level decision-making (see, Ghosh and Keshri, 2020). But an interesting observation based on the NFHS-5 factsheet is that family planning practices are not so significantly associated with per capita NSDP or with economic well-being and the ordinary correlation coefficient between the two turns out to be 0.211 which is insignificant

even at 10 percent. The disconnect between per capita income and family planning is better understood from the following numbers.

On the one hand developed states like Kerala and Goa have respectively 52.8 percent and 60.1 percent of women using modern methods of birth control, and backward states like Bihar with 44.4 percent, Jharkhand with 49.5 and Uttar Pradesh with 44.5 percent seem to be lagging. But the surprise element lies in the fact that some poorer states have better family planning adoption numbers compared to Goa and Kerala (for instance Madhya Pradesh at 65.5, Rajasthan at 62.1, and Chhattisgarh at 61.7). Some higher per capita NSDP states also have lower family planning numbers (see, for instance, Punjab with 50.5, Gujarat with 53.6 among several others). In sum, the inter-state disparities in family planning practices and women empowerment indicators in India are staggering, to say the least, and these inequalities should be explained by a host of socio-economic and cultural factors.

As a passing note, we mention that the level of gender bias and the general level of economic development of the state or region concerned must be controlled while examining the impact of women empowerment indicators on the rate of successful family planning practices among married women in the reproductive age group. Our central research question addressed in this paper is, 'do women empowerment at the state level lead to better family planning practices (by married women) in India'? In other words, can we claim that in the Indian context empowered women are more naturally inclined toward successful family planning? To examine this empirically on the basis of recent evidence, we make use of NFHS 4th and 5th round state level fact sheet data along with a few Census of India, 2011 sources in this paper. Simple statistical tools of ordinary correlation and regression are used for ease of interpretation and analysis without compromising issues related to econometric robustness. An obvious drawback of the study is that the focus is entirely on women's family planning adoption thereby neglecting the role of married men. The male members (husbands mostly) have a very crucial role to play in women's family planning decisions. This is not considered here.

Literature Review

Over the years numerous studies have been conducted on the role of women empowerment in family planning both at household levels as well as district and state levels. Cross-country studies are also available. While some studies try to argue that family planning practices, irrespective of the methods, are better observed among socio-economically empowered women others view women empowerment as an outcome of successful family planning. Here we take a brief overview of influential literature that has evolved in recent years.

To begin with, we note that Prata et al. (2017) reviewed the literature on women empowerment and family planning practices in developing countries. Findings suggest that positive associations between women empowerment and family planning outcomes are found for roughly 40 percent of the studies. The authors present a synthesis of research and evaluate the current evidence of the associations between women empowerment and family planning. In a perception-based study, Kohan et al. (2012) examined the views of Iranian women regarding empowerment in family planning decisions. The authors find that women feel more empowered when family planning decisions are made in agreement with their partners and thus observe that family planning may be endogenous to the respondents' households. Based on clinical sample observations, Mutowo et al. (2014) conducted a correlational study using systematic sampling for a small sample of reproductive age group women from clinical samples in Zimbabwe. The authors found a weak positive significant correlation between women's empowerment and the use of dual protection. Gender inequality was found to be associated with low levels of family planning practices.

In a significant study, Singer et al. (2017) observe that family planning programs can have important incentive effects by increasing parents' investment in girls below the fertility age group. On the basis of potential incentive effects, their findings suggest that family planning may have raised girls' educational attainments significantly. The authors claim that early investments are connected to work participation at prime working ages. On somewhat different lines, Canning and Schultz (2012) found that increasing access to family

planning services lowered fertility and improved birth spacing for both Bangladesh and Ghana. Results from the long-term follow-up revealed that women's earnings, assets, and body-mass index, and children's schooling and body-mass indexes, significantly improved in areas with better access to family planning services. Similarly, Finlay and Lee (2018) find that progress in reproductive health leads to improvements in women's economic empowerment. Contraceptive use is found to improve education, and labour force participation. They also find that higher maternal age at first birth increases the possibility of school completion and partaking in the formal labour market. The study also reveals that having fewer children raises labour force participation. On the whole, the study is of the view that better reproductive health leads to improvements in women's economic empowerment.

Women's participation in self-help groups and micro-credit-based self-employment programs can lead to desired family planning practices because participation in these programmes raises empowerment and autonomy in decision making. In a remarkable study, Amin and Ahmed (1996) observe that programs offering collateral-free credit and having integrated economic improvements influence family planning and social welfare. Results based on a household survey of five NGOs in rural Bangladesh that offer such micro-credits to SHGs reveal that participating women are more likely to use contraceptives and decide against further children. Thus, higher empowerment was found to be associated with the desire for no more children among group members.

Autonomy in health-related decision making is crucial from the point of view of family planning. For instance, Ameyaw et al. (2017) find that women, who were not deciding alone and were guided by others regarding their healthcare, were less likely to use contraceptives. The authors thus feel that empowerment interventions through mass media and other possible avenues can potentially enhance reproductive health. Mahato et al. (2020) observe that gender plays a role in contraceptive use, but decision-making may not be associated with contraceptive use. Educational and family planning programmes are suggested to promote contraceptive use. The authors observe that husband's involvement is crucial in this matter as contraceptive use is a

core element in family planning practices. Likewise, Haque et al. (2021) find that women's fertility plans can be achieved by enhancing their empowerment. The author concludes that a modified community-based family planning programme at the national level would be effective; highlighting the importance of women's empowerment whereby couples can have the exact number of children they plan.

The literature thus surveyed provides us with sufficient insights on the associations between women's empowerment and family planning decisions and practices by women. Education and employment are found to influence family planning decisions positively. However, the presence of gender bias is also expected to have a retarding influence on family planning decisions. When husbands of married women in the reproductive age group are taken into confidence the family planning outcomes are better. The studies also reveal that family planning decisions are endogenous, i.e., determined from within the socio-economic systems prevailing inside the household. However, exogenous or government interventions (or even NGO interventions) significantly enhance family planning practices which justifies the adoption of government-initiated family planning programmes.

In the Indian context, Patrikar et al. (2014) note that the use of contraception is influenced mostly by women's empowerment. Women's decision-making capacity and autonomy within the household are the keys to successful contraceptive use. However, they did not consider NFHS data and nor did they apply any correlation regression analysis. Even Yadav et al. (2011) make similar claims on the basis of household survey data where empowerment is associated with better standards of family planning practices among women.

By far, one of the most influential and methodologically detailed and robust studies based on NFHS–4 data is due to Singh et al. (2019), who apply multiple regression analysis to portray the relationship between women empowerment and contraceptive use. Further, logistic regression is used to access the adjusted effects of various dimensions of women's empowerment on the use of contraception. Based on empirical results the authors conclude that although women's status in India has improved across its dimensions,

the patriarchal norms significantly influence the decision of using contraception. Also, the focus must be on women's right to their own life and health. Efforts should centre on strengthening personal counselling and capacity building by outreach workers, which can potentially empower women by imparting awareness on health and bodily rights.

Our present work is also based on state-level NFHS factsheet data covering both 4th and 5th rounds. Although the NFHS data is a survey based we do not make use of household data or unit-level data here; rather our study is based on state-level factsheet data which is aggregative. The two-period panel data analysis with correlation and regression makes our paper unique and is a clear addition to existing literature. Although several studies view women empowerment as the outcome of better family planning, we on the contrary view family planning practices as the outcome of women empowerment. The following section briefly outlines the methodology and data sources.

Methodology and Data

Ordinary correlation and regression analysis are used throughout the paper in a two-period panel data setup. All variable definitions along with data sources are provided in the appendix. Our principal data source is the state-level factsheets from National Family Health Survey- 4 & 5 (NFHS- 4 and 5). We take 33 states and union territories leaving out Lakshadweep and Ladakh and take the union territories of Dadra and Nagar Haveli and Daman and Diu as a single unit for statistical convenience. Our dependent variable throughout the analysis is the NFHS factsheet defined family planning (FP) variable, under the current use of family planning methods for currently married women in the 15-49 years age group. In accordance with NFHS, we take FP as the state-level percentage of married women in the reproductive age group using any method of birth control, modern or otherwise. FP is our dependent variable in regression throughout the paper.

Next, we include explanatory variables like per capita net state domestic product (PCNSDP), percentage share of agriculture and allied activities in state domestic product (AGRI), and the percentage of

population below the poverty line (BPL). We draw the data from secondary sources including the Census of India, (1991, 2001 and 2011).

Among the variables related to women empowerment, we include the percentage of females with at least 10 years of schooling (SCHOOL), percentage of females engaged in economically gainful occupation (or WORK, i.e., working for wage/salary over the last 1 year, from NFHS-5), percentage of women who hold bank accounts (BANK) and operate personally and the state level sex ratio (SEX). The literacy gap (LITGAP) across males and females is assumed to capture the gender gap in educational attainments. The total fertility rate (TFR) is taken as a proxy for the socioeconomic status of women (see Malhotra, et al. 1995). In addition, early marriage (EM), as measured by percentage of females married before age of 18 years; currently in the 20-24 years age group, is taken as an explanatory factor. Higher incidences of EM usually result in early pregnancy leading to higher TFR and higher TFR implicates a higher birth rate which is quite contrary to the very objective of family planning in India. EM among females is perhaps an indication of patriarchy, gender bias, low female educational attainments and finally lower levels of empowerment. Although this issue, in particular, is beyond the scope of the present paper, states with higher incidences of EM are expected to have poorer family planning practices and thus is a very vital policy variable in the context of the present study. Family planning services (FPS) is a government policy initiated exogenous measure for birth control and is thus included as an exogenous regressor. In the present paper, we take the NFHS factsheet provided FPS as "health worker ever talked to female non-users about family planning (%).

We subsequently include the proportions of adult females who possess a mobile phone for personal use (MOBILE). The MOBILE essentially signifies women's social connectivity and awareness. They can be taken as instruments that foster the freedom to communicate. Since all variables from NFHS are provided across urban and rural areas separately, we introduce an urban dummy variable (U-dummy, assigning 1 for urban observations and 0 for others) as an independent regressor. Moreover, since we use a two-period data set, NFHS-5 is

taken as another dummy independent variable that assigns 1 for NFHS-5 observations and 0 for others. This is done to statistically differentiate between NFHS-4 and NFHS-5 observations.

We begin with a simple linear correlation analysis across all pairs of variables except our binary dummy variables. Next, we run a family of reduced-form regression models in order to explain our key dependent variable, namely FP. All variables except binary dummies are in natural logarithm. The variable FP throughout the analysis captures the percentage of married women in the reproductive age group at the state level, who reportedly adopt any kind of family planning measure.

Results and Discussion

As a prelude to the regression analysis, we present the pair-wise ordinary correlations across key variables leaving out the dummy variables. All estimations are done on the basis of 33 times 2 or 66 pooled observations. The correlation matrixes are in tables 1 and 2. FP is positively correlated with women empowerment variables but negatively correlated with gender bias. Early marriage is negatively associated with FP. Agriculturally dominant states have lower FP as is suggested by the negative correlation value. High TFR states are also seen to have lower FP which is anticipated. Table 2 also shows that FP is positively associated with women empowerment. But in addition, FP is weakly positively associated with PCNSDP but the correlation is significantly positive with MOBILE implying that states where women having better access to cell phone connectivity also have better FP practices.

Coming to the regression results in table 3, we must mention beginning with that all variables cannot be used in all models. The correlation matrixes already give us a preliminary understanding of the direction of association between FP, women empowerment variables and other state-level socio-economic factors. Understandably all variables are not included in all models. We estimate a set of seven log-linear models for estimating LOG (FP). Apart from our binary dummy variables all variables are in natural logarithm. Our core women empowerment indicators like SCHOOL, WORK and BANK

are statistically significant across models although the coefficient of BANK is positive but insignificant at 10 percent. The coefficient of FPS is positive but insignificant across models.

Although this aggregative effect of FPS is insignificant it may turn out to be a significant factor behind FP in the most backward states and districts throughout the country. When developed and urbanized states are taken into account FP is the outcome of either household-level or woman-level endogenous factors and FPS may have an insignificant role. However, a dedicated study on backward districts is beyond the scope of this paper. EM has a negative and significant coefficient implying that early marriage has a dampening influence on FP at the state level. In other words, deferring the time of marriage or raising the median age at marriage for females would help to promote FP practices. LITGAP, a measure of gender bias in education has significantly negative coefficients wherever it is used as a regressor. Thus, higher gender gaps in education lead to lower levels of FP among married women in the 15-49 years age group.

Table 1: Ordinary correlations between family planning practices of women and women empowerment indicators across Indian states

Variables	FP	SEX	SCHOOL	WORK	BANK	EM	AGRI	LITGAP	TFR
FP	1.000								
SEX	0.142 (0.406)	1.000							
SCHOOL	0.284 (0.109)	0.371 (0.030)	1.000						
WORK	0.282 (0.099)	0.267 (0.115)	0.290 (0.266)	1.000					
BANK	0.289 (0.095)	0.241 (0.157)	0.223 (0.191)	0.121 (0.482)	1.000				
EM	-0.202 (0.236)	-0.259 (0.145)	-0.736 (0.000)	-0.134 (0.434)	0.015 (0.930)	1.000			
AGRI	-0.288 (0.096)	-0.111 (0.519)	-0.312 (0.064)	0.213 (0.211)	0.073 (0.673)	0.406 (0.014)	1.000		
LITGAP	-0.313 (0.063)	-0.258 (0.147)	-0.333 (0.058)	-0.269 (0.112)	-0.073 (0.670)	0.198 (0.269)	0.377 (0.055)	1.000	
TFR	-0.383 (0.021)	-0.273 (0.107)	-0.092 (0.593)	0.265 (0.109)	-0.172 (0.317)	0.135 (0.432)	0.548 (0.000)	0.336 (0.052)	1.000

Source: Authors' computation

Note: Figures in parentheses indicate p-values

Both BPL and AGRI have negative coefficients although the coefficient of BPL is insignificant at 10 percent. Other things unchanged as the level of agricultural share in GDP rises, FP practices keep falling. Similar could be the interpretations based on poverty head count ratio or percentage of BPL.

Per capita, NSDP has a positive and significant (at 10 percent) coefficient implying that other things remaining equal, richer states in terms of per capita incomes tend to have better FP practices. This is quite consistent with our findings regarding BPL. Mobile usage has a positive and significant coefficient across models, implying that a higher percentage of women with cell phone connectivity have a higher inclination towards any kind of FP practice. The coefficient of sex ratio (SEX) is positive and has consistent values across models but turns out to be insignificant. We thus cannot say for certain that better sex-ratio states have significantly better FP practices among married women in the reproductive age group.

Table 2: Associations between family planning, economic development and women empowerment indicators across Indian States

Variables	FP	PCNSDP	SCHOOL	BANK	WORK	MOBILE
FP	1.000					
PCNSDP	0.211 (0.116)	1.000				
SCHOOL	0.287 (0.083)	0. 377 (0.028)	1.000			
BANK	0.233 (0.112)	0.183 (0.300)	0.190 (0.281)	1.000		
WORK	0.291 (0.091)	0.226 (0.198)	0.301 (0.084)	0.146 (0.409)	1.000	
MOBILE	0.311 (0.074)	0.622 (0.000)	0.299 (0.087)	0.111 (0.532)	0.281 (0.107)	1.000

Source: Authors' computation

Note: Figures in parentheses indicate p-values

Next, TFR has a significant and negative coefficient implying that controlling for other factors high TFR leads to low FP practices among married women across states in India. This is not a surprising finding as because the coefficient of EM is also negative and significant across models. Thus, higher proportions of early marriage

Table 3. Explaining family planning on the basis of women empowerment indicators in India [Dependent Variable: LOG(FP)]

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	1.117	0.098	1.001	0.997	1.121	0.983	1.179
	(1.029)	(-0.911)	(0.974)	(0.956)	(1.212)	(-0.866)	(0.923)
SCHOOL	0.086*				0.091*		
	(1.896)				(1.921)		
WORK		0.057*	0.066			0.059*	
		(1.733)	(1.584)			(1.744)	
BANK		0.030		0.029			0.028
		(1.644)		(1.598)			(1.577)
EM			-1.009*		-0.973*		
			(-1.977)		(-1.689)		
FPS		0.099					0.102
		(0.973)					(1.001)
LITGAP			-0.233**			-0.219*	
			(-1.966)			(-1.889)	
AGRI	-0.087*			-0.071**			
	(-2.001)			(-1.929)			
BPL			-0.001			-0.002	
			(-1.500)			(-1.499)	
PCNSDP		0.989*			0.932*		
		(1.799)			(1.776)		
MOBILE	1.002*			1.001*			1.121*
	(1.982)			(1.889)			(1.880)
SEX	0.015		0.017			0.022	
	(1.432)		(1.397)			(1.409)	
TFR		-0.223*		-0.026*			-0.019*
		(-1.689)		(-1.799)			(-1.778)
U-dummy	0.898**				0.867**	0.809**	
	(2.112)				(2.011)	(1.990)	
NFHS-5	0.003**		0.006**				0.001**
	(1.997)		(1.990)				(1.993)
R-Squared	0.398	0.382	0.463	0.326	0.397	0.399	0.459
Adj. R-Square	0.299	0.287	0.359	0.234	0.298	0.301	0.361
F-Statistic	4.832**	4.739**	4.999**	4.021**	4.860**	4.006**	4.235**
Durbin-Watson	1.989	1.960	1.889	1.898	1.878	1.833	1.901

Source: Estimated by authors on the basis of state-level secondary data for India.

Note: 1. t-values are in parenthesis. HAC adjusted standard errors are used throughout;

2. *, ** and *** respectively represent significance at 10, 5 and 1 percent levels;

3. The cross-section consists of 33 states and UTs for 2 periods giving 66 pooled observations. Results are EVIEWS 10 generated;

4. HAC adjusted standard errors are used throughout and 5. All independent variables are in natural log except the dummy variables

and higher total fertility are retarding factors in the path of successful adoption of family planning methods. However, on the contrary, it may also be argued that both EM and lack of adequate FP adoptions result in high TFR. Finally, the coefficients of the U-dummy and NFHS-5 are both positive and statistically significant implying that married women in urban areas have significantly better FP practices than their rural counterparts and NFHS-5 survey results reflect a significant improvement over NFHS-4 as far as FP adoption numbers are concerned. The following section concludes the paper with a few policy observations.

Conclusion and Suggested Policies

On the basis of the fourth and fifth rounds of NFHS survey-based fact sheet data, we explore how family planning practices among married women in the reproductive age group across Indian states are influenced by women empowerment factors, after controlling for economic development indicators and gender bias. Findings based on correlation and panel regressions suggest that family planning practices are significantly better in the more urbanized and relatively richer states of India while relatively poorer and agricultural states are lagging behind. We do not observe any insignificant impacts of family planning services of state health departments. Above all, the big takeaway from the study is that factors related to women's empowerment significantly augment married women's family planning practices while aggravated gender bias suppresses it. A positive observation is that adoption of family planning methods has improved across India over the last couple of rounds of NFHS surveys although a significant rural-urban divide still exists. Another remarkable observation is that early marriage of females is a severe retarding factor for family planning and so is high total fertility although high total fertility could be the end result of poor adoption of family planning methods.

Based on this simple two-period state level statistical exercise we conclude that family planning practices of women can be significantly improved firstly through higher rates of formal education and skill formation of women, secondly by controlling the rate of early marriage and thirdly, by encouraging women to participate in

economically gainful work especially in the formal sector. In our view the real challenge lies in the Hindi heartland states where gender bias is severe, patriarchy is blatant and where women's autonomy in intra-household decision-making is dismally low.

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Appendix: Variable definitions and data sources

AGRI - Percentage contribution of State Domestic Product from agriculture and allied activities, compiled from RBI Handbook of Statistics on Indian Economy available at https://www.rbi.org.in/scripts/AnnualPublications.aspx? (Table 8: Net State Value Added by Economic Activity at Constant Prices, Base: 2011-2012)

BPL - Percentage of population below poverty line at the state level based on Tendulkar Methodology. State level figures for

combined poverty estimates obtained from https://niti.gov.in/state-statistics (Data Source: Planning Commission).

FP - Percentage of married women in the age group 15-49 years who have adopted any method of family planning during the survey year; compiled from Fact Sheets of National Family Health Survey (NFHS-5) 2019-20, published by the Ministry of Health and Family Welfare Government of India available at: chiips.org/nfhs/factsheet_NFHS-5.shtml

LITGAP - Gender gap in literacy (total literacy rate for males minus total literacy rate for female),for the Census years, 1991, 2001 and 2011, obtained from https://www.census.gov/data/tables

PCNSDP - Per capita NSDP for 1992-2018, at 2011-12 prices, compiled from RBI Handbook of Statistics on Indian Economy available at https://www.rbi.org.in/scripts/PublicationsView.aspx?id=19743.[Source:National Statistical Office (NSO)].

SEX - Sex Ratio defined the number of females per 1000 males, from Census 1991, 2001 and 2011, obtained from https://www.census.gov/data/tables

SCHOOL - Percentage of women with 10 or more years of schooling, compiled from Fact Sheets of National Family Health Survey (NFHS-5) 2019-20, published by the Ministry of Health and Family Welfare Government of India available at: chiips.org/nfhs/factsheet_NFHS-5.shtml

EM - Early marriage, measured by the percentage of women in the 20-24 years age group who were married before age 18 years, compiled from Fact Sheets of National Family Health Survey (NFHS-5) 2019-20, published by the Ministry of Health and Family Welfare Government of India available at: chiips.org/nfhs/factsheet_NFHS-5.shtml

BANK - Percentage of women having a bank account or savings account that they themselves use, compiled from Fact Sheets of National Family Health Survey (NFHS-5) 2019-20, published by the Ministry of Health and Family Welfare Government of India available at: chiips.org/nfhs/factsheet_NFHS-5.shtml

WORK - Percentage of women in the working age group (15-59 years) who have worked in the last 12 months and were paid in cash, compiled from Fact Sheets of National Family Health Survey (NFHS-5) 2019-20, published by the Ministry of Health and Family Welfare Government of India available at: chiips.org/nfhs/factsheet_NFHS-5.shtml

TFR - Total Fertility Rate defined as the average number of children that would be born to a woman over her lifetime, compiled from Fact Sheets of National Family Health Survey (NFHS-5) 2019-20, published by the Ministry of Health and Family Welfare Government of India available at: chiips.org/nfhs/factsheet_NFHS-5.shtml

MOBILE - Women having a mobile phone that they themselves use (percent), compiled from Fact Sheets of National Family Health Survey (NFHS-5) 2019-20, published by the Ministry of Health and Family Welfare Government of India available at: chiips.org/nfhs/factsheet_NFHS-5.shtml