

ESSAYS IN HEALTH ECONOMICS

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INDIAN INSTITUTE OF TECHNOLOGY DELHI
SEPTEMBER 2021**

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ESSAYS IN HEALTH ECONOMICS

by

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Submitted

in fulfilment of the requirements of the degree of Doctor of Philosophy
to the



INDIAN INSTITUTE OF TECHNOLOGY DELHI

SEPTEMBER 2021

Dedicated to my grandparents

Certificate

This is to certify that the thesis titled '**Essays in Health Economics**', submitted by Asmita Verma, to the Indian Institute of Technology, Delhi, for the award of the degree of Doctor of Philosophy, is a bona fide record of the research work done by her under our supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

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Acknowledgments

First and foremost, I would like to thank my advisors, Dr. Reetika Khera and Dr. Sourabh Bikas Paul, for their continuous support, feedback, motivation and patience throughout the course of my Ph.D. Your guidance and expertise were invaluable and helped me during research and writing of this thesis.

Besides my advisors, I would like to thank my SRC members, Dr. Ankush Agarwal and Dr. Debasis Mondal for their insights, and Dr. Diane Coffey for going through the drafts and providing useful suggestions and comments. I am also grateful to all the faculty members at the Department of Humanities and Social Sciences who gave helpful advice during my proposal presentation, the work-in-progress seminars and my pre-phd presentation. In particular, I am thankful to Dr. Saptarshi Mukherjee and Prof. Ravinder Kaur for their support and encouragement. I would also like to thank the staff at the department office, library, PG and the accounts section for helping out with the various formalities during these past five years.

My sincere thanks also go to Prof. John Cleland, Dr. K.G. Santhya, Prof. K.S. James, Dr. Sohini Paul and all other participants and mentors of the 'Scientific paper writing workshop on Reproductive, Maternal, New born and Child Health in India' organised by the Population Council, New Delhi. The ideas discussed and presented in the workshop were immensely helpful in shaping my thesis.

In addition, I want to thank my fellow PhD scholars and friends at the department for stimulating discussions and morale-boosting during various stages of my PhD: Ruhi Sonal, Sandip Datta, Mahendra Shahare, Ahalya Ramanathan, Ekta Pandey, Deeksha Tayal, Aatina Malik, Ravi Chakraborty and Swayamshree Mishra. This thesis would not have been possible without the constant support and presence of my school friend, fellow PhD scholar and my

roommate at Himadri Hostel, Charumita Vasudev. I am also thankful to my childhood friend, Padmakshi Badoni, for being there for me during all the highs and lows of this journey.

Most importantly, I am extremely grateful and indebted to my parents for believing in me and standing with me throughout these years, to my brother, Yash Verma, for constantly cheering and encouraging me to complete the degree and to my dogs, Elvis and Zaggy, for being my constant companions and stressbusters.

Finally, I would like to sincerely thank all the women who agreed to be a part of the primary survey conducted as a part of the thesis and to all the health workers who helped immensely with the same.

Abstract

This thesis is an attempt to characterise the Indian health system and discuss its implications in context of certain maternal and child health (MCH) outcomes in India. In the first part, the focus is on understanding, defining and critically assessing a broad spectrum of issues related to healthcare delivery, coverage, financing, expenditures and regulation in India. In the second part, emphasis is on investigating the association between health service delivery and child health outcomes on one hand and assessing quality of MCH care by understanding and evaluating maternal perception of quality of healthcare services available to women during pregnancy and childbirth on the other. The thesis consists of five chapters. While chapter one provides the context in which the thesis is situated, chapter two provides, among multiple objectives, a comprehensive understanding of the Indian healthcare system, the role social health insurance plays in characterising it, the composition of public health expenditure by level of care, regulatory issues in the healthcare sector and the response of the Indian health system to the ongoing Covid 19 pandemic. Chapter three introduces the maternal and child health situation in India and the recent government initiatives taken to strengthen it. Specifically, it tries to establish a link, if any, between the place of child delivery which could be either a public health facility, a private health facility or home and early neonatal mortality which is defined as the death of a new born between zero and seven days after birth. Chapter four tries to understand the quality of healthcare services in maternal and child care from the user's perspective. It attempts to measure maternal satisfaction and develop a simple satisfaction index which is used as a proxy for understanding the women's perception of healthcare offered to her during the postnatal period. Further, it determines the socio-economic, demographic and obstetric factors that may be associated with maternal satisfaction. Finally, chapter five summarises the key findings from the thesis.

Keywords: **Indian Health System; Maternal and Child Health; Healthcare Delivery;**

Quality of Care; Maternal Satisfaction

JEL Classification: **I; J; O**

सार

यह थीसिस भारतीय स्वास्थ्य प्रणाली को चित्रित करने और भारत में कुछ मातृ एवं शिशु स्वास्थ्य परिणामों के संदर्भ में इसके प्रभावों पर चर्चा करने का एक प्रयास है। पहले भाग में, भारत में स्वास्थ्य सेवा वितरण, कवरेज, वित्तपोषण, व्यय और विनियमन से संबंधित मुद्दों के व्यापक स्पेक्ट्रम को समझने, परिभाषित करने और गंभीर रूप से मूल्यांकन करने पर ध्यान केंद्रित किया गया है। दूसरे भाग में, एक ओर स्वास्थ्य सेवा वितरण और बाल स्वास्थ्य परिणामों के बीच संबंध की जांच करने और दूसरी ओर गर्भावस्था और प्रसव के दौरान महिलाओं को उपलब्ध स्वास्थ्य सेवाओं की गुणवत्ता की मातृ धारणा को समझने और मूल्यांकन करके मातृ एवं शिशु स्वास्थ्य देखभाल की गुणवत्ता का आकलन करने पर जोर दिया गया है। थीसिस में पांच अध्याय हैं। जबकि अध्याय एक संदर्भ प्रदान करता है जिसमें थीसिस स्थित है, अध्याय दो का पहला उद्देश्य है भारतीय स्वास्थ्य प्रणाली की व्यापक समझ प्रदान करना, दूसरा उद्देश्य है ये जानना कि सामाजिक स्वास्थ्य बीमा इसकी विशेषता में क्या भूमिका निभाता है, तीसरा उद्देश्य है देखभाल के स्तर द्वारा सार्वजनिक स्वास्थ्य व्यय की संरचना करना, चौथा, स्वास्थ्य सेवा क्षेत्र में नियामक मुद्दे की जाँच करना और आखिर में चल रहे कोविड-19 महामारी के लिए भारतीय स्वास्थ्य प्रणाली की प्रतिक्रिया करना है। अध्याय तीन भारत में मातृ एवं शिशु स्वास्थ्य की स्थिति और इसे मजबूत करने के लिए हाल ही में की गई सरकार की पहल का परिचय देता है। विशेष रूप से, यह बच्चों के जन्म के स्थान (जो या तो एक सार्वजनिक स्वास्थ्य सुविधा, एक निजी स्वास्थ्य सुविधा या घर हो सकती है) और प्रारंभिक नवजात मृत्यु दर के बीच एक लिंक, यदि कोई हो, स्थापित करने का प्रयास करता है। अध्याय चार उपयोगकर्ता के दृष्टिकोण से मातृ एवं शिशु देखभाल में स्वास्थ्य सेवाओं की गुणवत्ता को समझने का प्रयास करता है। यह मातृ संतुष्टि को मापने का प्रयास करता है और एक साधारण संतुष्टि सूचकांक विकसित करता है जिसका उपयोग प्रसवोत्तर अवधि के दौरान माओं और बच्चों को दी जाने वाली स्वास्थ्य देखभाल की गुणवत्ता को समझने के लिए प्रॉक्सी के रूप में किया जाता है। इसके अलावा, यह सामाजिक-आर्थिक,

जनसांख्यिकीय और प्रसूति संबंधी कारकों को निर्धारित करता है जो मातृ संतुष्टि से जुड़े हो सकते हैं।
अंत में, अध्याय पांच थीसिस से निकले प्रमुख निष्कर्षों को सारांशित करता है।

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Abbreviations

AB-PMJAY	Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
AOR	Adjusted Odds Ratio
ASHA	Accredited Social Health Activist
AWW	Anganwaadi Worker
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy
BRICS	Brazil Russia India China South Africa
CBHI	Central Bureau of Health Investigation
CGHS	Combined Government Health Scheme
CHC	Community Health Centre
CPR	Centre for Policy Research
CSS	Centrally Sponsored Schemes
DH	District Hospital
DHS	Demographic and Health Survey
EAG	Empowered Action Group
ESIS	Employee State Insurance Scheme
FYP	Five Year Plan
GDP	Gross Domestic Product
GoI	Government of India
GST	Goods and Services Tax
ICMR	Indian Council of Medical Research
ICU	Intensive Care Unit

IFA	Iron and Folic Acid
IIPS	International Institute of Population Sciences
IMF	International Monetary Fund
IMR	Infant Mortality Rate
IPHS	Indian Public Health Standards
IRDA	Insurance Regulatory and Development Authority
ISDBICMC	India State-level Disease Burden Initiative Child Mortality Collaborators
JSSK	Janani Shishu Suraksha Karyakram
JSY	Janani Suraksha Yojana
LHV	Lady Health Visitor
MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
MoHFW	Ministry of Health and Family Welfare
MRP	Maximum Retail Price
MSI	Maternal Satisfaction Index
NFHS	National Family Health Survey
NGO	Non-Governmental Organisation
NHA	National Health Accounts
NHM	National Health Mission
NHPo	National Health Policy
NHPr	National Health Profile
NHS	National Health Survey
NHSRC	National Health Systems Resource Centre
NITI	National Institution for Transforming India

NMR	Neonatal Mortality Rate
NRHM	National Rural Health Mission
NSS	National Sample Survey
OAE	Own Account Enterprise
OBC	Other Backward Classes
OOPE	Out of Pocket Expenditure
OTC	Over the Counter
PCPNDT	Pre-Conception and Pre-Natal Diagnostic Techniques
PFHI	Publicly Funded Health Insurance
PHC	Primary Health Centre
PIB	Press Information Bureau
PIL	Public Interest Litigation
PMR	Perinatal Mortality Rate
PNC	Postnatal Care
PPE	Personal Protective Equipment
PPP	Public Private Partnership
PTI	Press Trust of India
QoC	Quality of Care
RAS	Rajiv Aarogyashri Scheme
RHS	Rural Health Statistics
RSBY	Rashtriya Swasthya Bima Yojana
SC	Sub Centre
SC	Schedule Caste
SDG	Sustainable Development Goals

SHA	State Health Authority
SHI	Social Health Insurance
SPHI	Supplementary Private Health Insurance
ST	Schedule Tribe
U5MR	Under Five Mortality Rate
TT	Tetanus Toxoid
UCHC	Urban Community Health Centre
UHC	Universal Health Care
UPHC	Urban Primary Health Centre
WHO	World Health Organisation

Notations

α Alpha

β Beta