# Introduction

- ‘Research about research’ is limited in developing nations (Bornmann, 2013)

- A great deal of development research (especially poverty alleviation) has been conducted in the last two decades (Blocker et al., 2013)

- *However, studies evaluating the dissemination and uptake of such research is scarce*

- In this project, we examine the role that social media can play in production, dissemination and uptake of development research in emerging economies

Why Social Media?
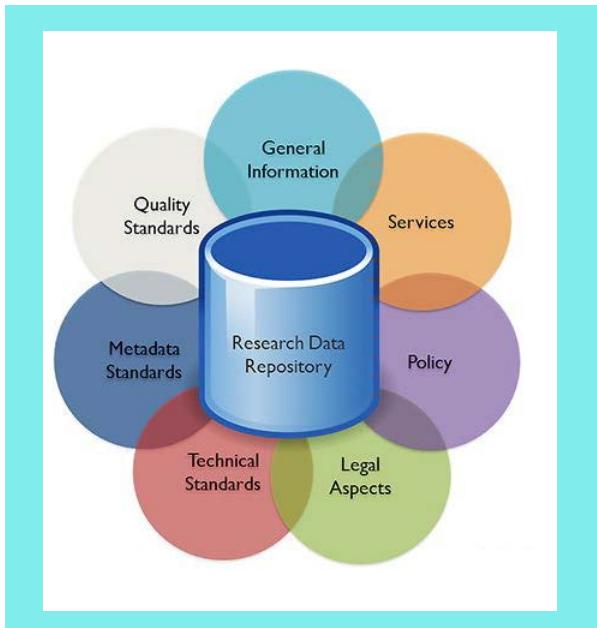
Repository based view

Network based view

(Beck, et al., 2017; Gruzd, et al., 2012)

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Objectives of the Three Studies

STUDY 1

Impact of social media on dissemination and uptake

Dissemination

STUDY 2

Impact of platform, contributor and content on uptake

Enhance uptake

STUDY 3

Role of social media in research production

Production
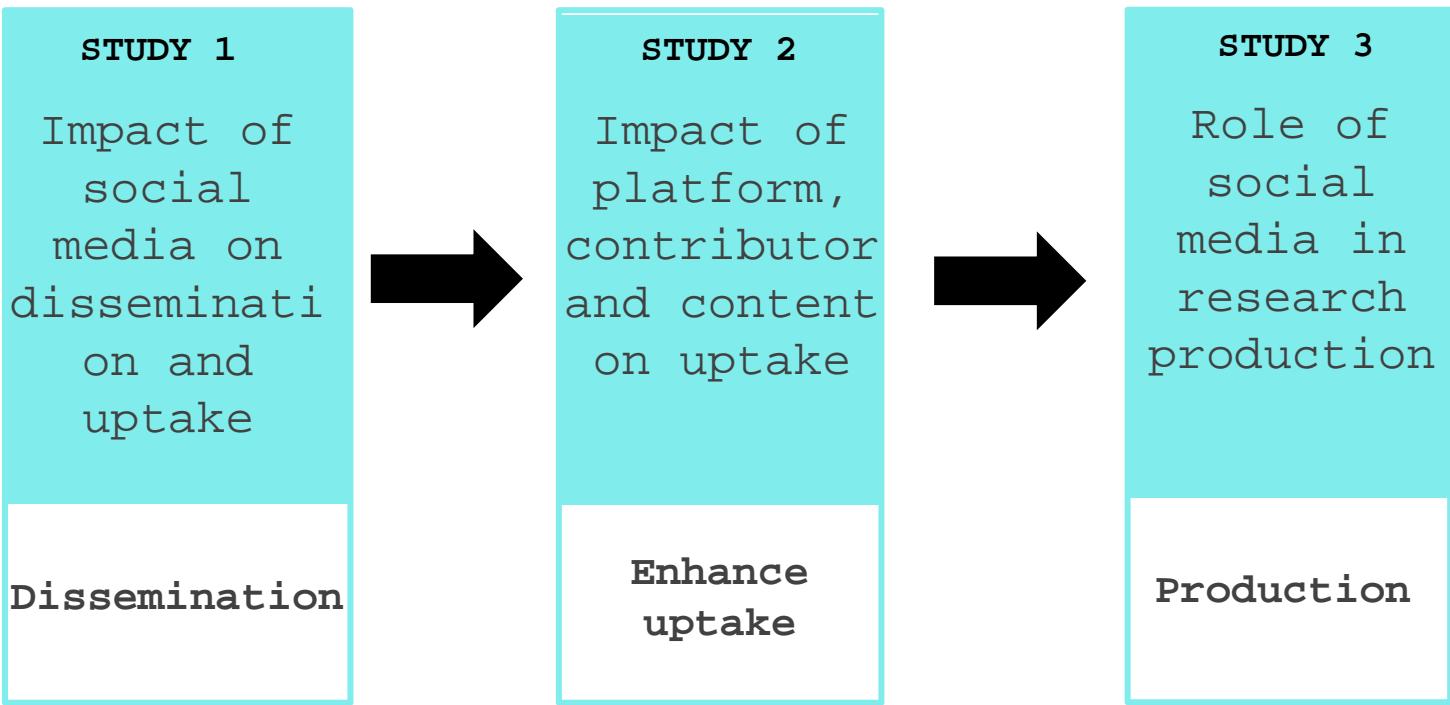
Scope/Domain of our Research

Poverty Alleviation

→ Economic and humanitarian measures that attempt to lift people out of poverty

736 million people live in poverty (UNDP, 2015)

Sustainable Development Goal '1'

The 2019 Nobel Memorial Prize in Economics

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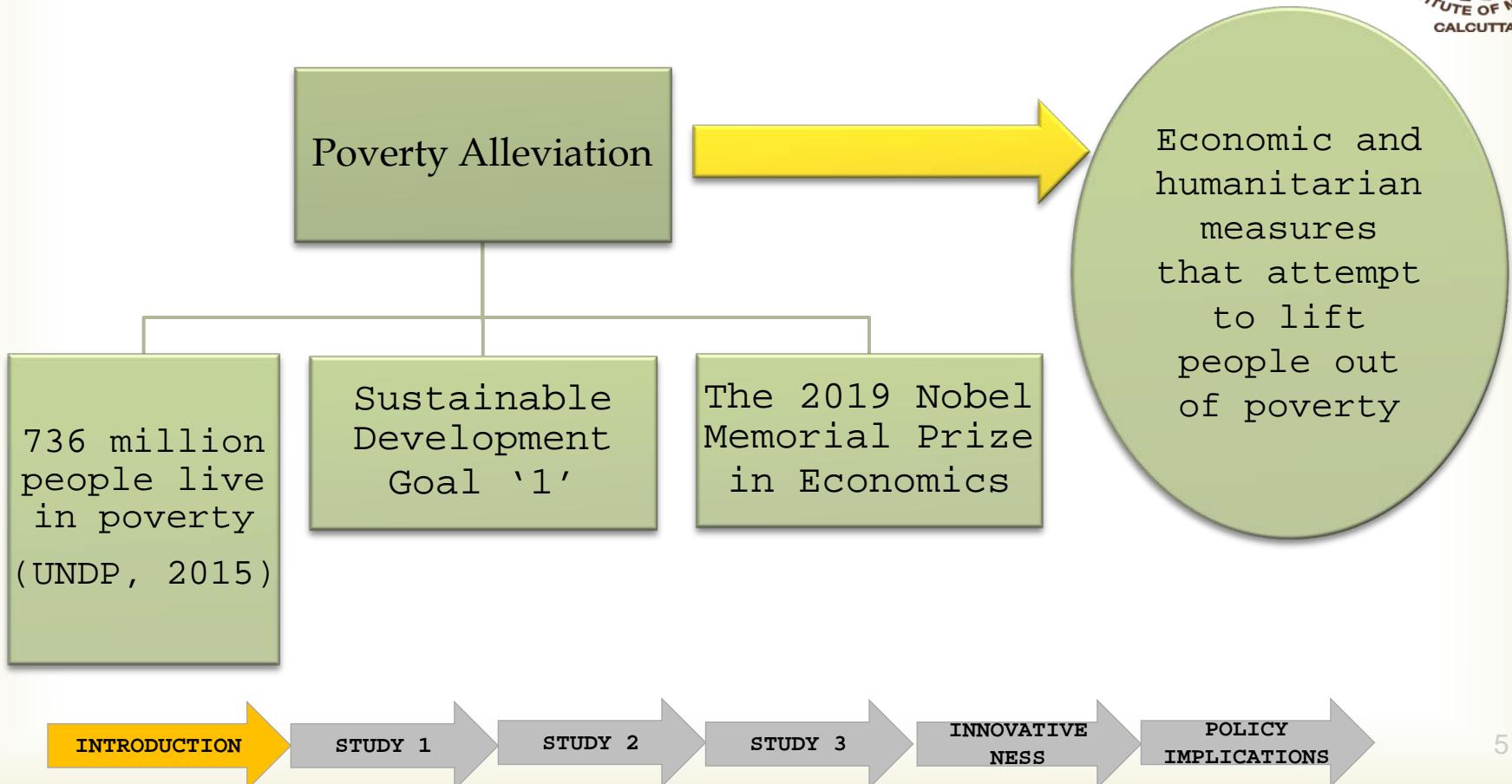
Study 1: Impact of Social Media on Dissemination and Uptake

Study 1: Impact of Social Media on Dissemination and Uptake

✎ RQ: What is the impact of social media on dissemination and uptake of development research?

✎ Altmetrics data – Data on research output
- ✂ Social media mentions
- ✂ Policy mentions
- ✂ News media mentions
- ✂ Citations and Mendeley additions

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Study 1: Impact of Social Media on Dissemination and Uptake

Part A
- Papers published between 1990 – 2000
- Effect of social media – RDiT (Regression Discontinuity in Time) design

Part B
- Papers published post 2005
- Compare papers - with vs. without social media mentions
- Apply Propensity Score Matching and Synthetic Controls

Part C
- Evaluate the impact of different factors (for papers with social media mentions)
- Social media platform, content type, contributor, likes and shares

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Study 2: Impact of Platform, Contributor and Content on Uptake

# Study 2: Impact of Platform, Contributor and Content on Uptake

- RQ: How to enhance the uptake of development research in social media?

Theoretical Considerations

- People process information differently across social media platforms (Schulze et al., 2014; Voorveld et al., 2018)
- Feature sets of Facebook (FB) and LinkedIn (LI) evoke different user identities
- FB evokes *self-expression*, LI evokes *professional self-promotion* (van Dijck, 2013)

Study 2: Impact of Platform, Contributor and Content on Uptake
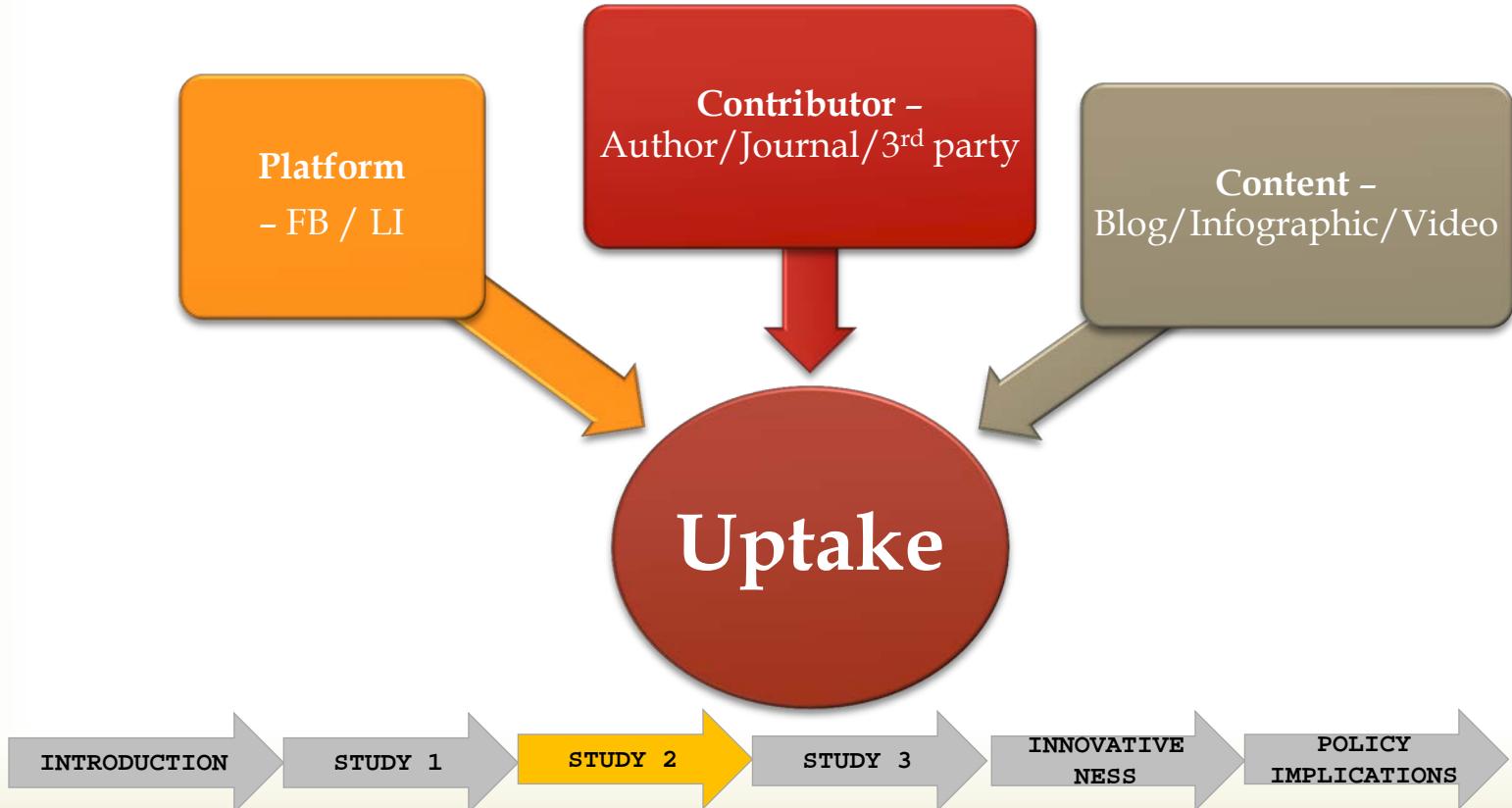
Study 3: Role of Social Media in Production of Research

Study 3: Role of Social Media in Production of Research

❧ RQ: How does social media disrupt the way knowledge is created in the domain of poverty alleviation research in the context of JPAL?

❧ We adopt a case study approach (Eisenhardt, 1989)
  ❦ Answer the 'how' questions associated with JPAL

❧ Data will be collected in multiple rounds from a variety of sources

❧ We have obtained permissions from JPAL's South Asia office in Chennai to conduct the case study research

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Study 3: Role of Social Media in Production of Research

J-PAL
ABDUL LATIF JAMEEL POVERTY ACTION LAB

- JPAL is a global research centre working with a mission to reduce poverty

- Three thrust areas: impact evaluation studies, policy outreach to governments and capacity building

- Network of 181 affiliate professors across 56 universities (81 nations)

- JPAL uses social media extensively to recruit research assistants and other stakeholders for research projects

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Innovativeness of the studies

- Study 1
    - Employing several identification strategies, including, regression discontinuity, synthetic controls and propensity score matching
    - Empirically evaluating the effect of different factors on dissemination and uptake

- Study 2
    - Experiment design to evaluate the form of content (boundary object), contributor and social media platform
    - Creating different social media pages as stimuli
    - Use of NGO executives to enhance external validity

INTRODUCTION → STUDY 1 → STUDY 2 → STUDY 3 → **INNOVATIVENESS** → **POLICY IMPLICATIONS**

Innovativeness of the studies

- Study 3
  - We include an emerging method in management research known as 'netnography' (Kozinets 2015)

  - Case study approach to understand the process adopted and lessons learnt by JPAL and how it can help other labs

| INTRODUCTION | STUDY 1 | STUDY 2 | STUDY 3 | INNOVATIVE NESS | POLICY IMPLICATIONS |

Sustainability of the Project Beyond the Funding Period

- A foundation within the Centre for Excellence at IIM Calcutta (eg. Social Informatics Research Group)

- Create an ecosystem (new social media platform) wherein different stakeholders (e.g. academics, NGOs, policymakers and other practitioners) from the development sector interact

Policy Implications

- India: As part of Union Budget 2019, India plans to set up National Research Foundation

- GDN: We attempt to contribute to GDN's 'Doing Research Program' by advancing new techniques and research designs

- UN: We suggest the mechanisms on social media through which academic research results could have better impact (especially SDG 1)

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Thanks!

Questions?
Happy to take them up now and after the session or via mail!
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Research Questions

- **<u>Research Question 1</u>**
- What is the impact of social media on dissemination and uptake of development research?

  - Examine the impact of social media mentions on dissemination and uptake of development research

  - Factors that are correlated with increased dissemination and uptake

- Secondary data analysis – Using data from Altmetrics

Research Questions

- **Research Question 2**
- How to enhance the dissemination and uptake of development research in social media?
  - Evaluate three specific factors – Platform, Contributor and Content

- Experiment on social media
  - Create several social media pages (as stimuli) and examine the effectiveness of the three factors

Research Questions

⚘ **Research Question 3**

⚘ How can social media alter the research production ecosystem?

⚘ Case Study on JPAL
  � Understand how JPAL leveraged social media to not just disseminate and enhance uptake, but also production of research

Study 1: Impact of Social Media on Dissemination and Uptake

✍ A. Effect of social media platforms on development research – Regression discontinuity in time (RDiT) design

✍ B. Effect of social media mentions – Propensity score matching (PSM) and Synthetic controls

✍ C. Effect of social media platform, content type, contributor type (source)– Standardizing the effects from part B and using simple OLS framework

Study 1: Impact of Social Media on Dissemination and Uptake

- A. Effect of social media platforms on development research

- Selection of Papers
  - Papers published in the period 1990 – 2000 (pre Facebook)
  - Keywords related to 'poverty alleviation'
  - Shortlist top 100 papers with the highest number of citations (top development papers)

- Separate into two groups
  - Papers with social media mentions (in the year 2005-07)
  - Papers with no social media mentions

Study 1: Impact of Social Media on Dissemination and Uptake

- Outcomes - Yearly policy mentions, Mendeley additions and news media mentions

- Key identification strategy - RDiT approach

- Expected results
  - Discontinuity for the papers with social media mentions, but not for the set without social media mentions

Study 1: Impact of Social Media on Dissemination and Uptake

Regression Discontinuity Experiment with an Effective Treatment

LATE
Local Average Treatment Effect

Cut-off score
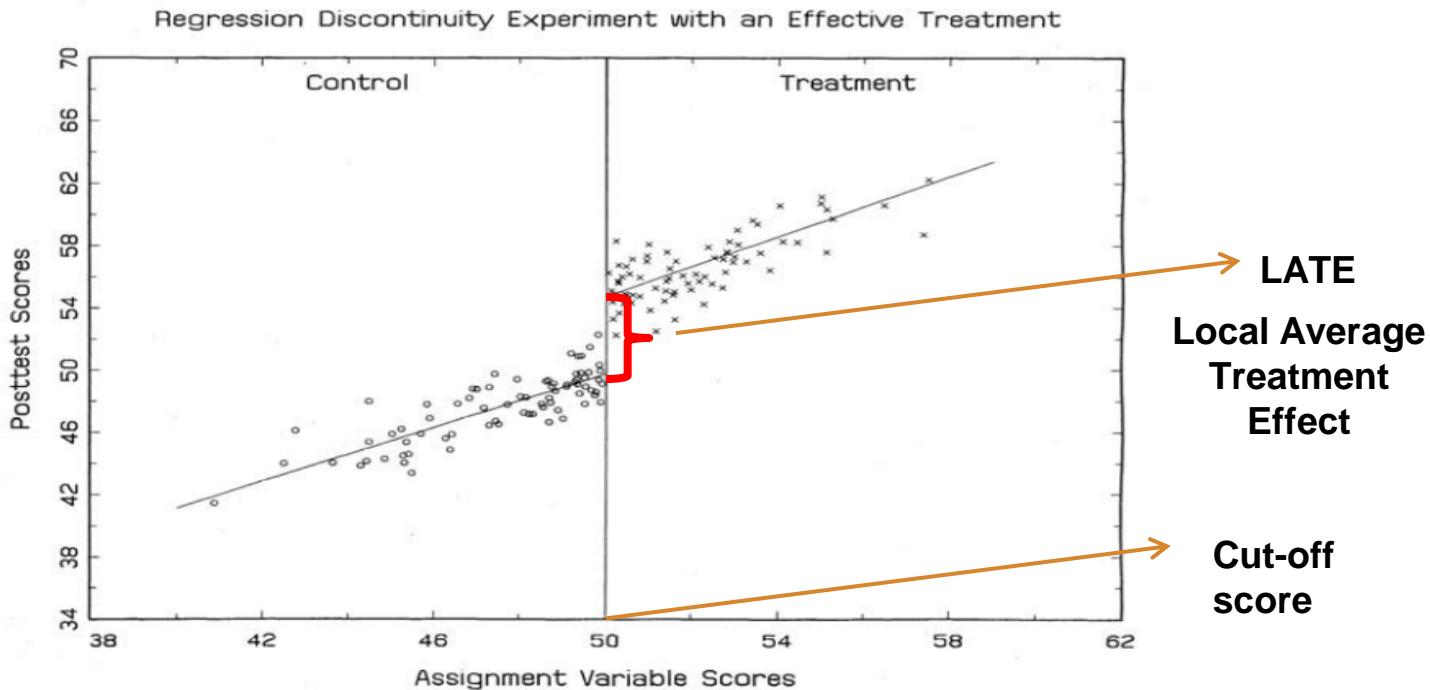
Study 1: Impact of Social Media on Dissemination and Uptake

- RDiT deisgn – effective source of discontinuity is time (time of mention acts as the cut-off)
  - The intervention is at a specific time t=0 (year/month of social media mention)

- Observations just before and after are expected to be similar (after accounting for trends)

- Bandwidth for RDiT – Imbens-Kalyanaraman bandwidth calculation (2010)

- RDiT provides very high internal validity to be able to ascribe causality (Imbens and Lemieux 2008)

Study 1: Impact of Social Media on Dissemination and Uptake

✎ RDiT Function

$$\tau_{SRD} = \mathrm{E}[Y_{it}(1) - Y_{it}(0)|W_i = 1]$$

✎ where τ_{SRD} refers to the *LATE* (local average treatment effect) estimate

✎ $Y_{it}(0)$ is the outcome before social media mention and $Y_{it}(1)$ is the outcome after social media mention

✎ Deterministic function - W_{it} ε {0,1} such that W_{it} takes the value of 1 when *t>c* (*c* being the cutoff period) and 0, otherwise

Study 1: Impact of Social Media on Dissemination and Uptake

- B. Effect of social media mention on policy mentions, Mendeley additions, citations and news media mentions

- Selection of Papers
  - Journals ranked at least A in ABDC
  - Keywords related to 'poverty alleviation'
  - Papers with actionable insights for policymakers and NGOs
  - Special issues on poverty alleviation
  - Preliminary search – around 550 papers (post 2005)

Study 1: Impact of Social Media on Dissemination and Uptake

❧ B. Effect of social media mention on policy mentions, Mendeley additions, citations and news media mentions

❧ Separate the papers into two groups
   � Treatment - Papers with social media mentions (6 months post publication)
   ✖ Control   - Papers with no social media mentions

Study 1: Impact of Social Media on Dissemination and Uptake

⚘ Empirical method 1: Linear model to assess the effect of social media mentions on outcome variables

$$Y_i = \beta_0 + \beta_1\, Treat_i + X^l{}_i\beta + \varepsilon_i$$

⚘ Y_i refers to the outcome variables (policy mentions, Mendeley additions and News media)

⚘ $Treat_i$ refers to whether the paper belongs to the treatment group (with social media mentions, then $Treat_i$ =0)

⚘ $X^l{}_i$ refers to the set of covariates – Journal, JEL code of paper, h-index of authors

Study 1: Impact of Social Media on Dissemination and Uptake

- Empirical method 2: Propensity score matching
- Propensity scores for each paper
  - JEL classification codes
  - Journal ranking
  - h-index of authors
  - Journal characteristics

- Select a control for with a similar propensity score for every treatment (probit model, 'nearest neighbor')

- Using the matched sample, we evaluate the effect of social media mentions on our outcome variables

Study 1: Impact of Social Media on Dissemination and Uptake

- Empirical method 3: Synthetic controls

- Using the following covariates, we plan to create a synthetic control from the papers in the control group
  - JEL classification codes
  - Journal ranking
  - h-index of authors
  - Journal characteristics

Study 1: Impact of Social Media on Dissemination and Uptake

- C. Effect of social media platform, content type, contributor type (source) on our outcome variables

- Compute the standardized effect size for each paper in the treatment group (with social media mentions)

- We express the effect as a function of the following covariates:
  - Social media platform
  - Who mentioned the paper?
  - Type of content
  - Other characteristics (to be coded)

Study 2: Impact of Platform, Contributor and Content on Uptake

- **H1a:** *Content requiring lesser mental resources (e.g. video) on fun social media platforms (e.g. Facebook) will be evaluated more favourably when compared to those that require more mental resources (e.g. blogs)*

- **H1b:** *Content requiring more mental resources (e.g. blogs) on professional social media (e.g. LinkedIn) will be evaluated more favourably when compared to those that require fewer mental resources (e.g. video)*

Study 2: Impact of Platform, Contributor and Content on Uptake

- **H2a:** *In a social media focusing on self-expression, posts from a 3rd party will be evaluated more favorably, followed by those from the Journal and then by the author.*

- **H2b:** *In a social media focusing on self-promotion, posts from the author will be evaluated more favorably, followed by those from the Journal and then by a 3rd party.*

Study 2: Impact of Platform, Contributor and Content on Uptake

- 2 x 3 x 3 – Mixed experiment design
  - Social media platform (Facebook vs. LinkedIn) – *Between subjects*

  - Type of contributor (Author / Journal / 3rd party) - *Between subjects*

  - Type of content (Blog / Infographic / Video) - *Within subjects*

Study 2: Impact of Platform, Contributor and Content on Uptake

❧ Subjects: Executives of NGOs working in poverty alleviation in India (sample size to be around 600)

❧ Each subject views and evaluates three posts (about three papers) by a specific type of contributor (eg. author) in a particular platform (eg. FaceBook)

❧ Counterbalancing
  ❀ For a single paper, 1/3rd of subjects will view blog, 1/3rd will view infographic and the last1/3rd will view video)

Study 2: Impact of Platform, Contributor and Content on Uptake

- Develop stimuli in both the platforms (Facebook and LinkedIn)
  - Eg. In Facebook, create a page for a Journal and add three focal posts about three papers (different content types) along with filler posts

- Last post in the page: Link to take the subjects to a questionnaire, where we capture the evaluation and understanding of the three focal posts

Study 3: Role of Social Media in Production of Research

Source	Description	Time Period
	Field Visits	
JPAL South Asia Head Office in Chennai	The team will visit JPAL's South Asia office located in the Institute for Financial Management and Research, Chennai	November-December 2019
JPAL South Asia regional sub-office in New Delhi	The team will also visit JPAL's South Asia regional sub-office office in New Delhi	December 2019-January 2020
Select locations of field experiments by JPAL	The team will visit selected locations of the field experiments by JPAL. Locations will be mutually decided	November 2019-January 2020

Study 3: Role of Social Media in Production of Research

Source	Description	Time Period
Netnography		
JPAL's social media activities on Facebook and Twitter Platforms	The team observed (& is observing) the different social media activities by JPAL	June 2018-January 2020
Semi-Structured Interviews		
Regional Director	South Asia Office	All interviews will be conducted between Nov 2019- January 2020 during the field visits or using video conferencing
JPAL affiliated professors	Professors associated with JPAL who are driving the projects (plan to interview 10 professors working in the poverty alleviation space in India)	
Project Managers	Managers of JPAL's Field Experiments	

Study 3: Role of Social Media in Production of Research

Source	Description	Time Period
Semi-Structured Interviews		
Social Media Team	The social media team of JPAL's South Asia Office	All interviews will be conducted between Nov 2019- January 2020 during the field visits or using video conferencing
Policy Outreach Team	The policy outreach team of JPAL's South Asia Office	
Field Workers	The research assistants and field staff associated with JPAL	
Target Communities	The communities wherein the field experiments are conducted	

Study 3: Role of Social Media in Production of Research

Source	Description	Time Period
Archival Data		
Annual Report	Annual reports published by JPAL over the last 10 years	The archival data will be collected during the field visits
Field Reports	Field reports by JPAL field staff	
Pamphlets, handouts, brochures and flyers	JPAL's different documents describing its activities	
Reports by Social Media Team	Reports by the Social Media Team	
Archived pictures and videos	Pictures, videos and other documents that capture the activities of JPAL	