

Learning levels of children from short-term migrant families in rural India

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Summary of the Presentation

- **Question 1:** Can seasonal hostels retain the learning outcomes of children from short-term migrant families in rural Odisha?
- Data: Primary data collected from Nuapada district in Odisha in 2019
- Outcome Variables: Percentile rank based on test scores of children who were in Grades 3-5 in 2018-19
- Method: Ordinary Least Squares (OLS)
- Finding: Children who were left behind in the source villages do not have significantly different percentile ranks in language and mathematics relative to children from non-migrant families, whereas migrant children have lower percentile ranks. Among children from short-term migrant families, the ones left behind in hostels perform significantly better than the others.

- **Extending to a nationally representative survey**
- **Question 2:** What were the learning levels of children from short-term migrant families in rural India in 2011-12?
- Data: India Human Development Survey (IHDS) II, 2011-12
- Outcome Variables: Learning levels in Language and Mathematics of children aged 8-11 years
- Method: Logit model, Instrumental Variable Approach
- Finding: Children from short-term migrant families in rural India have lower age-appropriate skills in language and mathematics relative to children from non-migrant families

Acknowledgement: Lokadrusti, Education Department of Government of Odisha, and the members who participated in surveys

Can seasonal hostels retain the learning outcomes of children from short-term migrant families in rural Odisha?

The question is answered based on a primary survey conducted by the author in July-August 2019 in Odisha

Introduction

- Internal migration in search of work is a common practice in many developing countries including India
- Over 10 million children in rural India have at least one short-term migrant in the family (SAS 2013, Government of India)
- Globally, children from migrant families, especially short-term migrant families, face several difficulties in attaining education (UNESCO, 2019) – the pattern also holds true in India
- Children from short-term migrant families face disadvantages in attaining education (Srivastava and Dasgupta, 2010; Srivastava and Sutradhar, 2016; Coffey, 2013; Bhattacharya, 2019; Nguyen, 2016)
- Open question in the Indian context: What happens to the learning levels of children from short-term migrant families at the national level? In case of a negative effect, how can the learning levels of children from short-term migrant families be retained?
- The findings relate to the Sustainable Development Goal 2030 – Goal 4: Quality Education

Education Policies in India: Provisions for children from migrant families

- **2009**: The Right of Children to Free and Compulsory Education (RTE) Act made elementary education free and compulsory for all children aged 6-14 years in India
- Section 4 of RTE: The right to receive special training for children who, though admitted, could not complete the academic year
- Section 5 of RTE: Child can seek admission in another school, in a state or outside, for any reason whatsoever
- Section 9 of RTE: Local Government authorities to ensure admission of children from migrant families
- The Sarva Shiksha Abhiyan framework (2011) proposes a strategy like operationalizing seasonal hostels to protect the right to education of children from short-term migrant families in India
- Government of Odisha has been operationalizing seasonal hostels in migration-prone villages since 2011-12

Context of fieldwork: Geographical zone



Figure: The state of Odisha on the Indian map

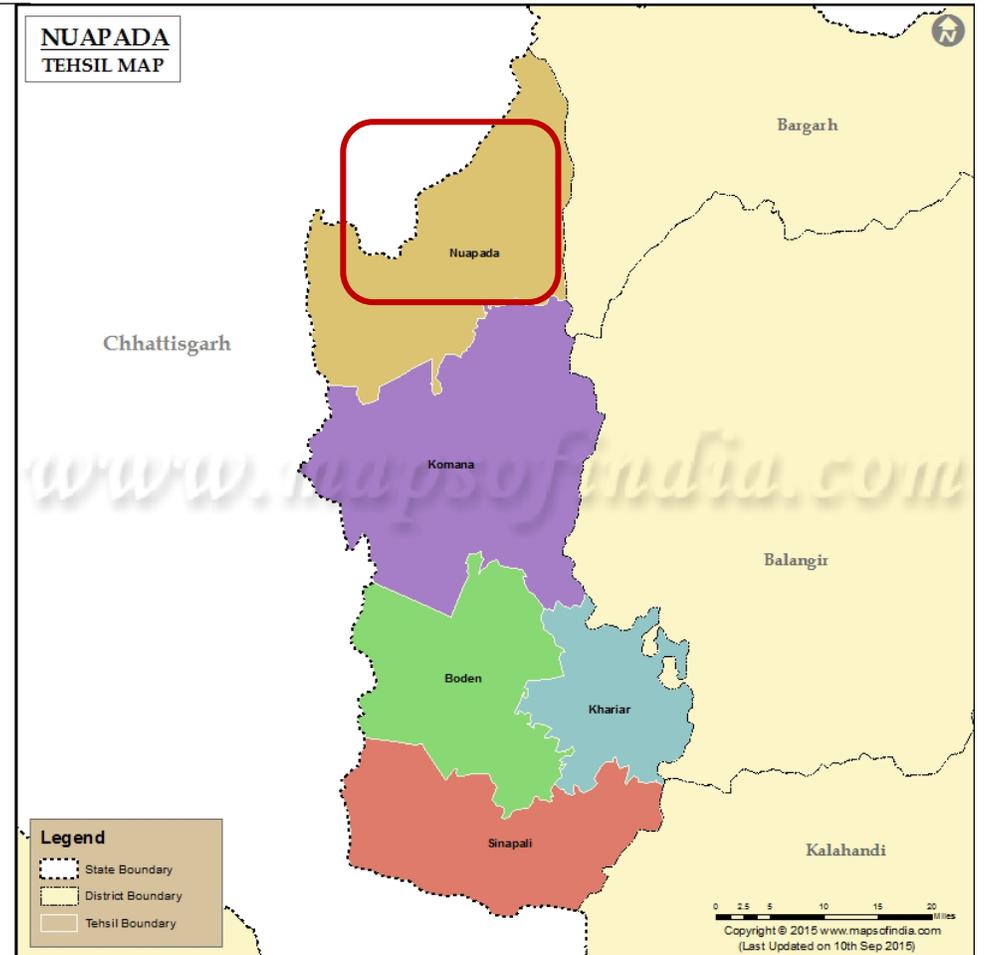


Figure: The five blocks of the Nuapada district, Odisha

Learning levels of children in selected districts of Odisha from ASER 2018

Districts	Percentage of children		
	Children aged 6-14 who are out of school	In grades 3-5 who can read standard 2 text	In grades 3-5 who can do at least subtraction
Balangir	0.3	30.2	21.4
Bargarh	0.0	60.2	38.6
Gajapati	1.9	33.6	34.4
Ganjam	2.0	68.9	58.0
Kalahandi	1.5	42.0	32.8
Koraput	7.4	19.5	12.7
Malkangiri	7.1	14.0	16.4
Nabarangpur	5.7	21.2	15.4
Nuapada	2.0	18.1	17.6
Rayagada	7.8	15.8	8.5
Subarnapur	0.3	48.7	41.6
Odisha	1.5	49.0	40.7

Table: 11 out of 30 districts are identified as short-term out-migration prone by the Labour Department of Odisha

Institutional setting in Odisha

- The state government of Odisha initiated a unique intervention called ‘Residential Care Centres’ (RCC), or seasonal hostels, for the children of short-term migrant families in western Odisha (Srivastava, 2020).
- Odisha Primary Education Program Authority (OPEPA), under the aegis of the School and Mass Education Department, set up guidelines for setting up and operating seasonal hostels for children from short-term migrant families in Bolangir, Nuapada, and Bargarh districts of Odisha.
- The unit cost of operating RCC for 6 months is 10,000 rupees (125 dollars) per child
- The hostels are on school premises with sufficient water and accommodation facilities.
- Classrooms are rearranged to form makeshift hostels, one classroom for girls and the other one for boys aged 6-14 years.
- Two locally-recruited caretakers, one male and the other female, who act as wardens in the hostels
- The hostels are governed by rules and timetables displayed in the school and a locally-recruited cook is prepares timely meals
- The school headmaster, along with School Management Committee and local NGO members ensure smooth functioning of hostels

Institutional setting in Odisha: A snapshot of timetable and budget allocation

ଋତୁ କାଳୀନ ଆବାସିକ କେନ୍ଦ୍ର
ଦୈନନ୍ଦିନ ଶାନ୍ତ୍ୟ ତାଲିକା

ଶିକ୍ଷା ଅଧିକାର
 ସର୍ବ ଶିକ୍ଷା ଅଭିଯାନ
 ସଭିଏଁ ପଢ଼ନ୍ତୁ, ସଭିଏଁ ବଢ଼ନ୍ତୁ

1	2	3	4	5	6
ଦିନ	ସକାଳ	ଜଳଖିଆ	ମଧ୍ୟାହ୍ନ	ସନ୍ଧ୍ୟା ଆହାର	ରାତ୍ରୀ
	୭.୩୦ ରୁ ୭.୦୦	୯.୦୦	୧.୦୦	୪.୩୦	୮.୩୦
ସୋମ	ବିସ୍ତ୍ରାନ୍ତ/ଦୁଧ	ଭାତ, ଚାଲି, ଚରକାରୀ	ମଧ୍ୟାହ୍ନ ଭୋଜନ	ମୁକ୍ତି, ମିଳ୍ମଚର	ଭାତ, ଚାଲି, ପାମ୍ପ
ମଙ୍ଗଳ	ବିସ୍ତ୍ରାନ୍ତ/ଦୁଧ	ଭାତ, ଚାଲି	ମଧ୍ୟାହ୍ନ ଭୋଜନ	ପକୋଡ଼ି, ପିଆଜ	ଭାତ, ଚାଲି, ଚରକାରୀ, ପାମ୍ପ
ବୁଧ	ହେଉ/ଦୁଧ	ଭାତ, ଚାଲି, ଚରକାରୀ	ମଧ୍ୟାହ୍ନ ଭୋଜନ	ମୁକ୍ତି, ମିଳ୍ମଚର	ଭାତ, ଚାଲି, ଚରକାରୀ
ଗୁରୁ	ହେଉ ଓ କାମ	ଭାତ, ଚାଲି, ଚରକାରୀ	ମଧ୍ୟାହ୍ନ ଭୋଜନ	ଆଳୁପତା, ଚଣା ଚରକାରୀ, ମିଠା	ଭାତ, ଚାଲି, ପିରି/ଛତୁ
ଶୁକ୍ର	କଦଳୀ/ହେଉ	ଭାତ, ଚାଲି, ସନ୍ତୁଳା	ମଧ୍ୟାହ୍ନ ଭୋଜନ	ରୁଡ଼ା, ଗୁଡ଼, କଦଳୀ	ଭାତ, ଚାଲି, ମାଫସ (ଚକେଇ/ମଟର)
ଶନି	ବିସ୍ତ୍ରାନ୍ତ/ଦୁଧ	ମଧ୍ୟାହ୍ନ ଭୋଜନ	ଭାତ, ଚାଲି, ପାମ୍ପ	ମୁକ୍ତି, ମିଳ୍ମଚର	ଭାତ, ଚାଲି, ସନ୍ତୁଳା, ଚକା
ରବି	ହେଉ/ଦୁଧ	ଭାତ, ଚାଲି, ଚରକାରୀ	ଭାତ, ଚାଲି, ମାଫସ (ଚକେଇ/ମଟର)	ପକୋଡ଼ି, ଚଟଣା, କଦଳୀ	ଭାତ, ଚାଲି, ପାମ୍ପ, ଖିରି

ସର୍ବ ଶିକ୍ଷା ଅଭିଯାନ, ଜିଲ୍ଲା - ନୂଆପଡ଼ା

Figure: Timetable of children residing in seasonal hostels in Odisha, India

UNIT COST FOR SEASONAL HOSTEL: 2017-018

S.No	UNIT	Quantity by Months	Amount in Rupees
1	Honorarium to caretaker-cum part time teacher	80	480.00
2	Telephone charges for contacting the parents of the children	10	60.00
3	Breakfast, Tiffin, Lunch and Dinner as per KGBV guideline	1300	7800.00
4	Remuneration to Cook	40	240.00
5	Remuneration to Asst. Cook	25	150.00
6	Health check up and medicine	10	60.00
7	Reading-writing Materials		
a	Color Box	1	30.00
b	Note Book	2	60.00
c	Pen	3	30.00
d	Pencil	7	20.00
e	Eraser	5	10.00
f	Drawing Khata	2	50.00
8	Dari, Bedsheet, Mosquito net		300.00
9	Lantern, kerosine, Electricity charges		200.00
10	Consumables (Soap, Detergent, oil, Tooth brush, paste, Mirror and contingency)	65	390.00
11	Documentation and contingency		120.00
	TOTAL		10000.00

Figure: Budget allocation for seasonal hostels in Odisha, India

Data collection: Selection of surveyed villages

- Collected data from the Nuapada district of Western Odisha in July to August, 2019
- Nuapada district is divided into five blocks, of which *Khariar* block was chosen randomly
- Four GPs were chosen based on their past migration records and accessibility
- The villages were within 15km of the Khariar Block Office and were accessible by roads.
- Surveyed seven villages: four villages had seasonal hostels in 2018-19, and three did not
- Collected data for 288 children who were in Grades 3-5 in 2018-19



Figure: Surveyed villages in Khariar block of Nuapada district, Odisha, India

Data collected through primary survey

School Survey

- Schools were visited in each village
 - Test scores of children in mid-term and end-term examinations in the academic year 2018-19 were collected and digitized
 - The question papers were the same across schools, set by the Government of Odisha
 - Teacher characteristics were digitized: gender, age and education, and permanent work status

Household Survey

- This was followed by a household survey of these children
 - Socio-economic characteristics, including social group and religion of the family, education level of parents, and possession of a TV, electricity, personal toilet, drinking water facilities, were collected
 - Gender, grade of the child, and whether the child attended private tuition or not were collected
 - Migration status of parents and living arrangement of children were collected

Descriptive Statistics

- Migration Pattern: Almost half (49.65 percent) of the children in the sample had at least one family member who had out-migrated the year before.
- Social group and religion: The surveyed villages were majorly dominated by Hindu families and the members belonged to Scheduled Tribe (ST), Scheduled Caste (SC) or Other Backward Classes (OBC).
- Education level of parents: 73 percent of the mothers in migrant households were illiterate compared to 69 percent in non-migrant households, and 55 percent of the fathers in migrant households were illiterate compared to 39 percent in non-migrant households.
- Possession of land: The percentage of households who possessed land was higher among non-migrant families (83 percent) than those from migrant families (73 percent).
- Learning outcomes of children: An examination of percentile ranks through a t-test shows that relative to children from non-migrant families, children who were left behind did not have significantly different ranks, whereas migrant children had significantly lower ranks in both mid-term and end-term examinations.

Method

- An Ordinary Least Square (OLS) model is estimated considering the percentile ranks (Rank_{ihv}) in language and mathematics as outcome variables of a child 'i' from household 'h' in village 'v'.
- The control variables include the (C_{ihv}) child's grade in 2018-19, gender, whether or not the child attended private tuitions, and the child's mid-term percentile rank in language and mathematics.
- Controlling for a child's mid-term percentile rank allows me to control for the child's past performance and child-specific characteristics.
- The household characteristics that were accounted for (H_{hv}) include the social group of the family, possession of television, bike, whether the household owns land, whether household has electricity, drinking water facilities and personal toilet, and whether the mother was literate.
- Among the teacher characteristics (Tv), gender of the teacher, whether the teacher was permanent or on a contract basis and the years of experience were controlled in the model.
- Village fixed effects (δ_v) are considered and the standard errors are clustered at the household level.

Main variable of interest: Living arrangements of children

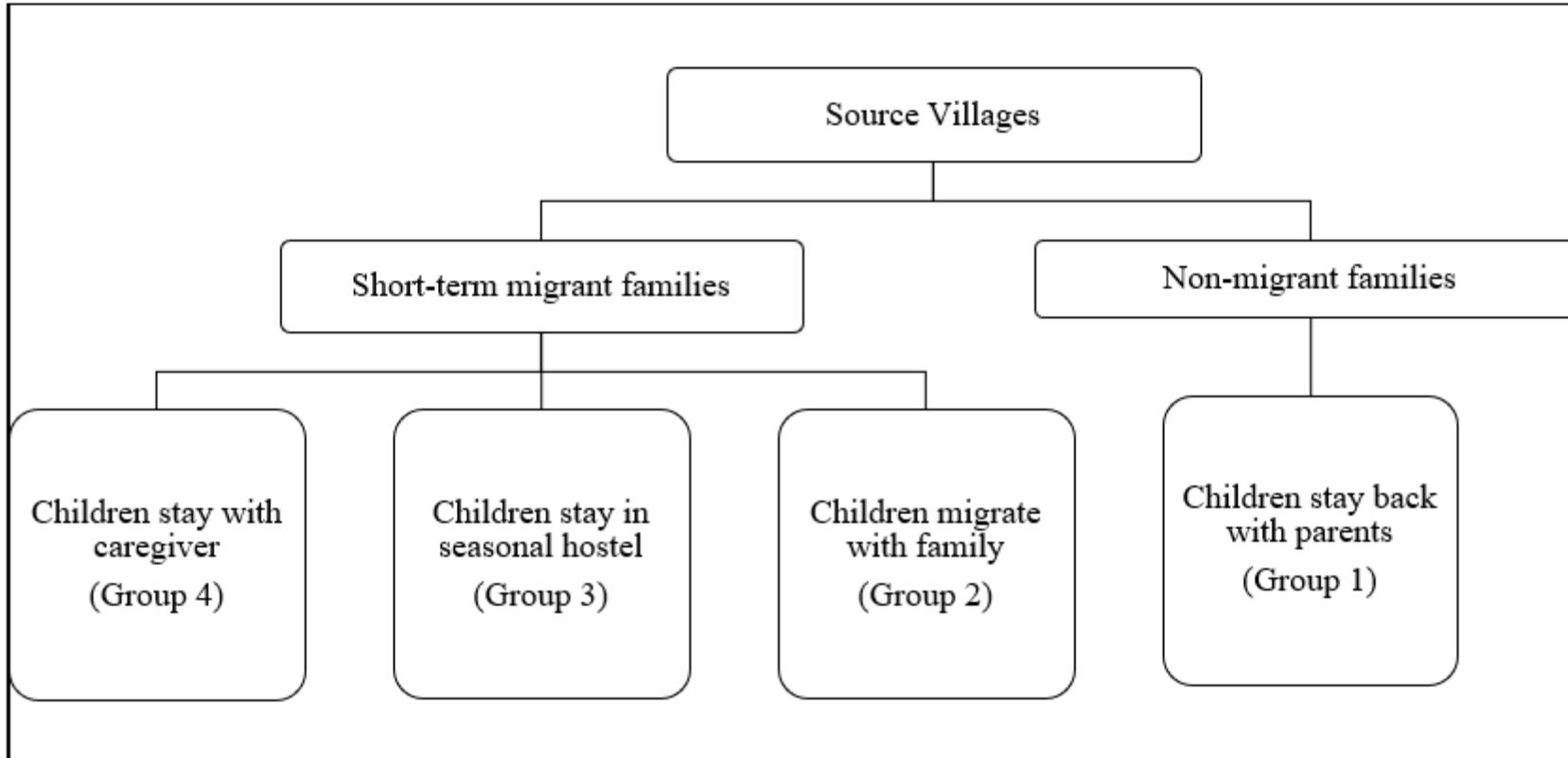


Figure: Living arrangements of children from short-term migration-prone villages

Model specification to compare learning outcomes based on living arrangements of children

Learning outcomes of children

- Model 1: Variation in percentile rank is estimated for the whole sample depending on the living arrangement of children when at least one member migrated from the family for a short term (Groups 1, 2, 3 and 4)
- Model 2: Variation in percentile rank is compared when at least one parent migrated for a short term (Groups 1, 2, 3 and 4)
- Model 3: The percentile ranks of children who were present in the village of origin were compared (Groups 3, 4 relative to 1)
- Model 4: Only percentile ranks of children from short-term migrant families were considered based on their living arrangement and migration status (Groups 3, 4 relative to 2)

Attendance of children

- Model 5: Attendance depending on whether or not the child was from a short-term migrant family where anyone migrated.
- Model 6: Attendance depending on whether or not the child was from a short-term migrant family where parents migrated
- Model 7: Percentage of school days attended in the year before depending on the children's living arrangement
- Model 8: Percentage of school days attended from September 2018 to March 2019, corresponding to the migration months.

Results: Learning outcomes of children by migration and living arrangement

	Full-sample (Model 1)		Parents migrated (Model 2)		The child was in the village (Model 3)		The child is from a migrant family (Model 4)	
	Percentile rank based on end-term scores							
	Math (1a)	Language (1b)	Math (2a)	Language (2b)	Math (3a)	Language (3b)	Math (4a)	Language (4b)
Percentile rank in midterm math	0.517*** (0.056)		0.519*** (0.057)		0.498*** (0.061)		0.512*** (0.097)	
Percentile rank in midterm language		0.341*** (0.060)		0.327*** (0.064)		0.299*** (0.066)		0.337*** (0.090)
The child was with her parents Child migrated	-9.934* (5.442)	-11.769* (6.384)	-9.391* (5.592)	-12.419* (6.557)				
The child was in a hostel	0.526 (3.634)	4.015 (4.462)	0.037 (3.715)	4.007 (4.599)	-0.479 (3.755)	3.464 (4.671)	17.790** (7.446)	20.032** (7.851)
The child was with caregivers	1.523 (4.338)	0.238 (4.044)	4.935 (4.779)	-0.360 (4.348)	4.779 (4.836)	-0.270 (4.404)	12.845* (6.941)	16.348** (7.224)
Child characteristics								
Female child	-3.564 (2.917)	-1.849 (3.242)	-3.535 (3.031)	-1.863 (3.424)	-3.453 (3.189)	-2.213 (3.645)	-9.251** (4.600)	-5.906 (4.515)
Grade 3								
Grade 4	0.304 (4.171)	-1.755 (4.460)	0.320 (4.208)	-0.361 (4.635)	0.927 (4.473)	1.595 (4.838)	-4.870 (6.294)	0.111 (6.682)
Grade 5	0.643 (4.103)	-0.849 (4.710)	0.073 (4.185)	0.641 (4.934)	0.206 (4.263)	2.057 (5.069)	4.347 (7.366)	0.387 (6.663)
Constant	13.714 (15.275)	23.609 (17.175)	18.160 (16.953)	24.507 (20.145)	22.499 (30.112)	30.148 (29.075)	0.885 (24.503)	5.065 (27.408)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Teacher characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Village fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	288	288	272	272	250	250	127	127

Source: Author's calculation using data collected from Nuapada, Odisha. Robust standard errors clustered at the household level are presented in parentheses. Level of significance: *** p<0.01, ** p<0.05, * p<0.1. In Model 1a-1b migrant family is defined as anyone of the household member could have migrated whereas for Models 2a-4b migrant family is defined as one where at least a parent has migrated. Control variables include whether child attends tuition, mother literate, social group, household owns land, television, bike, house has drinking water facility, personal toilet, electricity. Teacher characteristics include teacher's gender, tenure, and years of experience.

Results: Attendance of children by migration and living arrangement

	Attendance on day of the survey		Percentage of school days attended	
	(Model 5)	(Model 6)	Whole year (Model 7)	Sep - March (Model 8)
Child was with parents				
Child migrated	-0.093 (0.106)	-0.072 (0.109)	-21.913*** (4.549)	-30.986*** (5.621)
Child was in hostel	-0.017 (0.058)	-0.021 (0.060)	2.145 (2.385)	5.085** (2.257)
Child was with caregivers	-0.049 (0.070)	-0.031 (0.075)	-3.874 (2.824)	-4.874* (2.823)
Female child	-0.060 (0.047)	-0.063 (0.048)	0.064 (1.989)	2.097 (2.074)
Grade 3				
Grade 4	-0.041 (0.067)	-0.056 (0.070)	3.212 (2.655)	3.482 (2.732)
Grade 5	-0.076 (0.062)	-0.094 (0.064)	0.015 (2.332)	-0.366 (2.363)
Constant	0.488 (0.297)	0.629* (0.352)	37.373*** (11.647)	39.411*** (12.233)
Control variables	Yes	Yes	Yes	Yes
Village fixed effects	Yes	Yes	Yes	Yes
Observations	288	272	272	272
R-squared	0.114	0.110	0.453	0.489

Source: Author's calculation using data collected from Nuapada, Odisha. Robust standard errors clustered at the household level are presented in parentheses. Level of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. In Model (5) migrant family is defined as anyone of the household member could have migrated whereas for Models 6-8 migrant family is defined as one where at least a parent has migrated. Control variables include whether child attends tuition, mother literate, social group, household owns land, television, bike; house has drinking water facility, personal toilet, electricity. Teacher characteristics include teacher's gender, tenure, and years of experience.

Extending hypothesis to a nationally representative survey: Data and Method

What were the learning levels of children from rural short-term migrant families in India in 2011-12?

Extending hypothesis to a nationally representative survey: Data and Method

- **Data**

- India Human Development Survey (IHDS)-II data collected in 2011-12
- The learning levels of children aged 8–11 years in rural India are considered
- Outcome variable is defined based on the skill requirement set by NCERT (2005, 2017), Government of India
 - If an 8-year-old child can read a word, a 9-year-old can read a paragraph, or a 10-11-year-old can read a story, then the outcome variable takes the value 1, else it takes the value zero
 - If an 8-year-old child can identify numbers, 9-11-year old can divide, the outcome variable is set to 1, else zero

- **Methodology**

- Logit model
- Instrumental variable approach: Instruments used are as follows
 1. Rate of short-term migration from the district
 - Source: NSSO's Employment and Unemployment and Migration Particulars 2007-08
 2. Proportion of workers in the manufacturing industry in other districts in the state
 - Source: NSSO's Employment and Unemployment Survey 2009-10

Extending hypothesis to a nationally representative survey: Results

- **Finding from Logit Model:** The children from short-term migrant families in rural India have lower age-appropriate learning levels than their counterparts from non-migrant families
- **Instrumental Variable Approach**
- First-stage result
 - Both the instruments are positive and significant in line with expectations and the literature
- Validity of Instruments
 - Instruments are valid: Hansen J statistic (p-value 0.67 for math; 0.25 for reading)
 - Short-term migration is endogenous (significant at 1% for both mathematics and language)
- Second-stage result
 - Accounting for endogeneity, we still find that children from migrant families acquire less age-appropriate learning levels relative to children from non-migrant families
- The results indicate a negative causal impact between short-term migration of household members and learning levels of children from short-term migrant families from rural India

Discussion

- This study emphasizes on a hard-to-reach group of children belonging to short-term migrant families in India, who are likely to fall behind on receiving quality education in absence of context-specific intervention
- The results suggest that seasonal hostels can be a mechanism to protect children's right to education but the learning levels of children from short-term migrant families can be negatively impacted in absence of interventions
- Children who out-migrate with the families fall behind, even relative to left-behind children from short-term migrant families
- Migrant children engaged in (unpaid) work or took care of household chores, or younger siblings at the destination; less than one-third migrant children went to school at the destination region which were ineffective according to the survey data
- Parents could be encouraged to leave their children in village of origin while they out-migrate for work and have functional and effective schools at destination regions

Conclusion

- In the last two decades, India has seen a considerable rise in school attendance but a fall in learning levels
- There is a need to move beyond universal school attendance and enrolment and examine the learning levels of children – there is a focus on quality education in SDG 2030 Goal 4
- The RTE Central Rules were amended in 2017 to prepare class-wise, subject-wise learning outcomes for all elementary classes
- National Education Policy (NEP) 2020 states that: *“highest priority of the education system will be to achieve universal foundational literacy and numeracy in primary school by 2025”*
- This study shows that there is a need to identify children who are likely to fall behind in terms of attaining education
- There is a need to collect timely data based on these children and a need to undertake context-specific interventions if India were to reach foundational learning by 2025 and SDG 4 by 2030

Thank you

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QR to my personal webpage

