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The consequences of households Forced Migration during Early Childhood on Cognitive Well-Being During latter Childhood: A Longitudinal Data Analysis from India

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Introduction

- The last few decades have witnessed an increased inclination towards the impact of forced migration on population displacement.

- The factors of environmental degradation such as climate change, industrial development, deterioration of agricultural lands, desertification, and air and water pollution are responsible for majority of the unwanted natural calamities giving a call for forced migration and henceforth, affects the welfare of the households in terms of consumption, household income and most importantly, health and well being.

- International Organization for Migration (IOM) proposes the following definition of Forced Migration as “As any person who migrates to escape persecution, conflict, repression, natural and human-made disasters, ecological degradation, or other situations that endanger their lives, freedom or livelihood

Conti……

- 230 million people cross international boundaries, a number that is projected to pass 400 million by 2050.

- Beyond the people who cross international borders, more than two to three times as many probably are internal migrants, people who have moved within their own countries.

- The experts in the domain of forced displacement have projected that between 25 million to one billion people are expected to displace from their current environment to the new point of destination over the next 40 years.

- The last two decades have been an upsurge in the occurrence of the sudden-onset climate-related natural disasters resulting in the displacement of more than 20 million people in 2008

Conti…….

- Forced displacement can have substantial repercussions on the child's overall development.

- Unlike the ephemeral trauma to consumption and income, forced migration is expected to deliver a permanent shock that sensitize the overall well-being of households specifically children at infancy stage.

- Research suggests that as a consequence of forced and environmental displacement, increased dropout-rates have been observed among children of 12 years and above due to the emergence of alternative sources of household income.

- The long-term health outcomes of forced migration on child's nutritional development outweighed short-term consequences

Conti…….

- Study from Columbia reported that the likelihood of chronic malnutrition due to forced displacement were increased by 12.6 to 18.1 percentage points.

- Various studies have examined child immunization among refugee and displaced populations. It has been observed that children born during increased hostilities in Sierra Leone experience inappropriate immunization for age.

- Forced migration directly impacts childhood mortality through malnourishment and physical injuries. However, the less prominent impact includes psychological distress affecting child's cognitive ability due to forced exit from his/her comfortable environment to an unusual destination.

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- Forced migrants are therefore, encountered with the vulnerability of child development against non-forced migrants who are better off to deal with the immediate as well as long term disturbances of existing disruptions

- The availability of social support system during forced migration is crucial for social environment building and re-connecting the already displaced section to the new life of destination.
- Providing support and referral to those in need is both directly and indirectly linked to child development as well as survival

- Therefore, this study aims to examine the effect of forced migration during infancy on cognitive well-being of the children at the age of 8 years using longitudinal data from first and third wave of Young Lives Study from India.

Data

- We use data from the first and third waves of the Young Lives Study (YLS), which were conducted in the state of Andhra Pradesh in India during 2001 and 2009.

- Young Lives Study is an international longitudinal study investigating the changing nature of childhood poverty

- The first wave took place in 2003 and included 2011 children (2011 households)

- The attrition rate between waves one and two was about 3% and between waves two and three was about 1% (Barnett et al., 2012)

Outcome variables

- The outcome variables of interest are
  - Scores attained by child based on Peabody Picture Vocabulary Test (PPVT-Score)
  - Maths Achievement Test
  - Early Grade Reading Assessment Test (EGRA-Score) scores.
  - Memory Score

- The information on each of the outcome variables: HAZ, ppvt score, maths score egra score and memory score were collected during the third wave (child aged 8 years old) of YLS.

Conti…..

- The PPVT is a very common and widely accepted assessment test for identifying the verbal abilities, learning disabilities and scholastic aptitude among school going children

- YLS uses version-III (204 items, Dunn et al. 1997) to access ppvt scores in India.
- Mathematics achievement test was used to identify children's sense of numbers. The maths test included 20 items using numbers for addition, subtraction, multiplication and division.

- The Early Grade Reading Assessment (EGRA) is a test that was used to assess the ability of recognising letters of the alphabet, reading simple words, understanding sentences and paragraphs and listening comprehension.

- For details of ppvt-, maths- and egra- test, see Cueto and León (2012).

Independent variables

The key independent variable of interest is

- Forced Migration (No; Yes)

The variable forced migration were created using two questions asked in the first wave of YLS. During the first wave of the YLS, the survey asked

- Since pregnancy of index child, have there been any big changes or events (natural disaster, moved/migrated/fled; decrease in food availability; livestock died; crop failure; deaths of household member; severe illness/injury and victim of crime) that decreased the economic welfare of your households?

- If yes then survey further asked “what did the households do as results of the big changes/event.

Other Confounding Variable

birth size, preterm birth, sex of child, ever breastfeed, serious illness/injury, HAZ at wave-1 (HAZ-score), child immunization, pre-schooling , type of school , mother's height (in cm), mother's age at birth of the child, mother's education, mother's working status, household head's education, sex of household head, household sanitation condition, income shocks, wealth index in waves one and three, religion, caste and place of residence.

Statistical methods

- We used multivariable linear regressions to examine the consequences of forced migration during infancy on child cognitive development at the of 8 year.

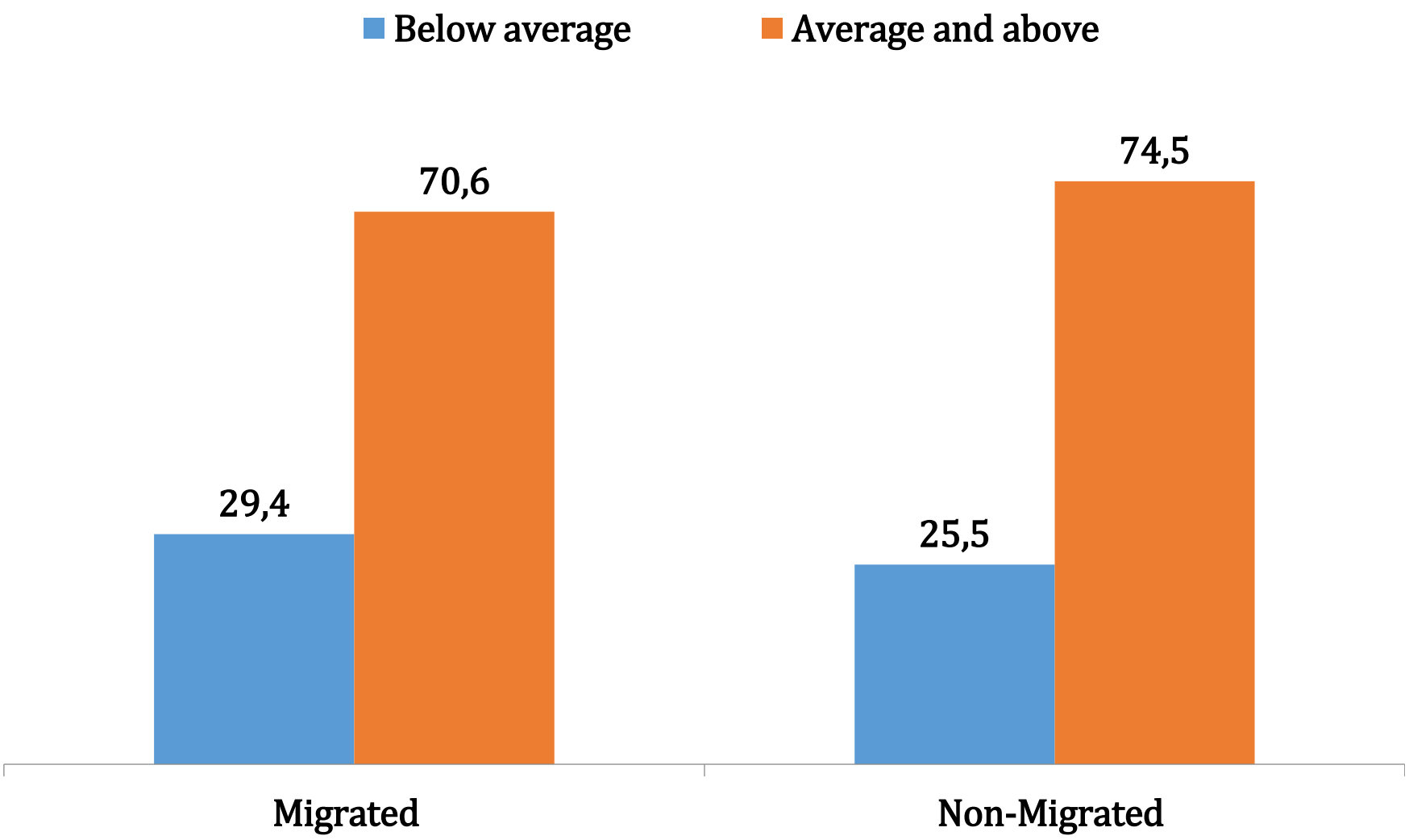
- Each of the four outcome variables - ppvt score, maths score, egra score and memory score (collected in third wave) were regressed on forced migration (collected in first wave) along with all the other variables listed in the 'other variables list'.

- We used ppvt score in natural logarithmic units to model a potential non-linear association between ppvt score and forced migration.

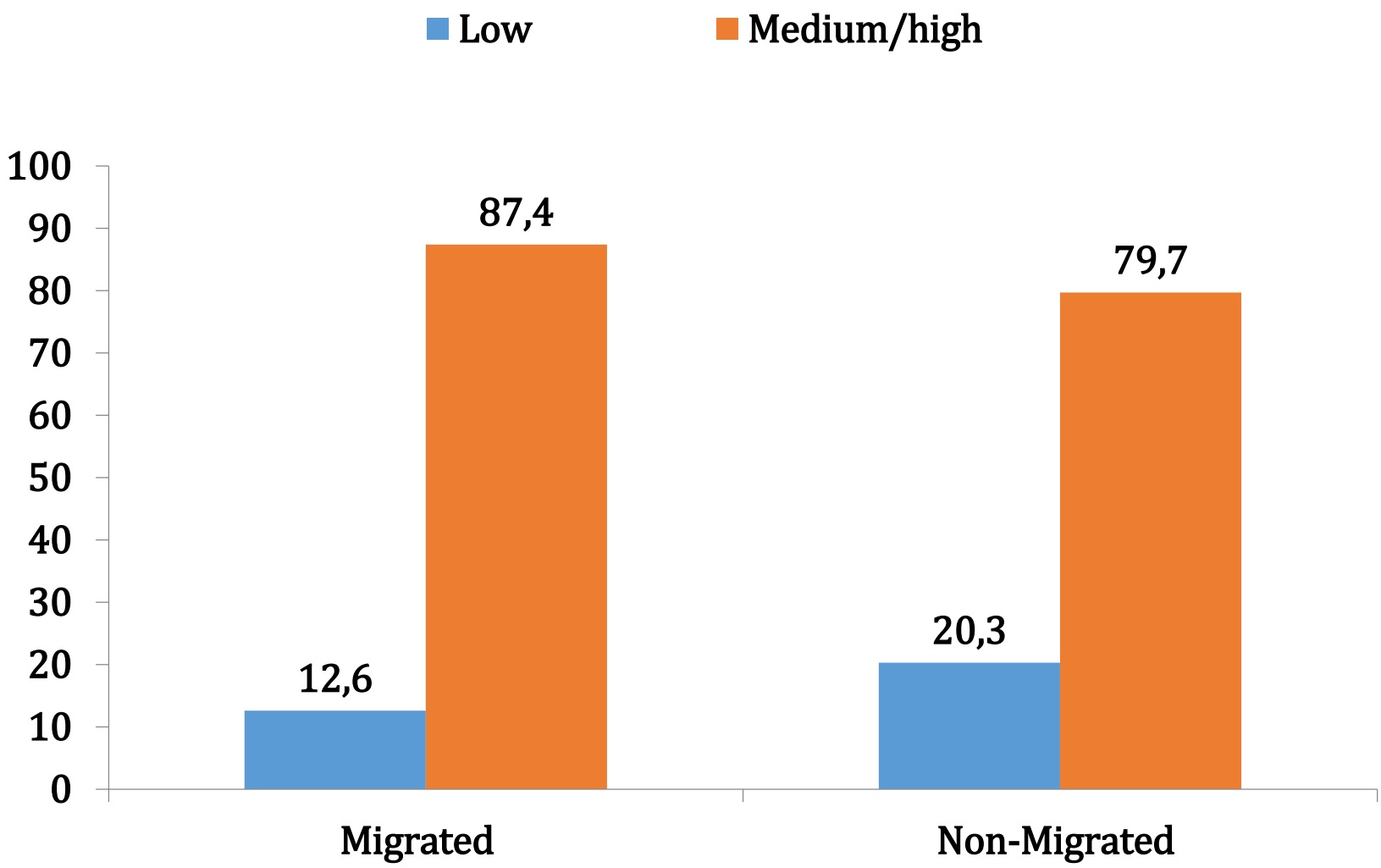
- All the variables were tested for multicollinearity before including them in regressions. The statistical estimations were done using STATA 13.0.

RESULTS

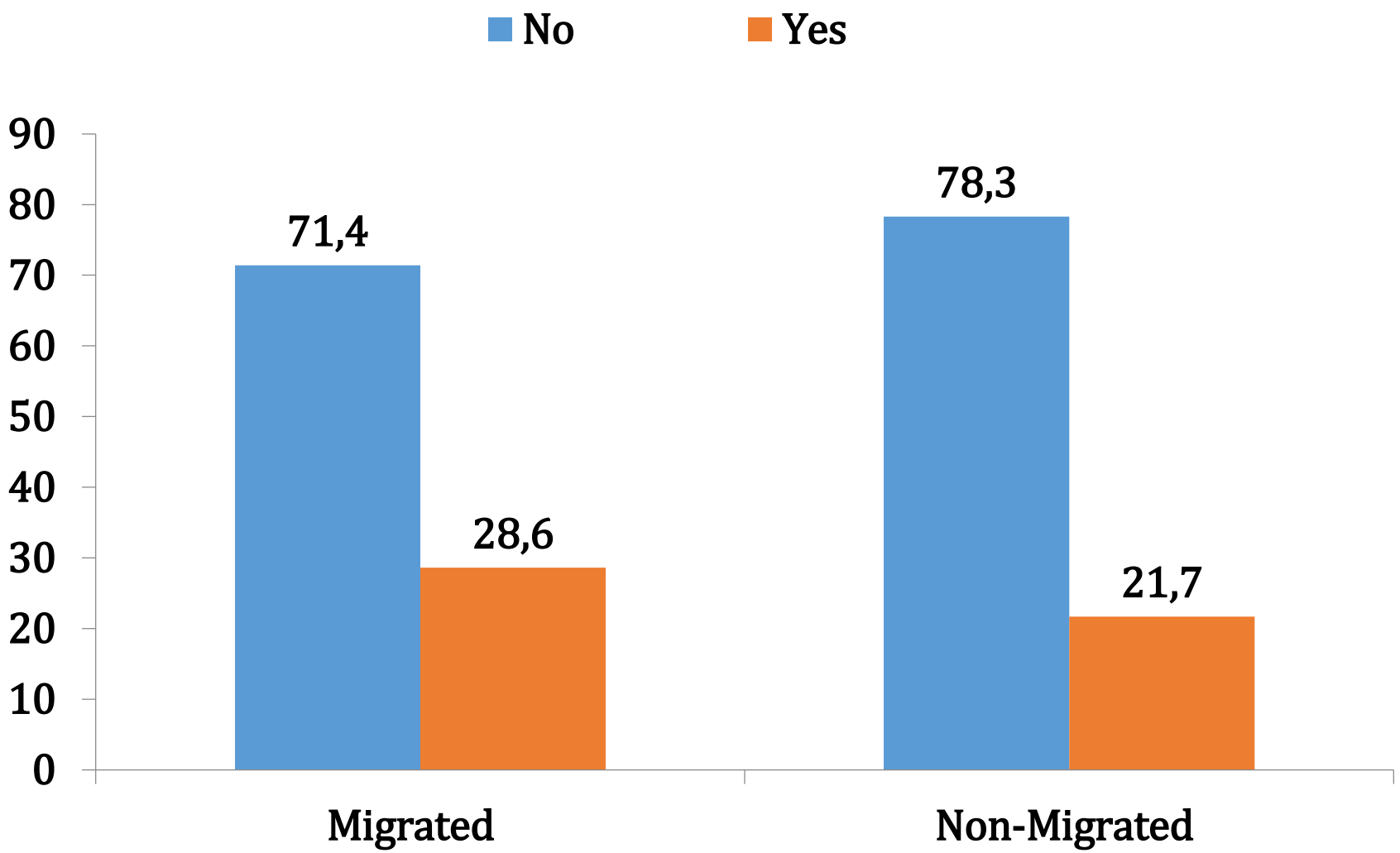
Distribution of Birth Size according to Migration Status



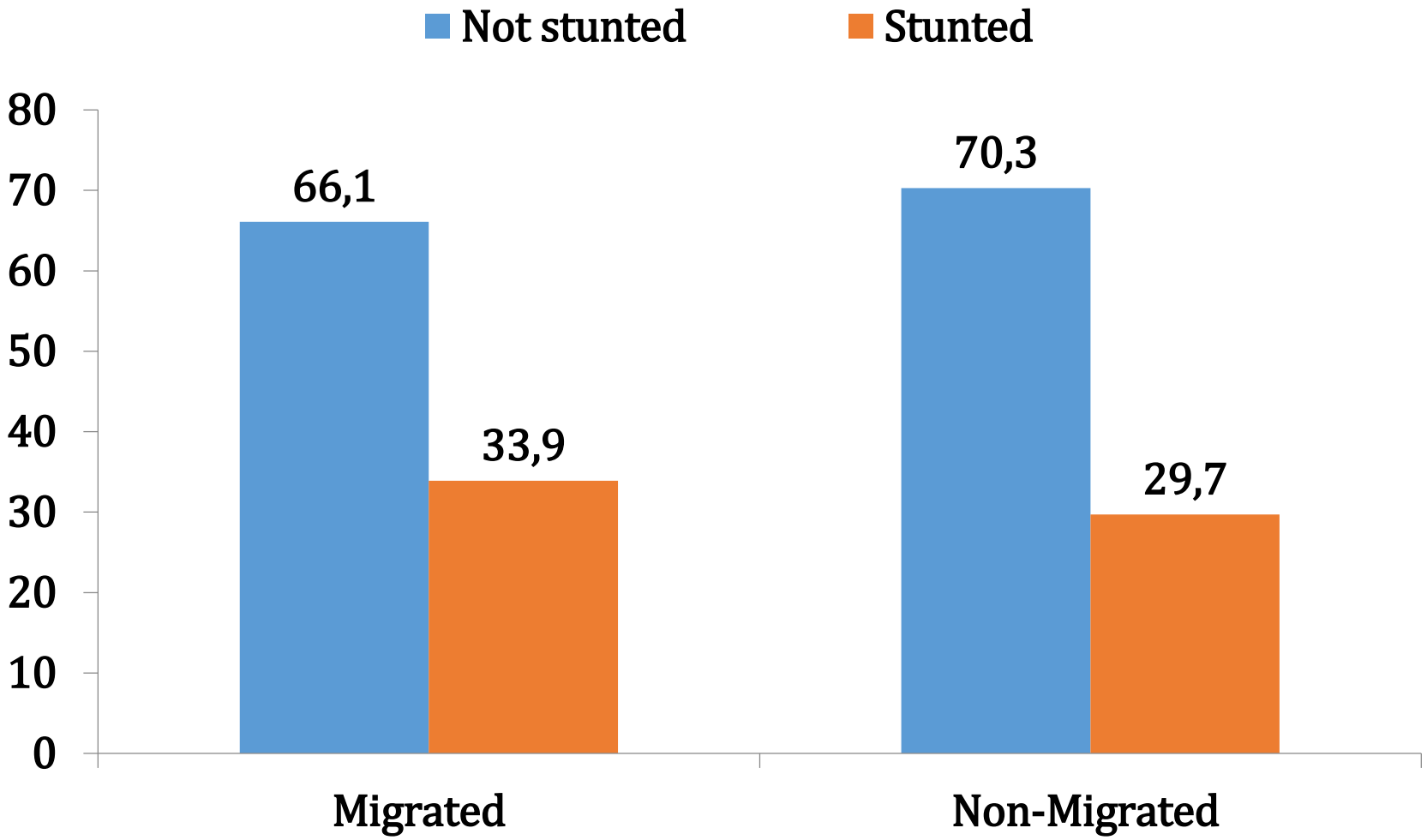
Distribution of Social support by migration status



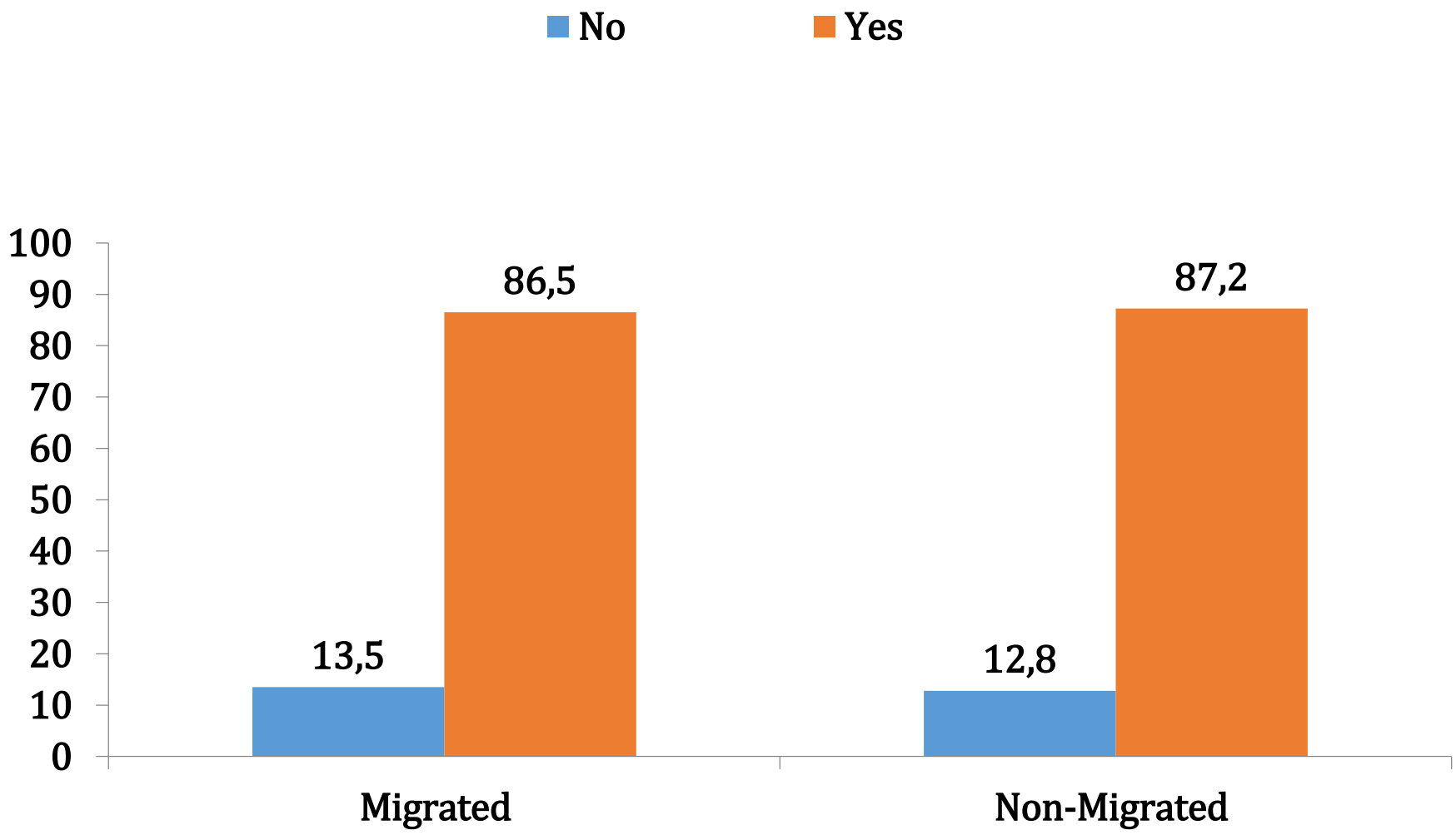
Distribution of Serious illness/injury in R-1 by migration status



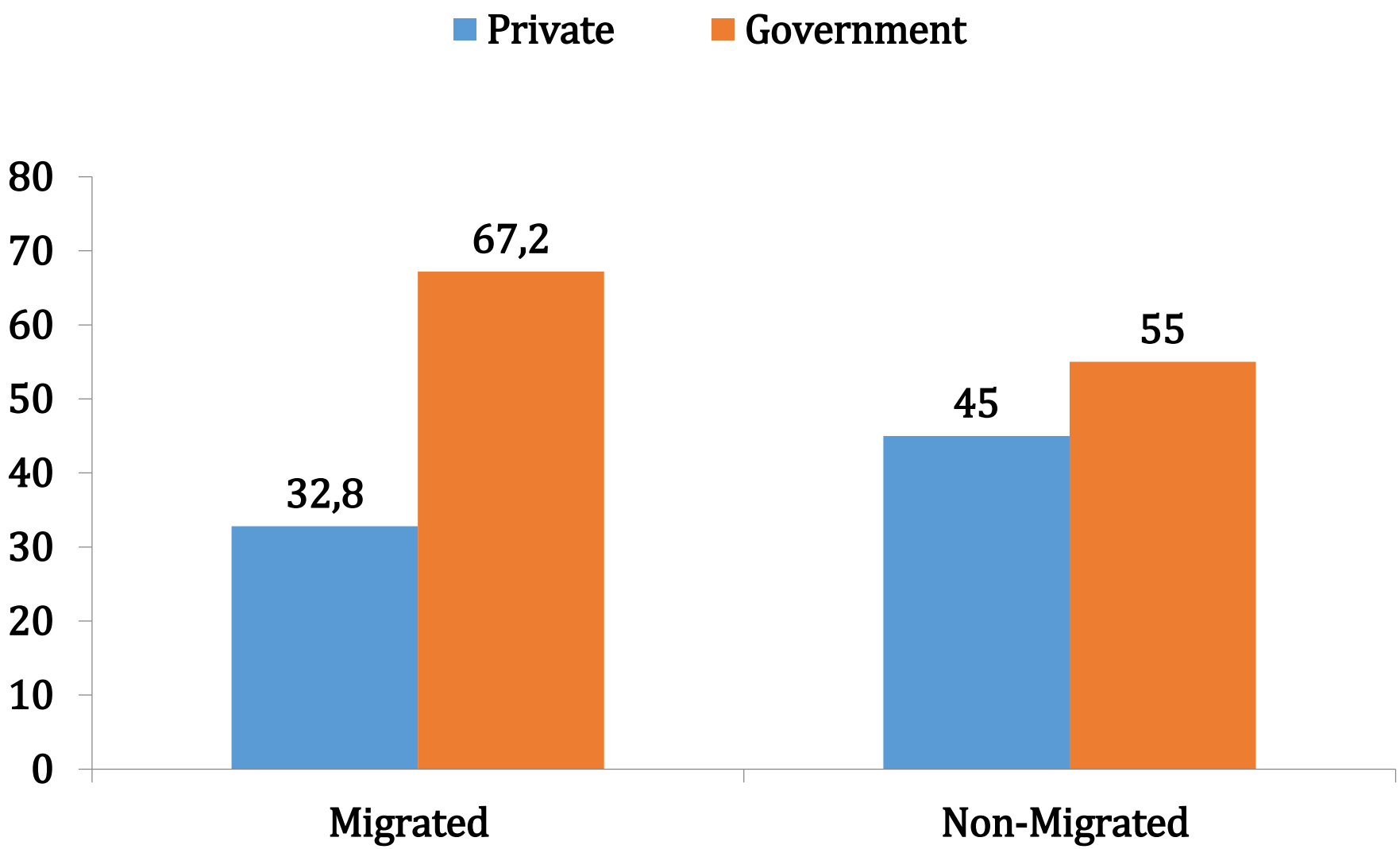
Distribution of Stunting in wave-1 by migration status



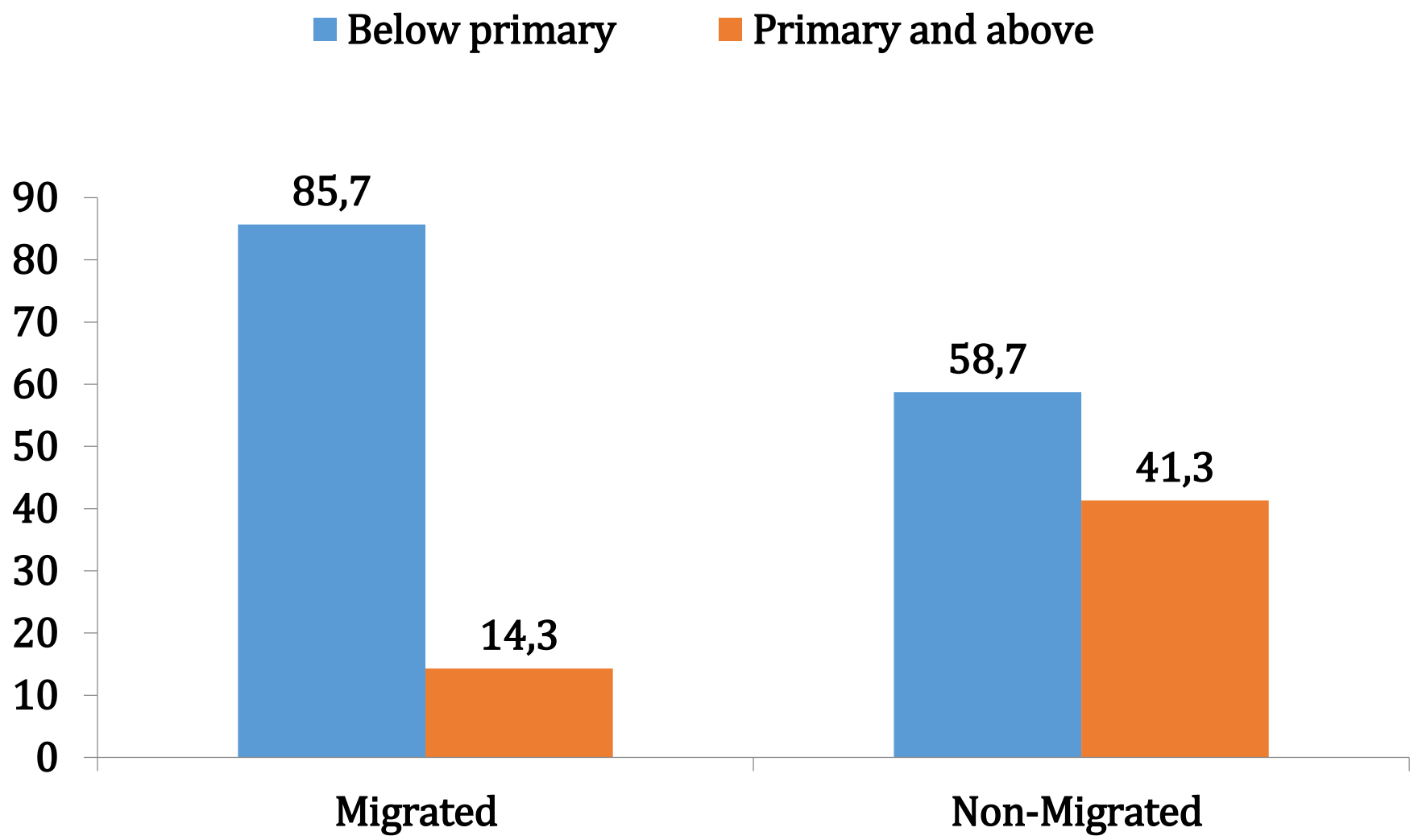
Distribution of attendance of pre-schooling since age of 3-years by migration status



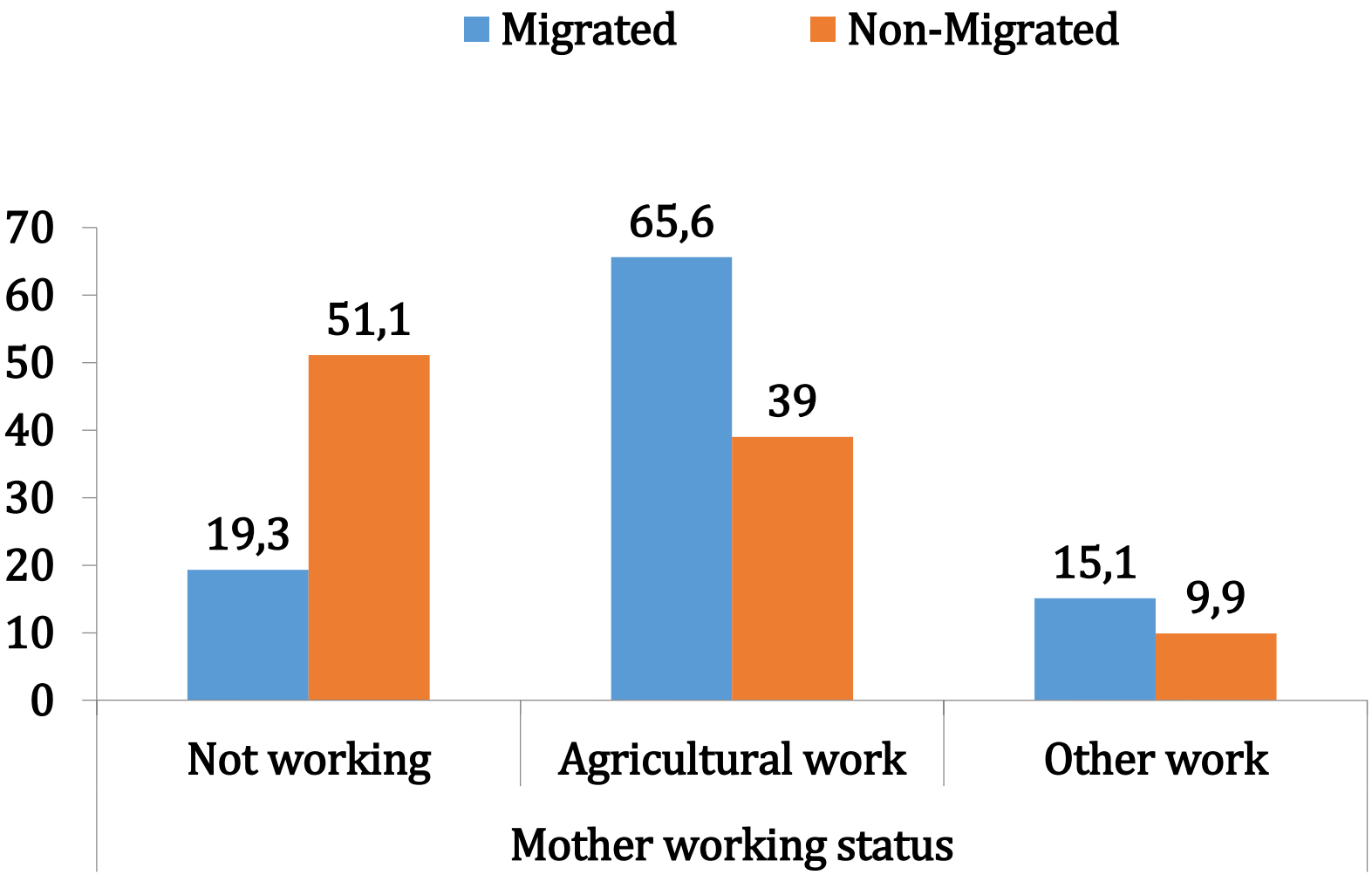
Distribution of Type of school by migration status



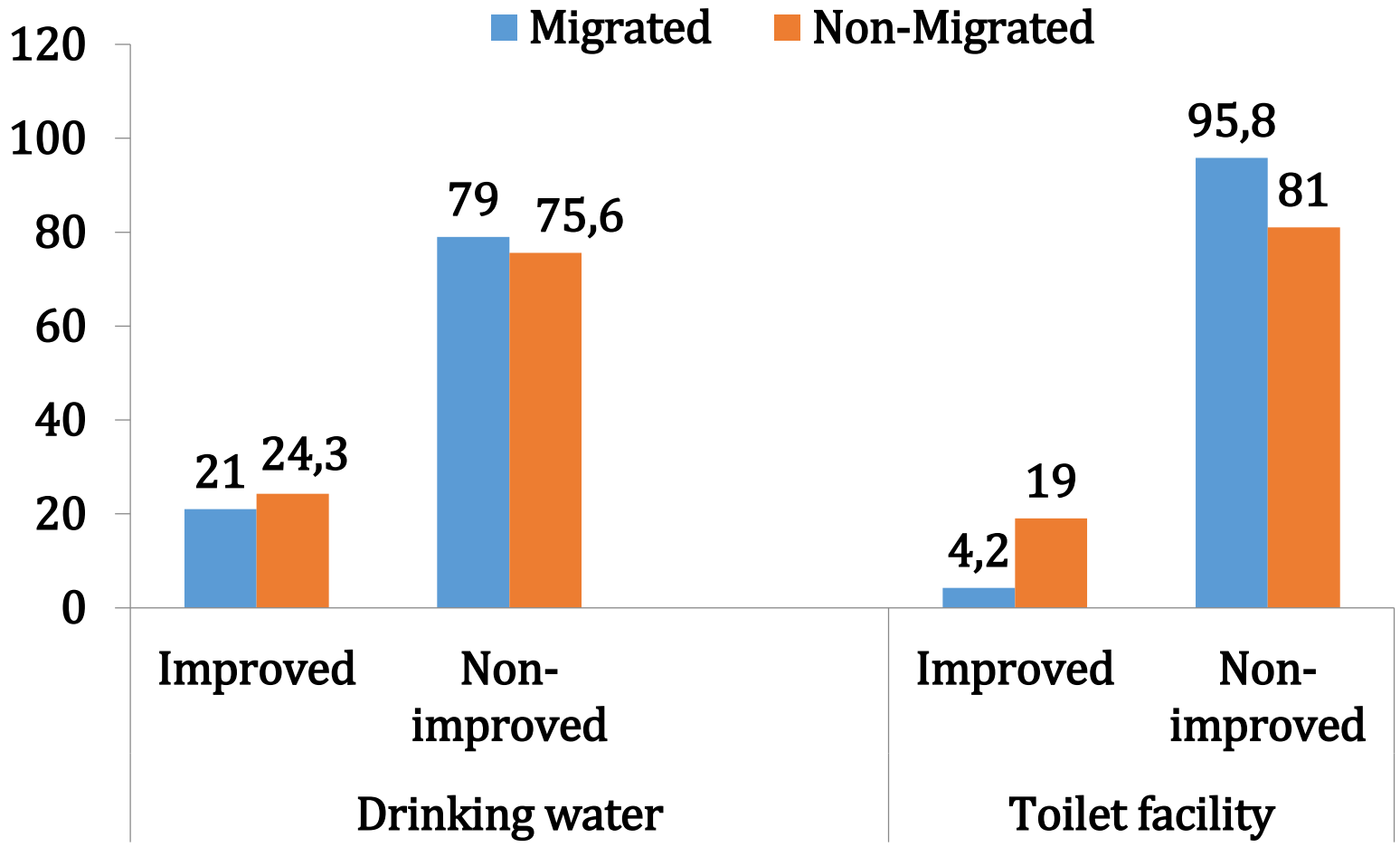
Distribution of Mother's education by migration status



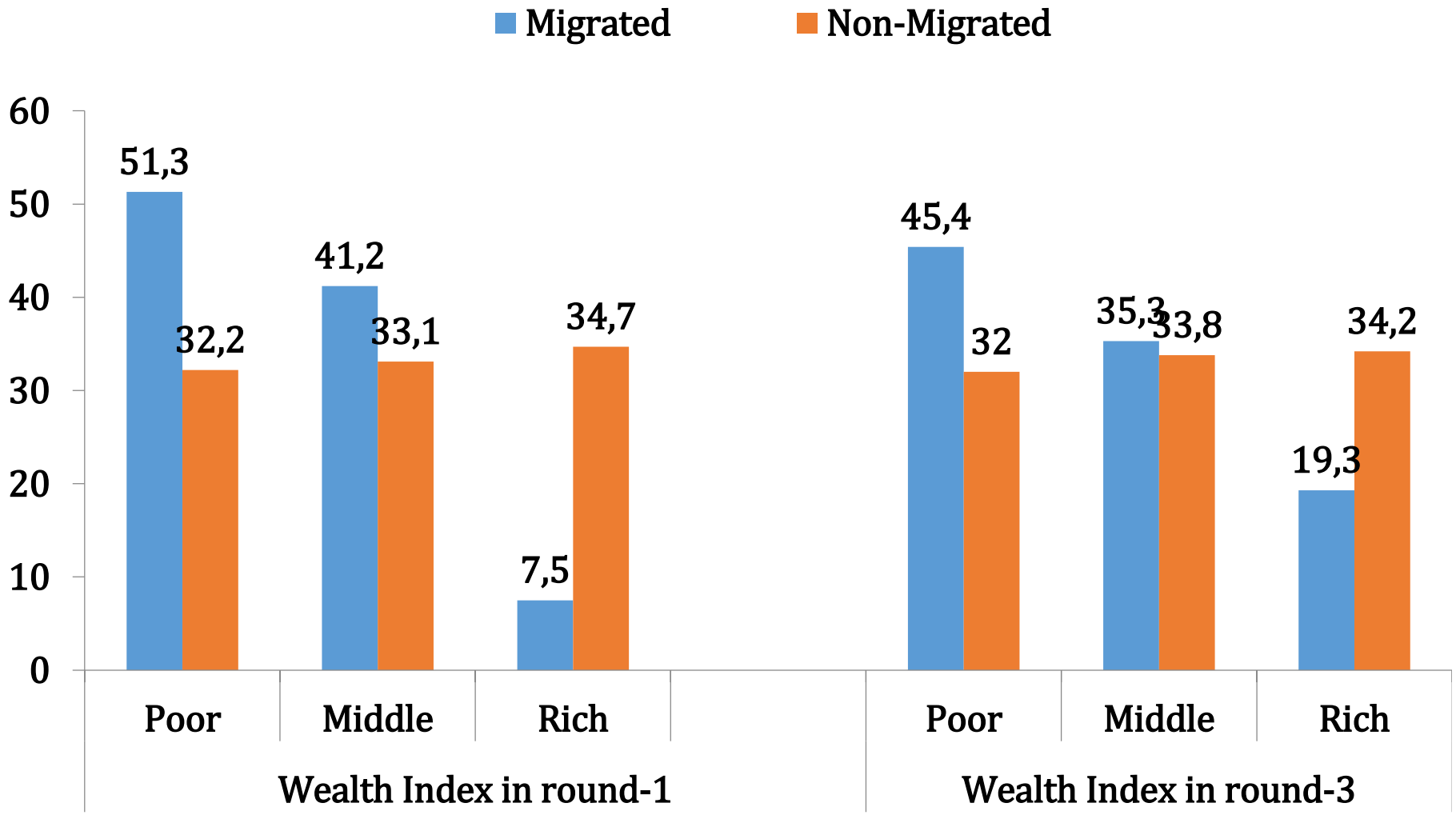
Distribution of Mother working status by migration status



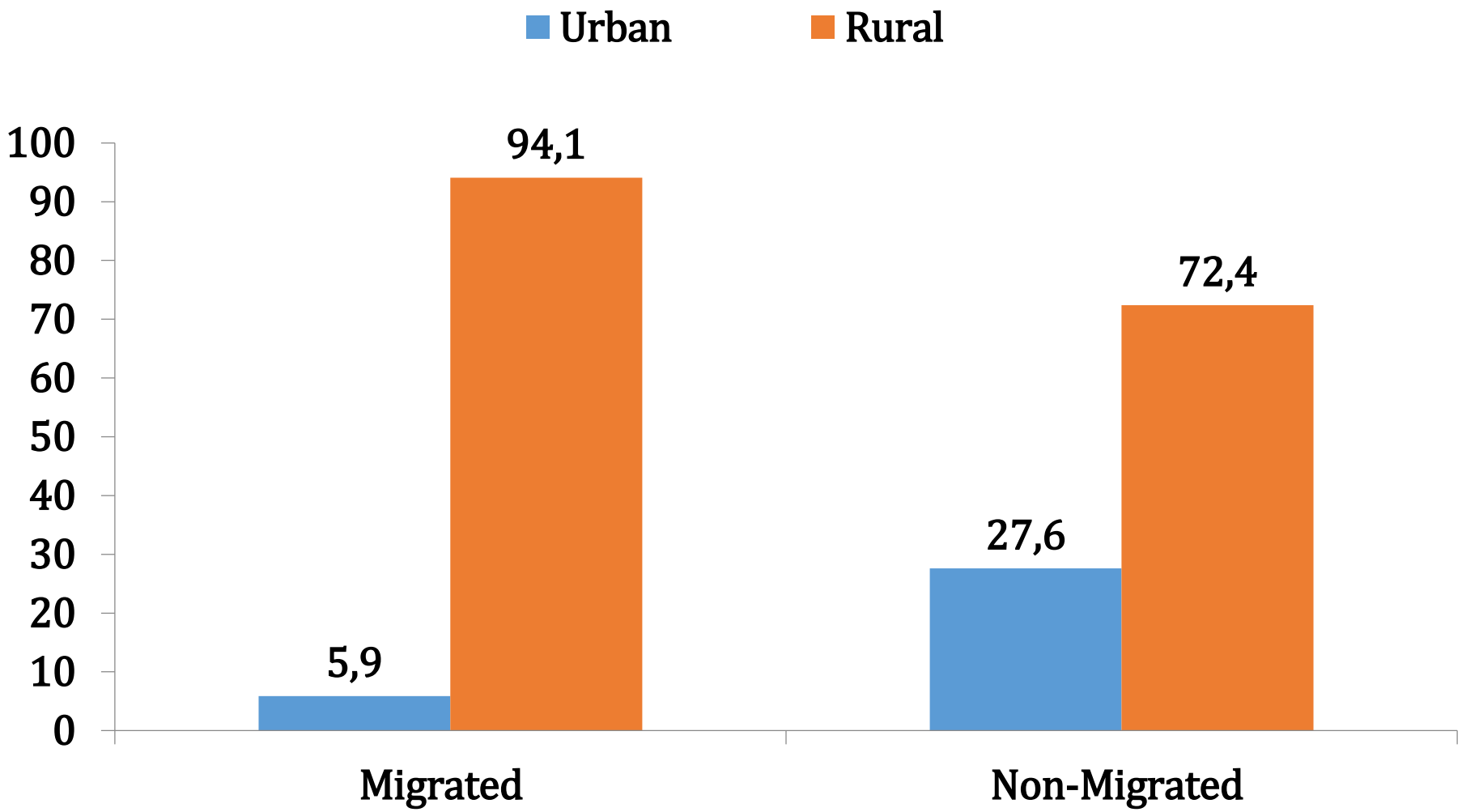
Distribution of Drinking water and toilet facility by migration status



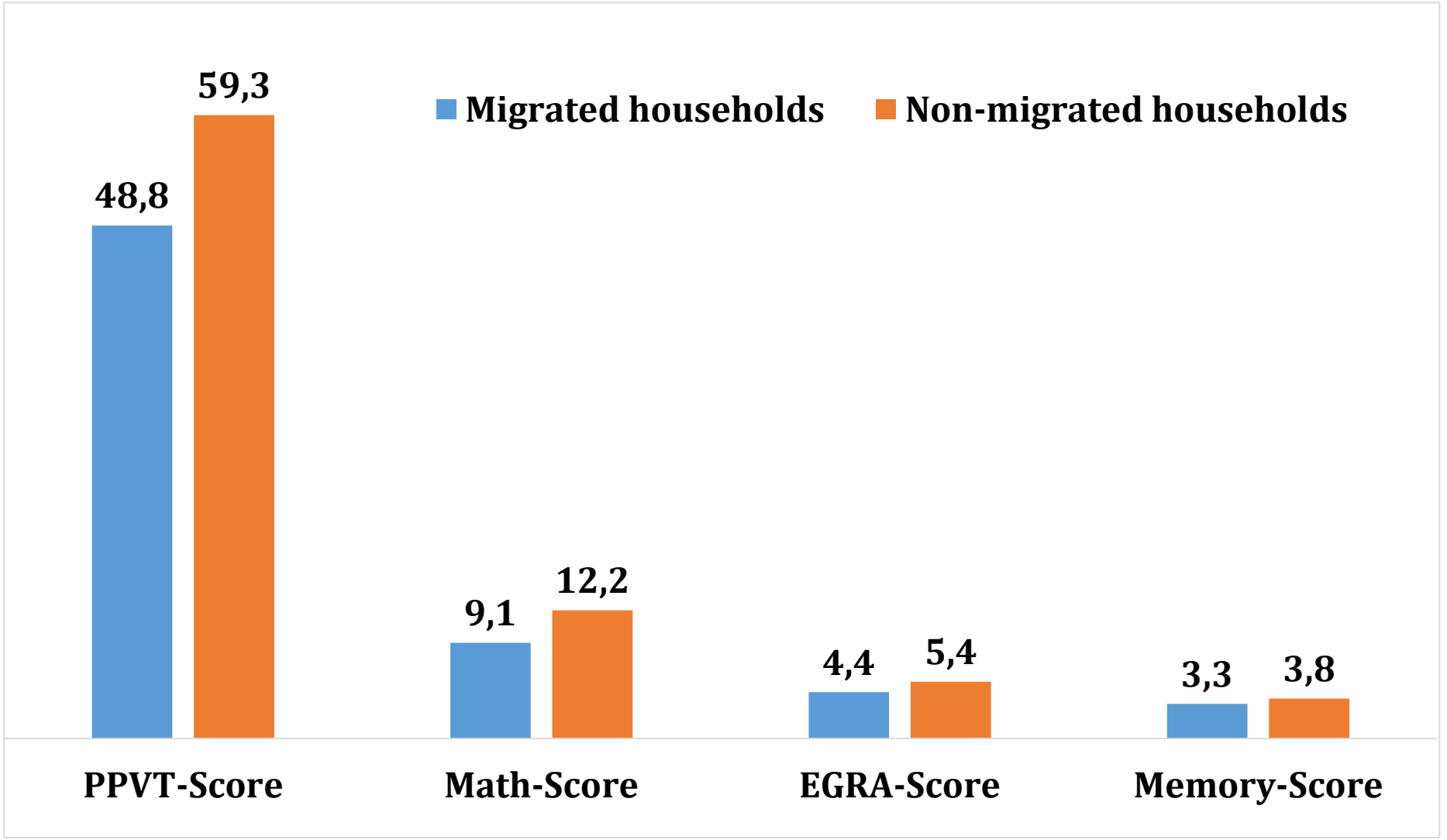
Distribution of Wealth index in round 1 and 3 by migration status



Distribution of Place of residence by migration status



Mean ppvt- , maths-, egra- and memory-scores by Migration Status



Linear regression results showing the consequences of forced migration during infancy on cognitive development at the age of 8

Table 2.docx

Conclusions

- Our study shows that children from the migrated households were statistically less likely to have higher math-score, egra-score and memory-scores compared to the children from non-migrated households.

- Findings indicate that effects of forced migration on child cognitive well-being were not mediated by the social support.

- One of the possible reason for the lack of association between social support and childhood cognitive well-being may be reverse causality whereby household who are in more adverse condition are more likely to receive support from other individuals within their community, relatives and friends. Notably, Kawachi and Berkman (2001) reported that protective effect of social support may not be uniform across society.

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- Findings of this study, call for rapid intervention from government and non-government organizations.

- Given the evidence about the effect of early childhood cognitive development on education, productivity and job performance, children from the migrated households need special intervention that attenuates the long-term effect of early childhood cognitive development on human capital.

- The intervention should make attention for the most vulnerable; children who were displaced during critical development ages.

THANK YOU