Exercise 2: Theoretical examples and considerations for moving forward with data

Day 1: Tuesday, 2 August 2022, 11:00-14:00 (BKK Time)

1. The country of Poplandia is hoping to undertake an inequality assessment on death registration completeness. The Civil Registry Office collects data on 10 different ethnicities as well as usual residence of the deceased.

   Almost all deaths are recorded by The Ministry of Health (MOH) because a death notification is needed for burial and this is strictly enforced in the country. However, the MOH does not collect any information on ethnicity. Usual residence is not collected, but information on location of the clinic issuing notifications of death is provided.

   a. Can analysis of death registration of ethnicity be done with this data? If not, what other considerations of proxies could be explored using these two data sources?

      Because the MOH does not collect data on ethnicity, analysis by ethnicity is not possible. However, if in Poplandia certain regions are populated by say 99% of the same ethnicity, it may be possible to do regional analysis by ethnicity. However, because the MOH and CRO do not both collect the usual residence, a proxy for residence may be needed. Analysis at the provincial level would be less prone to error. Another option is to investigate whether linkages to other databases may be possible using a unique ID number. Perhaps a tax ID database or a national ID database may have complete ethnicity information and could be linked to Ministry of health records.

2. The country of Poplandia is also hoping to undertake an inequality assessment on births. The Ministry of Education (MOE) has a very complete and detailed database for enrolled students. They collect data by sex, age, age of mother, ethnicity, and school location. Sex and age (Date of birth) are taken from birth certificates, mother’s age is taken from her National ID. However, ethnicity is a self-reported field.

   The civil registry office can disaggregate data by sex, age of mother, ethnicity, and location of the registry office. Sex and age of mother is taken from birth notifications. However, ethnicity for Indigenous persons requires both the mother’s and father’s birth certificate to have their ethnicity stated as Indigenous before the baby can be registered under this category.

   a. What variables might you be able to analyze inequalities in registration?

      Sex of child, age of mother
b. What variables might have problems? Can they be used?

Ethnicity may be problematic. You would need to explore what percent of indigenous children are not labeled as such in the civil registry office. It is likely you would underrepresent registered births for indigenous persons as the CRO may not flag all children who are indigenous. You could see if the MOE has ethnicity information for parents and try to filter this way so that your numerator and denominator align.

Analysis by residence/location may also be problematic. You can use the location of school and location of registry as a proxy, but there are many reasons this data may not align. Children may have moved between birth and school entry, births in major hospitals may have been registered close by, but then the family returned home to their village or remote areas soon after birth. This may be especially true for women who had complicated pregnancies, or who had no access to health facilities close to home. Analyzing at a Provincial level will likely have less error than at a lower district level. In this way, proceed with the analysis but explain your proxies in your methodology and use caution and consideration in your interpretations.

c. What are some other things you may need to consider before using the MOE data?

What percent of children are enrolled in the country? If it is high, 95% or more, this data would be acceptable. If it is low (65%), this may not be a viable data source.

Also to be considered, does MOE cover just government school or private or special education schools as well? If just government, what percent of children are in other schools? Again, the coverage of the MOE data is important.

What is the migrational context for children. Is it high? Negligible? We would need to assume close to zero international migration use MOE data to estimate births.

Finally, you will need data for infant and child mortality disaggregated by variables of interest for factoring in the children who may have died in the interim period between birth and school enrollment. This may be available for sex and province and even ethnicity, but may be more challenging by age of mother.