**Variable description and Social Change**

**Introduction**

In this paper, I will be looking into two variable of interest based on the HS longitudinal dataset and assessing their attributes, and how they relate to social change.

**Variables of Interests and their attributes**

My two variables of interest are: X1PAR1EDU (T1 Parent 1: highest level of education) and X1MTHUTI (T1 Scale of student's mathematics utility).

X1PAR1EDU (T1 Parent 1: highest level of education)   measurers the parents highest level of education. The variable is ordinal in nature in that it is a categorical variable whose categories are in a hierarchical or ordered form. The variable, therefore, does not have a unit of analysis.

On the other hand, X1MTHUTI (T1 Scale of student's mathematics utility) measures based on a set out scale, a student’s perceived usefulness of mathematics. The scores are later converted to z scores and recorded.  The variable is thus a ratio variable as it has a true zero and the difference in one unit measures a constant difference.  The scores are based on a scale and thus the variable does not have a unit of analysis.

**Social change**

Both variables can be used to answer questions that relate to social change. The variable, X1PAR1EDU (T1 Parent 1: highest level of education), can be used to answer various questions that relate to social change.  For example, the variable can be used to answer questions that relate to variation in living conditions, changes in promotion culture in the workplace, increased investment in education, and differences in child’s interest in learning.  The parent highest level of education can thus be seen to influence society in the above areas and in many other areas (Sharma and Monteiro, 2016).

The parent’s highest level of education is also influenced by social change. For example, if there is increased job promotions based on the level of education, then more parents will tend to go back to school and raise their education levels. If parents perceive that changes in lifestyles based on differences in incomes is dependent on their education level, the parents will tend to increase their investment in their children’s’ education so as to give them a better chance of a better life or also go back to school to raise their own levels of education (Yabiku and Schlabach, 2008).

The variable, X1MTHUTI (T1 Scale of student's mathematics utility) can also be used to answer social change questions (Sharma and Monteiro, 2016). For example, it can answer social change questions such the reason why scores in mathematics have become better or worse. If students perform better in Mathematics, this might be attributed to a positive perception on the usefulness of mathematics or vice versa.

The student's perception on the utility of mathematics can also be influenced by changes in society (Yabiku and Schlabach, 2008).  For example, if mathematics general application becomes important and of higher frequency in society, the student’s perception on mathematics utility might become more positive.

**Conclusion**

Based on the above, we have seen that changes in society can be influenced by changes in just a single variable. On the other hand, changes in society can also have both positive and negative implications on variables.

**References**

Yabiku, S. and Schlabach, S. (2008). Social Change and the Relationships Between Education and Employment. *Population Research and Policy Review*, 28(4), pp.533-549.

Sharma, R. and Monteiro, S. (2016). Creating Social Change: The Ultimate Goal of Education for Sustainability. *International Journal of Social Science and Humanity*, 6(1), pp.72-76.

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