

## Cultural Transmission and Health:

### The Effect of Russian Settlers on Life Expectancy in the Caucasus Region

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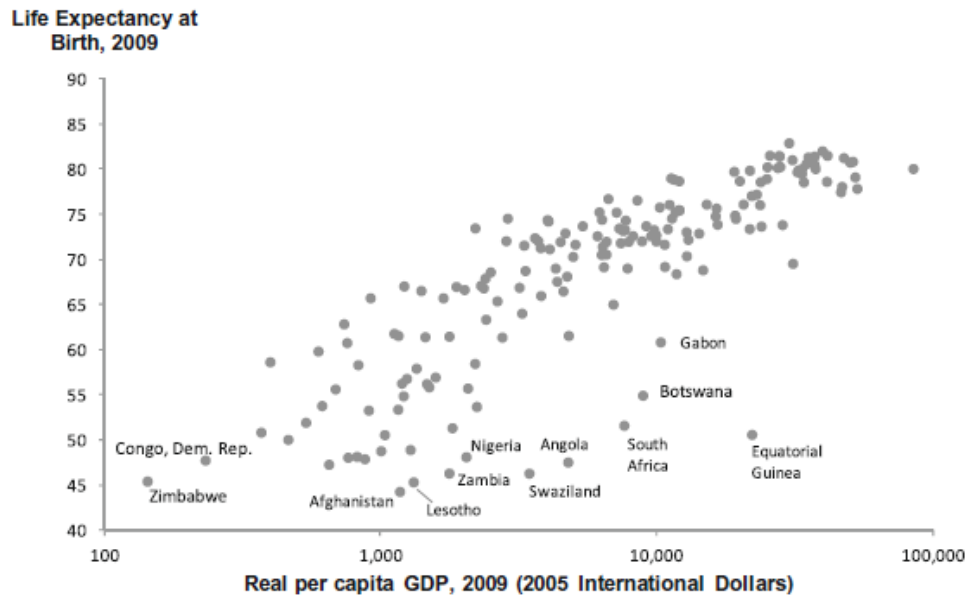
Across countries, income per capita is highly correlated with health, as measured by life expectancy or a number of other indicators. Within countries, there is also a correlation between people's health and income (Weil, 2014, Figure 1).

However, Russian Federation presents an interesting exception to this rule – there is no correlation between income per capita and life expectancy across 83 Russian regions (Figure 2). The lack of correlation is mainly due to presence of several outliers – regions located in the southern part of European Russia (North Caucasus), which were colonized in late 19-th century.

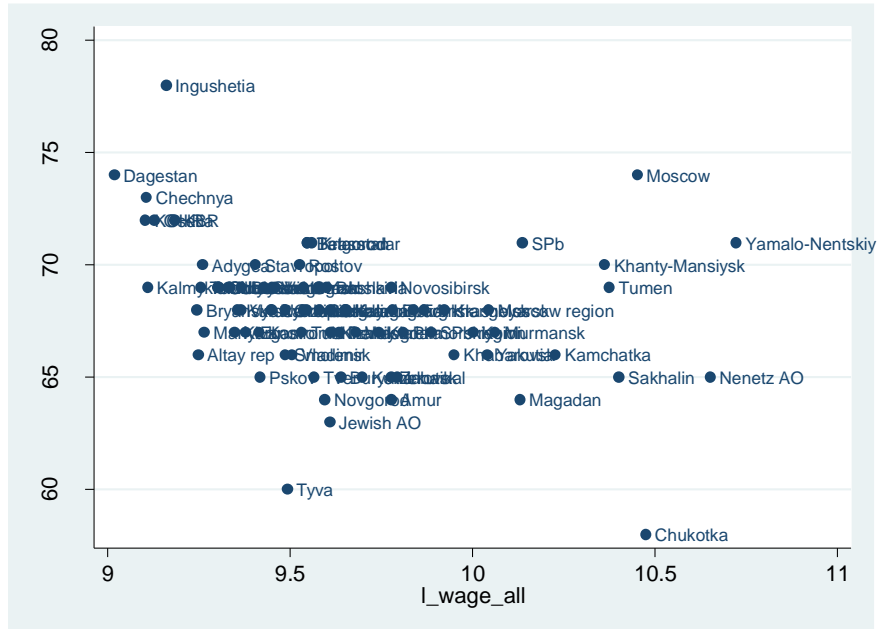
In a cross section of the North Caucasus municipalities there is even negative correlation between income and life expectancy – poorer districts enjoy much higher life expectancy than the richer ones (Figure 3). We explain this puzzle by cultural diffusion of various practices which affect health (mainly alcohol consumption) from the settlers to indigenous population. Despite the fact that Russian settlers had higher literacy rate and higher human capital at the time of colonization, they also brought with them a peculiar culture of strong alcohol consumption, which was mainly absent among indigenous population. The higher human capital of settlers resulted in higher income, and living standards among indigenous population in the regions of settlement (Natkhov, 2015). However, the peculiar culture of alcohol consumption was transmitted in same package with education, which resulted in the observed puzzling negative correlation between income and life expectancy.

We combine historical data on Russian settlements, literacy of settlers and indigenous population from 1897 census, and contemporary data on various measures of development, ethnic composition and life expectancy of the population. We show that across 195 municipal districts (*rayons*) of the North Caucasus region, places with higher share of Russian settlers in late 19-th century, today exhibit higher level of education, higher income, but also lower life expectancy and higher level of alcohol consumption. Our results are robust to various specifications.

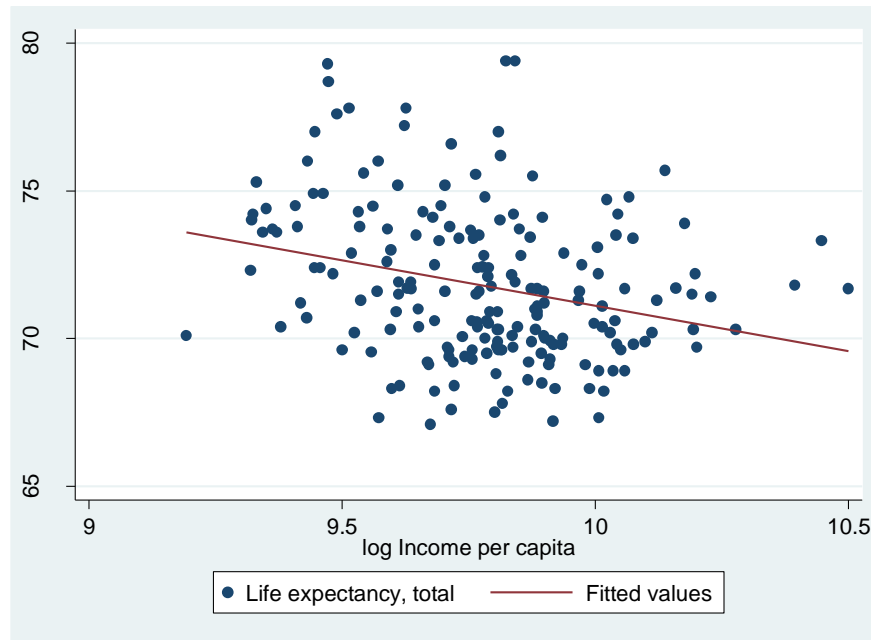
Our work is related to a growing body of literature on the effects of cultural norms on economic behavior. In particular, the impact of cultural differences on long-run economic development (Nunn, 2012), the changes in norms as a result of external treatment (Nunn, Wantchenkon, 2011) and persistence of norms and institutions (Alesina, Guiliano, 2016).



**Figure 1.** Income and life expectancy across countries.



**Figure 2.** Life expectancy and income per capita in Russian regions



**Figure 3.** Life expectancy and income per capita in North Caucasus districts

## References

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