Due to the lack of data, the existing evidence on ethnic fertility differentials in Lithuania is limited and contradictory. Our study uses two nationally representative census-linked fertility datasets for 2001-2003 and 2011-2013. The objectives of the study are to examine fertility patterns of four major ethnic groups in Lithuania: Lithuanians, Poles, Russians, and Other, and to investigate the role of various compositional factors (education, economic activity status, urban-rural place of residence) in the observed variation. Fertility level among Russian women was found to be the lowest both in 2001-2003 and in 2011-2013. In 2001-2003 the TFR for Lithuanians was slightly higher than for Poles, but in 2011-2013 the relationship reversed. Differences in the risk of having a second child explained most of the observed ethnic differences. After controlling for compositional effects, the disadvantage of Russians remained, whereas in 2011-2012 fertility among Poles became lower than both among Lithuanians and Russians.