GDN 2002 Research Competition Grant FINAL REPORT (D. Münich) GDN 2002 Research Competition Grant

## NON-TECHNICAL SUMMARY

**Project title:** Impact of schooling reform on enrolment, quality, and inequalities of graduates: New evidence from the Czech Republic.

Thematic area: VI. Education, Educational policy, Reform, Funding.

## Investigator: Daniel M Ü N I CH

The paper studies causal relationships determining skills of 18 year old pupils in the final year at upper-secondary school in the Czech Republic in late 1990s. Observed differentials in student's achievements measured by standardized study aptitude test scores are quantified and attributed to three principal determinants: i) student's initial skills, ii) school quality, and iii) selection.

The analysis is based on very rich data set representing full population of students subject to nation-wide standardized testing. Unique feature of the data is that it also contains information on school, student's parental background and initial skills.

Students in highly demanded grammar schools - program with general curriculum show notably better achievements than students in vocational programs. Only one third of the performance differential is due to differentials in students' initial characteristics representing parental education, math and language skills of students before uppersecondary school enrolment. It is estimated that almost half of the achievement differential is due to pure school quality effect. School quality differential between grammar and vocational schools explains persistent excess demand for grammar school programs in the country.

The analysis shows that students also sort into different types of schools according to their comparative advantages in specific school types. Parental education and local supply of slots in grammar schools are strong determinants of grammar school enrolment while initial skills play minor role. Due to large variance in the supply of grammar school slots across districts, local conditions are more important determinant of grammar schools admission than students' skills. This implies that two equally skilled pupils living in two different regions of the Czech Republic frequently face very different educational options.

Particular attention is devoted to evaluation of potential gain of students who would benefit from a reform expanding slots in grammar schools. Estimates show that vocational schools students, who would enroll in grammar schools thanks to such expansion, would achieve significantly higher test scores. The gain would be lower than the gain of students who are currently enrolled in grammar schools but the gain would exceed average gain of all students in vocational schools.

Strong evidence is presented that graduates from grammar schools are much more successful in admission to colleges. Admission to colleges is heavily rationed and pecuniary returns to college education are high. High selectivity of the schooling system build-in at different schooling levels is found to be widening unequal distribution of skills in the population.