

The Limited Impact of Extending the School Week on Educational Outcomes in Dutch Primary Education: a Quasi-Experimental Study Using Penalized Synthetic Control Analysis¹

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Abstract: This study uses a quasi-experimental design to investigate the causal impact of an extended school week on educational performance in 22 Dutch primary schools. The intervention has been partly modeled after the prominent Harlem Children's Zone (HCZ). To assess the impact of the intervention, we leverage register data containing information on all Dutch children finishing primary school in the period 2009–2022. Synthetic control analysis is applied to estimate the causal effect for each individual school. The findings show the program has had limited effect on educational outcomes with little variation between schools. Although we lack implementation measures, we discuss how factors such as goal switching, lack of participation, and teacher shortages may have hampered program effectiveness. Finally, we explore whether the HCZ concept is transferable to other international contexts.

Keywords: Educational effectiveness; extended school time; after-school programs; Harlem Children's Zone; synthetic control method

Introduction

There is a significant need among policymakers, practitioners, and researchers to identify which educational programs are effective and to understand the conditions under which they succeed. This study evaluates the effectiveness of an extended school week in the Netherlands, using a quasi-experimental design, leveraging unique school-level registry data and synthetic control analysis. The intervention is part of the National Program Rotterdam South (*Nationaal Programma Rotterdam Zuid: NPRZ*), a unique program in its scope, long-term orientation, and involvement of various stakeholders (Custers et al., 2023; Dol et al., 2019). The extended school week aims to improve educational outcomes among disadvantaged students in 30 primary schools (NPRZ, 2012).

1 This study is an independent evaluation of the effects of the NPRZ extended school week, initiated by the first author. The main goal of the study was to contribute to scientific literature by examining the effectiveness of educational interventions within a long-term urban policy program in the Dutch context. During the research the first author maintained contact with the NPRZ bureau, but the bureau had no role in formulating the research questions, conducting the study, and interpreting the outcomes. Funding was obtained through a Microdata Access Grant from Statistics Netherlands in 2020.

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We contribute to the literature in two ways. First, although much research has been done on the effects of extended school time, important questions remain about why some programs are more effective than others in raising academic outcomes (Durlak et al., 2010; Kraft & Novicoff, 2024). The intervention is inspired by the Harlem Children's Zone (HCZ), a program that has substantially increased test scores (Dobbie & Fryer, 2011, 2015). Evaluating the HCZ adoption in the Netherlands is interesting from a policy perspective because the Dutch educational landscape is considered 'policy-dense' with many stakeholders (Waslander et al., 2016), meaning implementation of interventions might be complicated (Custers, 2025). Our study discusses to what extent the educational concept of the HCZ can be successfully transferred to other contexts (Kerr & Dyson, 2014).

Second, we advance earlier research on the NPRZ intervention by estimating the effects on academic outcomes for individual schools. Previous findings indicate that, on average, the program has had no impact on track recommendations at the school level (Custers, 2025). However, schools have some autonomy in how they implement the program (Kruiter et al., 2020; Sardes & DSP-group, 2023). Effects might therefore differ between schools depending on choices made during implementation. Although we have no measures on actual implementation and therefore cannot assess the causal impact of separate program factors, the findings can still indicate to what extent flexibility in implementation might produce different outcomes. In addition, whereas previous research only considered track recommendations as an outcome (Custers, 2025), this paper also looks at the effects on test scores.

In the current paper, our goal is to estimate the causal impact of the NPRZ intervention on educational achievement for different schools. We do not consider other goals of the program such as socioemotional development and students' enrichment. We use register data from the system of social statistical datasets (SSD) by constructing a longitudinal dataset including 22 intervention schools and relevant control schools drawn from the nationwide registry data, in principle including all schools in the Netherlands, for 5 pre-intervention and 9 post-intervention years. The causal effect of interest is the post-intervention improvement in educational outcomes for the 22 intervention schools. To estimate the causal effect of the NPRZ intervention, we perform a quasi-experimental synthetic control analysis (Abadie & L'Hour, 2021), which attempts to estimate the post-intervention counterfactual for each school.

The rest of this paper is structured as follows: First, we contextualize our study by discussing the HCZ and relevant findings from similar after-school programs. Second, we describe the setup and context of the NPRZ intervention, including relevant characteristics of the Dutch education system and potential issues with the intervention. Third, we describe the register data and the resulting longitudinal dataset, after which we explain our methodological approach. Finally, we present the results and end with a brief discussion.

Findings from the HCZ and After-School Programs

Harlem Children's Zone

The HCZ is an educational and social service organization that creates educational opportunities for students in central Harlem (Hanson, 2013). The philosophy behind the program is to create a "pipeline" or "conveyor belt" through which children from disadvantaged families