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### Immigrant educators and students' academic achievement

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#### ABSTRACT

Using a dataset which allows students to be linked to their teachers, this paper examines how educators with an immigrant background affect the academic achievements of secondary school students in the United States. To account for the possibility that immigrant and native teachers may be assigned to different types of schools, and even within schools, to different types of students, two estimation strategies are employed. The first estimates the immigrant teacher impact by comparing the achievements of students with immigrant teachers to the achievements of observationally similar students with native teachers, within schools. The second compares the achievement of a student with an immigrant teacher in one subject to the achievement of the same student with a native teacher in another subject. Contrary to popular perception, the results suggest that, overall, immigrant teachers do not have a negative impact on the educational achievements of native students.

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#### 1. Introduction

The number of teaching professionals with a migrant background in the United States (U.S.) has increased over the years. While only 2.0% of elementary and secondary school teachers were foreign-born in 1960, approximately 8.6% are foreign-born today (see Fig. 1). The size and growth of the immigrant teacher population has not been uniform, with some cities and school districts experiencing larger shares and increases than others. Fig. 2 shows how the percentage of foreign-born teachers has evolved over the decades for the largest U.S. cities. It is clear that, in a number of cities such as San Jose, immigrant teachers now constitute a sizeable and growing part of the teaching force. Given the growing shortage of teachers in the U.S., the trend of international recruitment looks set to continue. Despite this, little is known about how the presence of immigrant educators has affected American students' academic achievements and learning experiences. Although a small number of studies have made efforts in this direction, these have focused exclusively on examining the effects at the undergraduate level and are predominantly based on evidence from the Economics discipline.

Mixed results have been found at the undergraduate level. While a number of studies have found evidence suggesting that immigrant Teaching Assistants and Associates impact the academic performance of undergraduates adversely (Watts and Lynch, 1989; Borjas, 2000; Becker and Powers, 2001; Marvasti, 2007), an equally large number of studies report quite the opposite effects – suggesting that immigrant educators can be as (Jacobs and Friedman, 1988; Saunders, 2001; Asano, 2008), if not more (Norris, 1991; Fleisher et al., 2002) effective in classroom instruction than their native counterparts. The inconsistency in evidence is possibly due to the fact that each study's data come from a different university. Because each university has its own set of instructor hiring requirements (with some universities requiring that potential instructors be trained in teaching methods and/or the English language, or even undergo screening through interviews before they are allowed to teach), the results across studies are unlikely to be comparable. The above studies generally assume Teaching Assistants and Associates to be randomly assigned across students enrolled in a course. As such, simple regression control strategies are typically employed to identify the effect of immigrant educators.<sup>1</sup>

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The literature has advanced a number of reasons to explain why immigrant educators may not be as effective as their native counterparts in classroom instruction. These include the lack of English language proficiency (Jacobs and Friedman, 1988; Watts and Lynch, 1989; Norris, 1991; Borjas, 2000; Fleisher et al., 2002), differences in teaching cultures (Jacobs and Friedman, 1988; Watts and Lynch, 1989; Fleisher et al., 2002; Liu et al., 2006; Asano, 2008; Alberts, 2008), and/or a lack of insights into local situations which might otherwise aid in the presentation of concepts and ideas (Watts and Lynch, 1989; Fleisher et al., 2002; Asano, 2008). These factors potentially prevent effective instruction and inhibit students' learning processes. Nevertheless,

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<sup>&</sup>lt;sup>1</sup> Note that these studies often do not clearly and explicitly detail the process by which instructors are matched with students. Because the variables that determine instructor assignment are often unknown, it is unclear whether the simple regression control strategies used by these studies are sufficient to identify the causal impact of immigrant educators.

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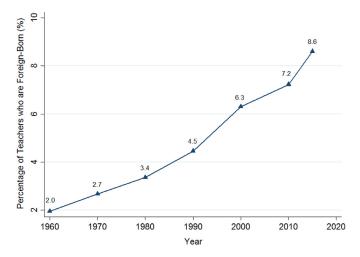


Fig. 1. Percentage of Elementary and Secondary School Teachers in the United States who are Foreign-Born, 1960–2015.

*Notes*: Values in the figure are constructed using data from the U.S. decennial census (years 1960–2010) and the American Community Survey (year 2015) 1% sample, made available through IPUMS-USA (Ruggles et al., 2015). Sample weights used in all computations.

because immigrant educators are a select group who have chosen to brave the uncertainties of living and teaching in a foreign culture, it is possible that they possess qualities which make them more desirable instructors compared to natives. In particular, they may be more motivated and less-risk averse (Chiswick, 1978; Norris, 1991) and these factors may potentially enhance the learning experiences and achievements of their students.<sup>2</sup> Together, these imply that it is not possible to know, *a priori*, how having an immigrant teacher will affect student achievement.<sup>3</sup>

Student learning effects at the lower academic levels<sup>4</sup> have until now been completely ignored in the extant literature, although as highlighted above, immigrant teachers continue to be absorbed in considerable numbers by U.S. schools to teach at the elementary and secondary school levels. The purpose of this paper is to fill the gap in the literature by examining whether the migration background of the teacher matters for how well secondary school students in the U.S. perform. This is the first study that I am aware of which aims to identify a causal relationship between teacher nativity and student achievement outside the university

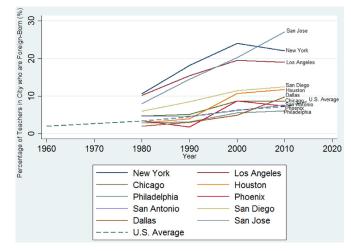


Fig. 2. Percentage of Elementary and Secondary School Teachers who are Foreign-Born, by City, 1980–2010.

*Notes:* Values in the figure are constructed using data from the U.S. decennial census 1% sample (years 1980–2010), made available through IPUMS-USA (Ruggles et al., 2015). The average percentage of elementary and secondary school teachers who are foreign-born in the U.S., plotted in Fig.1, is also reproduced here for comparative purposes (dashed line). Sample weights used in all computations. City-level values of the percentage of foreign-born teachers are unavailable for the years 1960, 1970, and 2015.

level. Specifically, this paper attempts to address two research questions: (1) How does having an immigrant teacher affect the academic achievements of secondary school students in the U.S.? and (2) Do immigrant teacher effects differ by student nativity? To answer both questions, I draw on evidence from the National Education Longitudinal Study of 1988 (NELS) – a dataset consisting of a nationally representative sample of 8th grade students in the U.S.

To account for the possibility that immigrant teachers and native teachers may be assigned to different types of schools, and even within schools, to different types of students, I employ a within-school and a within-student strategy respectively. The former approach estimates the immigrant teacher impact by comparing the academic achievements of students with immigrant teachers to the achievements of observationally similar students with native teachers, within schools. This approach, also known as the school fixed effects or within-school approach, will yield unbiased estimates of the immigrant teacher impact, as long as, within schools, there is no tendency for immigrant and native teachers to be assigned to different types of classes and students. The latter approach, also known as the student fixed effects or within-student approach, estimates the immigrant teacher impact by comparing the achievement of a student with an immigrant teacher in one subject to the achievement of the same student with a native teacher in another subject whilst controlling for the student's prior achievement in both subjects. The latter approach will yield unbiased estimates of the immigrant teacher impact as long as there is no systematic tendency for students to be assigned to immigrant teachers in subjects in which they are weaker (or stronger).

Contrary to popular perception, the results from this study indicate that, overall, immigrant teachers do not have a negative impact on the educational achievements of native students. Additional tests suggest that this non-adverse effect is driven primarily by the greater effectiveness of White immigrant teachers relative to native teachers.

Three aspects of this study deserve attention. As mentioned, this is the only study which investigates the effects of having an immigrant teacher on student achievement outside the university level. In addition, unlike most studies in this field, which have considered learning effects largely in the subject of Economics, this paper considers learning effects in Science, Mathematics, Social Studies, and English – subjects that form the core foundation for a variety of other disciplines. Lastly, in contrast to the findings of previous studies, which have limited gen-

<sup>&</sup>lt;sup>2</sup> I find some evidence in support of this with data from the National Education Longitudinal Study of 1988. The data show that immigrant teachers are more likely to spend additional time each week outside of regular school hours planning/preparing for teaching and supervising students. They are also more likely to express being either "very well prepared" or "well prepared" (as opposed to being either "adequately prepared", "somewhat prepared", or "totally unprepared") to teach the subject matter covered in the course. Further, immigrant teachers are more likely to use innovative pedagogical techniques such as non-textbook based instruction in lessons (see Appendix Table A1).

<sup>&</sup>lt;sup>3</sup> Ideally, the *ceteris paribus* question in this context should contrast the achievement of a student with an immigrant teacher to the achievement of the same student with an otherwise identical native teacher (identical in every respect such as educational qualification, certification, motivation, risk aversion, etc, with the exception of nativity). However, since I am not able to measure and control for unobserved teacher characteristics (like motivation and risk aversion), even with a within-student identification strategy, the estimates in this paper should be viewed instead as representing an "overall treatment effect". In other words, the results should be seen as an attempt to contrast the achievement of a student with an immigrant teacher to the achievement of the same student with a native teacher (where unobserved characteristics like motivation and risk aversion of the native and the immigrant teacher need not be the same). The results in this paper are the average of these individual treatment effects.

<sup>&</sup>lt;sup>4</sup> The lack of suitable data at the lower academic levels likely explains the absence of such studies. A review of the available educational statistics databases reveals that the nativity statuses of teachers are not usually reported in the data. Often, the demographic information available on instructors are limited only to race/ethnicity, Hispanic identity, age, and sex. Country of origin is almost always never reported (an exception is the "National Study of Postgraduate Faculty". However, this study does not allow one to match instructors to their students and is therefore not suitable for our purposes).

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