The impact of competition on the performance of public high schools

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ABSTRACT
Performance-based reforms of education have developed based on three core beliefs; all students can learn, school performance directly impacts student learning and schools should be accountable for student achievement (Lezotte, 1992). School competition, it is argued, forces all schools to perform better. In this regard, NZ schools provide a unique case study for these types of reforms, as it has been subject to a free market for education that required public schools to compete, not just with private schools, but also with each other.

Traditionally public schools have not directly competed, as each school is allocated a specified geographic area or ‘zone’ from which enrolments are accepted. Under such a system enrolments outside the zone are limited. During the 1990s, in NZ these zoning rules were removed. This introduced direct competition between public schools, particularly in large urban areas where transport costs between schools were low (Fiske & Ladd, 2000). The removal of school zoning has been one of the most controversial reforms of the NZ education system and subsequently it has been reintroduced.

The reforms in NZ were driven, ideologically, by the New Public Management (NPM) philosophy. One of the underlying principles behind this reform was the contention that an absence of competition leads to inefficiencies in the education system (New Zealand Treasury, 1987). Treasury advocated a public education system with minimal state intervention and competition between public schools that provided high levels of parental choice. School reformers in NZ expected the removal of zoning would provide incentives for low performing schools to improve their
performance or risk losing students and, thereby, funding. This, in turn, would lead to the average performance of all schools increasing.

Research on the impact of school competition mostly deals with private schools competing with public schools. This research has found that higher concentrations of private schools are related to higher levels of public school performance (Couch, Shughart, & Williams, 1993; Dee, 1998; Greene & Kang, 2004; Hoxby, 1994a). Notwithstanding, in some cases no marked increase in average performance has been found and the main impact of competition appears to be an increase in sorting with the best students moving to private schools (Hsieh & Urquiola, 2003). There is limited research examining the impact of increases in competition between public schools. Hoxby (1994b) considered the impact of increased competition created by an increase in the number of school districts in a metropolitan area that increased school choice. This reform was found to be related to higher school performance. However, it has been suggested that this type of increased competition does not provide the same incentives for all public schools to increase their performance (Adnett, Bougheas, & Davies, 2002).

The qualitative research on the impact of the introduction of school competition in NZ has found that the introduction of competition advantaged some students, but that overall competition created ‘winners’ and ‘losers’. Under the competitive model, failing schools were unable to retain sufficient students to overcome temporary performance issues and, given insufficient resources, were unable to correct these problems. Commentators criticised the reforms on the basis that there was insufficient intervention by the Ministry of Education to assist failing schools, which were often dominated by students from the poorest socio-economic environments.
Further, critics argued that, in terms of efficient resource allocation, the introduction of competition was not sustainable in the long term, as the increasing demand for school placements should have been met by using already existing under-utilised (unpopular) schools, rather than building new schools or expanding over-utilised (popular) schools (e.g., Fiske & Ladd, 2000; Lange, 1999).

This paper uses an economic model of school performance to empirically measure the effect of competition in NZ public high schools. A categorical data envelopment analysis model is used to obtain efficiency scores for NZ schools using data on school resources and student academic performance stratified using student socio-economic characteristics. The sample schools are subject to different levels of competition due to their geographic location. Schools located in large urban areas were subject to high levels of competition for students. Schools located in isolated areas were subject to relatively little competition. Following previous empirical research, the degree of competition between schools has been measured using a Herfindahl Index to determine the concentration of schools in defined geographic areas (Borland & Howsen, 1992; Grosskopf, Hayes, Taylor, & Weber, 2001; Hoxby, 1994b).

This study found a relatively high level of uniformity in performance across NZ schools during the test period. However, differences in performance between schools in the most populated areas and those located in isolated areas were identified. These differences affect both the level of performance and also changes in performance over time.

Schools facing high levels of competition for students were found to have higher levels of efficiency, but only for large schools. In contrast, high levels of competition were negatively associated with performance for small schools. Rather than
improving the average performance of all schools, competition appeared to improve
the efficiency of some schools at the expense of others, primarily, due to the
movement of students. Competition was also found to be related to changes in
performance over time, suggesting that high levels of competition were associated
with positive improvements in performance, but again these results varied depending
on the size of the school. Overall, the results of the study are consistent with the NZ
qualitative research on the impact of competition. This suggests that in the long term
the introduction of a free market for public education would have resulted in the
inefficient use of fixed resources by an increasing number of smaller schools.
References


