Formula-Based Public School Funding System in Victoria: An Empirical Analysis of Equity

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This article explores the formula-based school funding system in the state of Victoria, Australia, where state funds are directly allocated to schools based on a range of equity measures. The impact of Victoria's funding system for education in terms of alleviating inequality and disadvantage is contentious, to say the least. It is difficult to adopt the belief that equity funding can alter the unequal levels of capacity that pupils bring into the classroom as a result of their varied socio-economic backgrounds. This study highlights a number of contextual factors that challenge the equity considerations of the Victorian school funding system. Among these factors include: the ability of individual schools to raise their own funds; allocation of a significant proportion of formula funding for staff salaries without directly addressing educational disadvantages; and the unnecessary complexity of formulas and limited community access to funding information. Nevertheless, the formula-based school funding system in Victoria presents a model in which funding is tied directly to the needs of both students and schools; a uniform criteria to apply impartially to each school; an increased level of accessible information on how the funds have been deployed; a reduced level of complexity presented compared to overlapping funding models from state, district and local authorities in other jurisdictions; and an opportunity for meaningful analysis generated on the school level to explore the impact of funding and incorporate improvements in a single funding system.

Context and Purpose

In Australia, the state and territory governments are responsible for funding and regulating education within their borders; therefore, different funding and management policies exist from one state to another. For example, in Victoria, state funds are allocated directly to public schools to manage autonomously.

The education system across Australia follows the three-tier model, which consists of primary education (primary schools—Prep to Year 6), followed by secondary education (secondary schools – Year 7 to Year 12) and tertiary education (Technical and Further Education colleges (TAFEs), and universities). Nationally, school education is compulsory between the ages of six and seventeen. The majority of the 2,228 schools in Victoria are public (69%), but private schools are quite popular as well. Out of the 870,000 students in Victoria, 63% attend public schools and 37% attend private schools. Regardless, all schools are required to register with the state's education department and are subject to public standards in terms of infrastructure, curriculum and teacher registration.

The overall system of education in Victoria is administered by the Department of Education and Early Childhood Development (DEECD), while individual schools are governed by individual School Councils. There are no intermediary state boards of education or district-level school boards. The School Council assists in the efficient governance of each school; ensures that the decisions made by each school's administration are in the best interests of the students; enhances the educational opportunities of the students of the school; and ensures that the school and the Council operate within the legislative framework (DEECD, 2011a). The Council membership consists of elected officials within three categories: parents, school employees (the principal is an automatic member) and community volunteers. The principal, as Executive Officer of the School Council, must ensure that adequate and appropriate advice is provided to the Council on educational matters and that the decisions of the Council are properly implemented. The principal is accountable for the overall leadership, management and development of the school as determined by state-wide guidelines and government policies (DEECD, 2009a).

Approximately 90% of the revenue for public schools in Victoria comes from state government funding, while the federal government provides an additional 8%. Public schools in Victoria also raise approximately 2–5% of their revenue from parent payments, trading activities, grants and fundraising activities, although this level of local funding depends on the individual capacity of the school. The funding system under consideration concerns the state funds allocated by the Victorian government to its public schools.

Victoria's education funding system is known as the Student Resource Package (SRP), and has been in operation since 2005. The SRP aims to improve how schools are funded, targeting specific programs to better meet the needs of individual students and increase their overall performance. The package was designed to allocate funds with a higher degree of impartiality for each school, while also allowing for easy oversight of how the funds are used (DEECD, 2012a).

The SRP allocates its resources based on a mathematical formula (or weighted formula) that "contains a number of variables (items such as number of pupils in each grade, area of school, poverty, learning need indicators, location of schools), each of which has attached to it a cash amount" (Levacic, 2008, p. 206). These variables change considerably across Organisation for Economic Co-operation and Development (OECD) countries, with four main distinctions, including: i) student number and grade level-based; ii) needs-based; iii) curriculum or educational program-based; and iv) school characteristics-based (Fazekas, 2012).

Internationally, a conceptual dispute regarding school funding exists when deciding the unit of analysis for calculating school finance (revenue). Victoria uses each school (and its pupils) as a component for calculating and distributing education revenue directly to the schools. The use of a school district as a unit of analysis, which is common practice in the USA, has been questioned by Berne and Stiefel (1994) on the basis that most activities in a child's education occurs within their particular school. Specific schools provide more meaningful information relating to individual student's educational process, outputs, and outcomes and their strong relationship with inputs. District-level data does not explain how schools use allocated funds; therefore, the adequacy of funding to meet defined absolute performance standards becomes problematic (Roza et al., 2008).

Victoria's system of fund allocation to public schools incorporates a combination of three categories: (a) student-based, (b) school-based, and (c) targeted initiative-based funding. Every category and sub-category of the funding incorporates formulas to ensure equal, fair and consistent distribution to meet individual student and school needs.

This paper explores how the formula-based school funding system in Victoria has been designed to meet equity considerations in terms of ensuring that the individual learning needs of students are met, and that the schools with the same level of student learning needs are receiving the same levels of funding. The paper then analyzes the impact of equity considerations, comparing the performance of Victorian students between 2010 and 2012 to the performance of

students from the Australian state of New South Wales (NSW), where school- and pupil- based formula funding had not yet been implemented (NSW received formula funding in 2013). A combination of empirical research methods was applied in gathering the evidence for this paper, including the analysis of policy documents, analysis of outcome performance data that reflect equity considerations, empirical testing of assertions that emerged from education finance literature, and interviews with departmental officials and school principals.

Equity Principles in Education Finance

For policymakers, the first step in addressing student performance gaps is adjusting fiscal policy based on equity principles. According to Field, Kuczera & Pont (2007), equity in schooling includes the dimensions of "fairness" and "inclusion." Fairness implies that personal and social circumstances are not an obstacle in achieving educational potential, while inclusion refers to ensuring a minimum standard of education for all. In the broader social context, equity refers to equality of opportunity, fairness, and social justice. In the context of educational finance, equity is a dual funding principle whose purpose is to 1) provide as much equality as possible in educational services, and 2) establish fairness in regards to the community sharing the tax burden for education (McGrath, 1993).

Equity is prone to two alternative and supplementary definitions: horizontal equity and vertical equity (Berne & Stiefel, 1984; Fazekas, 2012; Levacic, 2008). Horizontal equity refers to funds allocated equally among schools who share certain characteristics. But, this definition does not assume that all schools have comparable needs; rather, it refers to the philosophy of "equal treatment of equals." For example, general education spending provides an equal base for all students. Thus, horizontal equity could provide a valid criterion upon which to evaluate equality of general education funding (Berne & Stiefel, 1994, p. 406).

Vertical equity is the notion that students should be treated according to their different learning needs and characteristics. This is the principle of "unequal treatment of unequals." This also implies that "differently situated children should be treated differently" (Levacic, 2008). Vesely & Crampton (2004) accepted the notion that vertical equity is a more complex and difficult concept to operationalize. The concept of vertical equity stresses that if students have different educational needs, an equitable state funding system should provide different levels of funding to meet these needs (Rubenstine et al., 2000). Therefore, in order to apply the vertical equity concept, one has to identify the relevant "differences in learning needs" which are typically defined in terms of educational input needs to achieve a defined level of performance (Berne & Stiefel, 1999).

Although the concepts of vertical and horizontal equity are fairly straightforward, constructing valid measures of each has been a complex task. The international community agrees that providing funding for education programs to help children who are at risk of academic failure is imperative. The Gonski Panel (2011) noted five factors of disadvantage that have a significant impact on educational outcomes in Australia. These include: socio-economic status, indigeneity, English language proficiency, disability at the student level, and remoteness at the school level. After analyzing a substantial body of research, Land and Legters (2002) identified five of the most frequently cited factors that determine a student's likelihood of academic failure. They include: poverty, race or ethnicity, limited English proficiency, poorly educated parents, and single-parent status. In addition, they noted that disability and urbanicity are factors associated with academic failure. Toutkoushian & Michael (2007) concluded that Land and Legters' list mentioned above provide a good assessment of state education funding systems committed to the idea of vertical equity. Land & Legters (2002) also found poverty to be the most consistent predictor of academic failure. At the same time they noted the compound nature of risk in terms of some students falling into more than one category. Students with a "compound disadvantage" are at an even higher risk of poor academic performance, and require more intensive support to reach their full potential (Gonski et al., 2011). It is important to note

that all these at-risk factors identified by Land and Legters are beyond the control of schools despite the fact that they are expected to "fix" the consequences of these factors. King (1994) observed that, in general, the term "at-risk" refers to students who demonstrate low academic achievement, failure to advance a grade, poor attendance rates, and high dropout rates. These aspects appear to be within the schools' control. Therefore, despite the fact that the formula-based system of funding is necessary when considering the at-risk factors that influence academic failure, more focus should be given on the factors that the schools can control.

The academic failure of at-risk students raises serious issues of social justice and equity. Directing more revenue to achieve vertical equity can produce greater overall inconsistency in funding across districts and thereby reduce horizontal equity. There are fundamental issues in relation to how much additional resources are required for at-risk students to succeed. Bifulco (2005) noted that there is little consensus on how much additional funding per pupil is needed for poor students relative to non-poor students. It has yet to be determined which vertical equity characteristics of students or schools deserve increased financial support. In addition, government officials have yet to identify the appropriate magnitude of these differences (Toutkoushian & Michael, 2007). Baker & Friedman-Nimz (2003, p. 528) described the problem, stating, "The phrase [vertical equity] raises two questions: (1) who is unequal….and (2) what constitutes appropriately unequal treatment (i.e., how unequal is unequal enough)?" At this stage, determining the magnitude of the weights in equity funding has yet to be adequately supported (Reschovsky & Imazeki, 2001). This raises the issue of effectively evaluating the magnitude of at-risk factors and then allocating state funds accordingly. It is imperative to build a better understanding of the nature of funding for at-risk children to create a more definitive system for vertical equity.

Transparency and accountability are two other concepts that go hand in hand with the equity considerations of education funding. How resources are spent should be information that stakeholders can access easily (Ross and Levacic, 1999). The introduction of a formula-based funding allocation system is anticipated to increase the transparency of school finances both for public authorities and for external stakeholders, because it itemizes quite clearly where funds are allocated. This increased transparency contributes to the accountability of schools (Fazekas, 2012). Ability to track funds from all sources to the school level will shed light on (in)equality, and it will provide stakeholders with information regarding the total amounts being allocated and spent. Transparency of fiscal allocations is critical for stakeholders to ensure comparability in base allocations and fairness in targeted allocations (Roza, et al., 2008).

There are a number of perspectives in education finance literature that can be applied in the analysis of a formula-based funding strategy that directly allocates to schools. They include: whether or not the funding system is comprehensive enough to ensure that schools with similar characteristics are funded similarly; whether or not differently situated children are treated differently, taking into consideration the "at-risk" and disadvantage factors; whether or not transparency and accountability of the system are ensured; and whether or not a reasonable level of outcome data support the equity considerations of the funding system.

Victorian Formula-based School Funding System

The SRP contains three funding categories, and then a number of sub-categories (Table 1) which apply specific formulas and metrics. Student-based funding is the major source of resources to schools (90%), and is driven by students' level of schooling, their family's socio-economic status, and their community's characteristics. This component covers the costs of core teaching and learning, school's administration, teaching support programs, professional development, payroll tax and superannuation. School-based funding focuses on school infrastructure and programs specific to individual schools (DEECD, 2012a).

Fund allocations for schools in each component are nominated in credit and/or cash. The credit component contains allocations for staff salaries paid on the central payroll, while the cash

component contains cash allocations for discretionary use by schools to meet expenses incurred locally. The components that represent both credit and cash are divided approximately 90% as credit, and approximately 10% as cash. To a certain degree, schools can switch funding between credit and cash within the guidelines of the DEECD and depending on the individual school's circumstances.

Table 1
Distribution of SRP Funding in 2012

Category/ Sub-category and components	Sample of formulas, metrics and indices	Equity principles	Funding 2012 ($m)	%
A. Student-based funding				
Core student allocation – (Per student funding, enrolment link base, small school adjustment, rural small school adjustment)	• Per-student price with the base amount being a safety net • Learning weightings for each year level considering potential impact • Extra base and per student funds for small and rural schools	Horizontal/ vertical	$3,658	80.4
Equity funding – (Student family occupation index, middle years equity, secondary equity, mobility allowance, program for students with disabilities, special school complexity allowance, interpreter staff salaries, medical intervention support, special school transport additional cost, English as an Additional Language grants)	• Per-student rate for schools exceed median state Student Family Occupation (SFO) density • Levels of disability index for each student with disability • Integrated weighted index for allocating funds for primary and secondary students in English as Additional Language (EAL) • Schools with national standardised tests scores for English and Maths in $15% average score	Vertical/ horizontal	$515	11.3
B. School- based funding				
School infrastructure – (Contract cleaning, cross infection prevention, ground allowance, building area allowance, split and multi-site allowance, utilities, maintenance and minor work funding, essential services funding)	• Per square meter entitlements for building area, cleaning, ground maintenance, etc. • Historical data for utilities • Allocation based on entitlement area for maintenance and minor work	Horizontal	$212	4.6
School Specific programs – (Prep-12 complexity allowance, location index funding, science and technology teachers, instrumental music programs, language assistants, bus coordination, country area program grant, alternative and ancillary teachers assistance)	• Administration complexity allowance per school • Per school and per student funding for schools outside Melbourne metropolitan area • EFT teacher funding at teacher price • Funding for eligible schools under a criteria	Horizontal/ vertical	$75	1.6
C. Targeted initiatives				
Targeted initiatives – (Primary welfare, senior-secondary re-engagement, Secondary teacher assistants, managed individual pathways, Vocational Education Training in Schools grant)	• Student family Occupation Index – levels • Base rate plus student rate • Average costs for vocational education training	Vertical	$90	2.1
			$4,550	100

Measures of Horizontal and Vertical Equity

The "Core Student Learning Allocation" contains approximately 80% of the SRP funding to each public school in Victoria. The examination of various formulas used reveal that the category is represented by both horizontal and vertical equity principles.

The main feature of the Core Student Allocation is the per capita allocation for students from Prep to year 12 for all schools in Victoria. The per-student allocation system in the SRP is based on research in Victoria's public schools that identify the cost of gaining successful outcomes in a representative sample. This allocation is based on the assumption that differing costs associated with delivering effective educational outcomes at various levels of learning are to be recognized by differing rates. All students within each particular grade are entitled to an equal level of funding. The sub-category, "Enrolment Linked Base," provides per school funds to different schools with different student body sizes and composition. Two additional variations of per school funding include the "small school base" and the "rural school size adjustment." A complex formula is utilized in allocating these funds.

Vertical Equity Measures Addressing Disadvantage

There are four categories of funding based primarily on vertical equity principles, including: (a) Equity Funding, built on the socio-economic profile of the student population; (b) Program for Students with Disabilities (PSD); (c) English as an Additional Language (EAL); and (d) Targeted Initiatives. The Equity Funding component is built on the socio-economic profile of the student population, which comprises the funding that is based on the "Student Family Occupation (SFO) Index." There are five categories of occupations that are considered for the SFO index, and each category is given a weight. The SFO funding supports programs that focus on students who are at risk of not achieving success at school - with emphasis on students with literacy problems. The funding allocation is per student rate and based on a complex formula.

The "Middle Years Equity" funding provides additional targeted funds to public schools that have high concentrations of disadvantaged students in their middle years, while Secondary Equity funds are for schools with high concentrations of students who are at risk of not achieving expected levels in literacy and numeracy. Funding for the Program for Students with Disabilities is a credit grant to schools; schools are funded for each eligible student with a disability based on one of six levels. The resources are allocated to provide specialist staff, teacher's professional learning, specialist equipment, and educational support staff. Funding for English as an Additional Language (EAL) is provided to schools to overcome language disadvantage. The EAL funding is based on an integrated weighted index for primary and secondary students.

Targeted initiatives include programs with specific targeting criteria and/or defined life spans, and fall largely within vertical equity principles. Primary welfare initiatives support students who are at risk of disconnecting from school and not achieving a certain level of literacy, numeracy and participation in learning. The Senior Secondary Re-engagement initiative aims to retain students at high risk of disengaging from education and training and to re-engage students who have already left school or are closer to dropping out. Managed Individual Pathways is a cash allocation strategy for schools to provide all students aged 15 and over with an individual career action plan, along with associated career development support, to successfully transit through senior secondary to further education, training or employment.

Impact and Issues Relating to the Funding System in Victoria

The state of Victoria targets at-risk students on the basis of disadvantaged socio-economic backgrounds (poorly educated parents and less exposure on average to formal education), limited English proficiency, and disability. Further, urbanicity has been taken into consideration to

minimize disadvantage for students in rural areas. The Student Family Occupation Index accommodates broader family-based socio-economic characteristics, thereby compounding the effect. However, educational performance data show that there are significant educational performance gaps between distinctive ethnic groups; in particular there is a clear gap of academic performance between indigenous (Aborigines or Koori) students and non-indigenous students in Victoria.

Table 2 shows tracking of NAPLAN's (National Assessment Program - Literacy and Numeracy) reading and numeracy performance data of all students in Victoria from 2010 to 2012. It is indicative that indigenous students performed 10% lower than non-indigenous students. The non-indigenous students' progress from 2010 to 2012 has been stable while the indigenous students' progress has been uneven. Indigenous metropolitan students generally performed better than their provincial counterparts. Children living in the most socio-economically disadvantaged and remote Australian communities are the most vulnerable and consequently develop severe learning difficulties. The comparative data between NSW and Victoria shows that Victoria is slightly ahead in overall performance. Indigenous student performance is a politically sensitive issue for Australia. Despite the effort of successive federal and state governments, Indigenous Australians remain severely disadvantaged, and poor educational attainment is the key barrier to sustainable improvements in their socioeconomic status. Outside the SRP funds, there is separate state and federal funding initiatives to raise indigenous students' academic performance, reduce their school's dropout rate, reduce absenteeism, and increase school retention. The indigenous factor does not solely represent the SRP, however; rather, it is taken into account through a number of compound disadvantage equity measures. Performance results indicate that increased and targeted support for the indigenous community is warranted.

Table 2
Performance of an Indigenous Cohort of Students from 2009 to 2012

Performance area/ Categories	VIC-2010 results at or above national minimum standards (%)	VIC-2012 results at or above national minimum standards (%)	Performance increase or decrease (%)	NSW-2012 results at or above national minimum standards (%)
NAPLAN Year 3 Reading				
Indigenous	*87.0*	*84.9*	*-2.1*	*83.0*
Non indigenous	95.5	95.5	0.0	95.0
Metro Indigenous	*95.6*	*95.4*	*-0.2*	*86.9*
Metro non-indigenous	96.1	95.7	-0.4	95.7
Provincial indigenous	*94.7*	*94.3*	*-0.4*	*81.3*
Provincial non-indigenous	95.4	94.8	-0.6	94.2
NAPLAN Year 3 Numeracy				
Indigenous	*86.5*	*85.9*	*-0.6*	*82.9*
Non indigenous	95.9	95.9	0.0	95.7
Metro Indigenous	*86.6*	*88.1*	*1.5*	*86.9*
Metro non-indigenous	96.0	96.0	0.0	96.1
Provincial indigenous	*86.4*	*84.0*	*-2.4*	*81.0*
Provincial non-indigenous	95.6	95.4	-0.2	94.4
NAPLAN Year 5 Reading				
Indigenous	*84.8*	*81.4*	*-3.4*	*77.6*
Non indigenous	94.6	94.4	-0.2	93.7
Metro Indigenous	*89.2*	*83.1*	*-6.1*	*81.8*
Metro non-indigenous	94.9	94.7	-0.2	94.0
Provincial indigenous	*81.2*	*79.7*	*-1.5*	*75.4*
Provincial non-indigenous	93.6	93.5	-0.1	92.7
NAPLAN Year 5 Numeracy				
Indigenous	*87.4*	*83.2*	*-4.2*	*80.8*
Non indigenous	96.0	95.3	-0.7	95.2
Metro Indigenous	*95.9*	*84.3*	*-11.6*	*85.2*
Metro non-indigenous	96.2	95.6	-0.6	95.5
Provincial indigenous	*94.8*	*82.0*	*-12.8*	*78.3*
Provincial non-indigenous	95.4	94.6	-0.8	94.4

Source: NAPLAN National Reports 2010 and 2012

Student related factors are very influential in educational performance (Hattie, 2009). There is a close correlation between socio-economic statuses, including: educational background, ethnic background of parents, and educational performance of their children (Woesmann, 2004; Hanushek & Woesmann, 2011). Table 3 provides an analysis of reading and numeracy data of a cohort of students who were designated "Language Background Other Than English" (LBOTE). It is indicative that Victoria is closing the gap between LBOTE and non-LBOTE, and the difference is nonexistent in NSW. School principals believe that the students with the "language other than English" background is a factor for high educational performance in many metropolitan schools in Victoria due to the fact that many migrant parents are influential in providing a conducive environment for their children to pursue education goals.

Table 3
Performance of a Cohort of Students from 2009 to 2012 on LBOTE

Performance area/ Categories	VIC-2010 results at or above national minimum standards (%)	VIC-2012 results at or above national minimum standards (%)	Performance increase or decrease (%)	NSW-2012 results at or above national minimum standards (%)
NAPLAN Year 3 Reading				
LBOTE	94.4	93.7	-0.7	94.5
Non LBOTE	95.7	95.7	0.0	94.8
NAPLAN Year 3 Numeracy				
LBOTE	94.3	94.1	-0.2	95.0
Non LBOTE	95.7	96.1	0.4	95.0
NAPLAN Year 5 Reading				
LBOTE	93.3	92.3	-1.0	92.0
Non LBOTE	94.6	94.7	0.1	93.2
NAPLAN Year 5 Numeracy				
LBOTE	95.1	93.8	-1.3	94.4
Non LBOTE	95.9	95.4	-0.5	94.5

Source: NAPLAN National Reports 2010 and 2012

Table 4 shows that even though there is a close relationship between parent education and academic performance, the gap is narrow. Parents who completed at least 12 years of education or received some equal qualification appears to be a threshold for both Victoria and NSW students - those who had parents below this qualification achieved significantly lower grades in reading and numeracy. There is a clear relationship between parents' occupation and students' performance in literacy and numeracy in both Victoria and NSW (Table 5). Victoria recognizes the Student Family Occupation as a determinant in providing additional resources. It can be argued that an externally influential socio-economic factor has multiple effects on a child's education besides current funding considerations. Parents make the decision of which schools their children should attend, how they are educated and what additional support is necessary. Private tuition arranged by parents is becoming popular in Victoria as additional support to needy children, as well as for gifted children to achieve higher. Education is valued unevenly among different cultures and families, meaning that children start their schooling

already advantaged or disadvantaged. Family background, for instance, influences a child's language skills, general background knowledge, long term memory, problem-solving abilities, and working memory capacity.

Table 4
Performance of a Cohort of Students from 2009 to 2012 on Parent education

Performance area/ Categories	VIC-2010 results at or above national minimum standards (%)	VIC-2012 results at or above national minimum standards (%)	Performance increase or decrease (%)	NSW-2012 results at or above national minimum standards (%)
NAPLAN Year 3 Reading				
Parent education –Bachelor	97.7	97.7	0.0	98.1
Parent education –Diploma	96.4	96.2	-0.2	96.6
Parent education – Certificate	95.4	94.5	-0.9	94.1
Parent education –Year 12	94.8	93.9	-0.9	93.4
Parent education –Year 11	89.7	88.3	-1.4	86.5
NAPLAN Year 3 Numeracy				
Parent education –Bachelor	97.7	97.8	0.1	98.3
Parent education –Diploma	96.1	96.6	0.5	96.9
Parent education – Certificate	95.3	95.0	-0.3	94.4
Parent education –Year 12	94.5	94.0	-0.5	94.1
Parent education –Year 11	90.3	89.2	-1.1	86.7
NAPLAN Year 5 Reading				
Parent education –Bachelor	97.8	97.6	-0.2	97.4
Parent education –Diploma	96.2	95.1	-1.1	95.4
Parent education – Certificate	93.7	93.5	-0.2	92.4
Parent education –Year 12	93.8	92.7	-1.1	91.6
Parent education –Year 11	87.8	86.2	-1.6	82.7
NAPLAN Year 5 Numeracy				
Parent education –Bachelor	98.1	97.9	-0.2	98.0
Parent education –Diploma	97.0	95.8	-1.2	96.5
Parent education – Certificate	95.5	94.5	-1.0	94.3
Parent education –Year 12	95.6	94.2	-1.4	93.6
Parent education –Year 11	91.2	88.5	-2.7	86.1

Source: NAPLAN National Reports 2010 and 2012

Table 5
Performance of a Cohort of Students from 2009 to 2012 on Parent Occupation

Performance area/ Categories	VIC-2010 results at or above national minimum standards (%)	VIC-2012 results at or above national minimum standards (%)	Performance increase or decrease (%)	NSW – 2012 results at or above national minimum standards (%)
NAPLAN Year 3 Reading				
Professionals	98.1	98.3	0.2	98.1
Associated professionals	97.5	97.0	-0.5	97.3
Skilled trade people	96.2	96.0	-0.2	95.4
Manual workers	92.9	92.5	-0.4	92.1
unpaid work / unemployed	88.3	87.1	-1.2	87.4
NAPLAN Year 3 Numeracy				
Professionals	98.1	98.5	0.4	98.4
Associated professionals	97.5	97.4	-0.1	97.7
Skilled trade people	96.1	96.4	0.3	95.8
Manual workers	93.1	93.2	0.1	92.6
unpaid work / unemployed	88.4	87.7	-0.7	87.3
NAPLAN Year 5 Reading				
Professionals	98.2	98.0	-0.2	97.8
Associated professionals	96.6	96.7	0.1	96.2
Skilled trade people	94.9	94.8	-0.1	93.8
Manual workers	91.4	90.6	-0.8	89.6
unpaid work / unemployed	85.4	84.7	-0.7	82.9
NAPLAN Year 5 Numeracy				
Professionals	98.4	98.3	-0.1	98.1
Associated professionals	97.4	97.4	0.0	97.3
Skilled trade people	96.4	95.6	-0.8	95.6
Manual workers	93.7	92.4	-1.3	91.9
unpaid work / unemployed	88.7	86.7	-2.0	86.2

Source: NAPLAN National Reports 2010 and 2012

As discussed previously, the formula-based system of funding under the horizontal and vertical equity principles generally target to prevent potential disadvantage. On one hand this approach focuses less on gifted students. Evidence obtained from interviews with Victorian school principals indicate that SRP does not support gifted or academically talented students to progress. In Victoria, there are accelerated programs to assist gifted students, but without SRP provisions; therefore, principals have to manipulate funds to support these programs. Related to the same issue, the formula-based funding does not take into account certain aspects of school admission policies, such as selective entry. There are four large, selective schools in Victoria where pupils are selected from an entry exam. These schools provide opportunities for gifted and academically talented students to perform in a competitive and demanding academic environment. The Victorian Certificate of Education (VCE) results show that these schools are

among the best performing in the state (VCAA, 2012). These selective schools also receive SRP funding under equity principles, but operate in a favorable educational environment, having the advantage of fixed student numbers and stable budgets. All the principals interviewed for this project acknowledged the unfair advantage that selective schools enjoy in Victoria. Providing more public resources to less affluent communities is acceptable as promoting vertical equity, but providing more resources to affluent communities undermines it.

The SRP funding does not capture the full set of resources at a school's disposal. School Councils in Victoria are vested with the power to charge fees from parents, raise funds, and run trading operations (e.g., school canteens, uniform shops, before- and after- hour school care programs and book sales). Schools can rent out their premises, including their gyms, theaters, and school hall, to generate additional funds. Further, School Councils in Victoria have the power to receive grants from non-governmental, state and federal sources, and to enter into contracts, agreements and arrangements with other entities. Victorian schools raised $478 million dollars from other revenue in 2012 (on average $310,000 per public school per year). There are gaps of locally raised funds between schools in metropolitan and non-metropolitan areas and schools in affluent and less affluent suburbs (individual school information found in *My School* website). Comparative literature indicates that if local revenues play an important role in school financing, which constitutes an additional element to the funds distributed by the formula, then horizontal equity and wealth neutrality is violated. Differences in local capacity to raise additional revenues and local preferences result in horizontal inequality.

A substantial portion (approximately 80%) of SRP funds in Victoria is allocated to build staffing structures and cover staff salaries in schools. There are two potential issues in this context: On one hand, salary data might not describe full dollar costs of the resources. For example, teacher salaries are recorded at the school level, but their compensation, superannuation and fringe benefits are not assigned to schools. In some cases, superannuation and fringe benefits range between 20-35% of salary costs. In Victoria, superannuation and long-term service and termination benefits are built into staff salary allocations. On the other hand, there is an issue relating to comparability of dollars and positions. Dollars are fully comparable regardless of whether resources are devoted to personal services or not, or if there are different types of personnel employed. Two schools can have the same dollar resources per child, but one can have a much smaller number of positions at higher salaries. The devolved power in Victoria's state government assists schools in determining average class size and then making necessary changes to staff size. It can also be argued that a ratio of teachers to students does not represent the quality of teaching. The quality of the personnel matters a great deal. Experienced and well-qualified teachers are expected to apply quality teaching programs, including experimental teaching methods (Hattie, 2009). Further, there is evidence that highly qualified and experienced teachers are not equally distributed throughout remote and provincial schools; therefore, the quality of teachers is a concern in those schools. In Victoria there are minimum teacher training qualifications to become certified, but the quality of the teaching personnel and their experience and expertise is an influential factor in improving student performance. In Victoria, schools are vested with the responsibility to allocate resources in the best interests of student learning. In these decisions there is a need to accommodate staff costs, including overhead and potential increases. The effectiveness of the funding will depend on how effectively the money is used by schools.

A state's funding program can significantly influence a school's financial management and operational behaviors. Victoria has a devolved school governing system, with a wide range of powers to make local decisions, which is receptive to formula-based funding. How valuable is the autonomous school governance system in Victoria in advancing the objectives of SRP funding? First, a School Council has the power to oversee the financial management of state-allocated funds, which contributes to making more accurate spending decisions. Second, a School Council is entitled to maintain bank accounts which facilitate the convenience for financial transactions at the local level. Third, a School Council has the power to purchase

goods, equipment and materials for carrying out its functions, as subject to Section 2.3 of the *Education and Training Reform Act 2006* which enables the Council to operate effectively in the use of allocated funds. Fourth, a School Council has the power to enter into contracts with private suppliers to conduct school maintenance work. Finally, a School Council has the power to employ local workers, including education support class employees, casual relief teachers, and other non-teaching employees under Section 2.3 of the *Education and Training Reform Act 2006*. The conditions of employment for School Council employees, including rates of pay, are outlined in Ministerial Order Number 200. Generally the staff employed by DEECD (that is, on the executive level, school principal level, teacher level, paraprofessional level and education support level) are active on an ongoing basis in accordance with Department policy, and are paid through the Department's central payroll system (eduPay). Employees of School Councils who are not paid through the Department's central payroll system are paid on the local payroll module. Victorian public schools have the capacity to select the best available employees as funded through the SRP to meet the educational needs of their students.

Each school receives an SRP entitlement in September and October of each year in order to assist in planning and budgeting. The final total of funds to be received is confirmed in March of each year, after the February Enrollment Census. Since the majority of SRP funds allocated to schools is for staff salaries, principals are needed to help with workforce planning. There are training programs and guidelines for school principals on how to utilize SRP funds. In order to provide assistance to schools, the Department of Education and Early Childhood Development developed an SRP planner which allows principals to model the impact of enrollment variations and other changes in SRP and to build an overall workforce plan. The SRP planner provides salary projections and an estimate using current payroll parameters, such as job classifications, time fractions, increment dates and appointment dates. Automated reports on various aspects of the SRP are accessible to schools online. School Councils have the right to access information relating to staff positions funded by SRP; however, they are only allowed to oversee SRP cash grants and other school operating revenues. The school annual report to the community contains information on the school's operating budget, but does not show 90% of the school revenue (which is mainly allocated for staffing). The principals who were interviewed for this paper indicated that the funding formulas are complex and not transparent, but they believe that the system is fair and equitable.

Conclusion

Victoria's system of formula-based funding for public schools presents a model that allocates resources directly to schools based on individual needs and equity considerations. The system combines both conventional and innovative equity considerations in an attempt to provide an equal and fair allocation of state funds to all schools in the state. The autonomous school governance environment assists in facilitating the use of funds at individual school level.

Among the exclusive vertical equity funding considerations in Victoria are the Targeted Initiatives. The Primary Welfare and Senior Secondary Re-engagement initiatives target students who are at risk of dropping out of school, not achieving the goals of literacy and numeracy, nor completing recognized minimum school qualifications. Managed Individual Pathways is a funding program that assists all students to find a career path as well as to acquire different educational qualifications necessary to follow these paths.

The impact of Victoria's funding system for education in terms of alleviating inequality and disadvantage is contentious. With reference to the limited performance data analyzed for the purpose of this paper, the widening performance gap between indigenous and non-indigenous students in provincial areas is still observable, which demands more targeted funding for this disadvantaged group. It is difficult to conclude whether or not equity funding plays a role in the narrowing performance gap between students who do not speak English as a first language and the rest. The influence of parents' background in terms of their level of education, occupation

and aspiration is evident. It is contentious to assume that the educational capacity that children bring into the school due to their socio-economic disadvantage can be largely addressed through equity funding.

The paper highlights a number of contextual factors that challenge the equity considerations of this formula-based funding system. Among them include: the significant capacity and legal right for schools to raise local funds - which create inequality among schools; allocation of funds for staffing structures and staff salaries that do not directly address academic performance; the differences in school admission policies; and complexity of the formula-based funding system and lack of community access to SRP funding information.

Nevertheless, the formula-based school funding system in Victoria offers a model where funding is tied directly to student and school needs on the basis of equity principles; a uniform set of resource allocation criteria; a more transparent and accessible level of information on how the funds are deployed at individual school level; a reduced level of complexity compared to overlapping funding models from state and local authorities in other jurisdictions; and an opportunity for realistic analysis generated on the school level to explore state funding's precise impact and incorporate continuous improvements accordingly.

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