

Does Current Early Childhood Education Policy in Aotearoa New Zealand
Contribute to Persistent Disadvantage?

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Defining the Problem

New Zealand is no exception to how location, ethnicity, parents' occupations, stable socioeconomic security, and other circumstantial factors impact children achieving their potential in the existing education system. For children who access a preschool childcare centre, the journey through education begins with learning how to act with peers and authority figures. In countries like New Zealand with distinct ethnic groups, this stage is the critical opportunity for embracing the diversity of cultures that form society and national identity. A stimulating social and emotional learning (SEL) early childhood environment is fundamental to supporting children with an optimal start in the education system beyond preschool. (Kulic et al., 2017). These two factors of accessing Early Childhood Education (ECE) and the quality of ECE are at the core of analysing how current ECE policy in New Zealand contributes to persistent disadvantage. This paper will consider the structure of the current ECE sector to identify elements of existing policy impact on accessibility and quality. Kulic et al. (2017) research indicates that the dimensions of access and quality are critical for studying inequality in early childhood. "It is the content, the structure, the peers in high-quality institutions that may enhance early development, and it is often the least advantaged who profit the least from high-quality institutional care due to unequal access." (Kulic et al., 2017, p. 14)

In the past decade, there has been a growing body of international literature on how investment in ECE benefits the child and society more broadly. This paper reviews recent literature to identify how strategic investment can address inequities and mitigate longer-term social costs. Investment inevitably requires consideration of economic feasibility. Accordingly, the paper uses cost-benefit analysis (CBA) concepts to explore how investment in ECE benefits the child and society. Within the constraints of applying a CBA framework

and the limited availability of empirical data in this sector, the research discusses what can be considered costs and benefits and how they may be valued.

A more robust analysis of ECE policy would apply a comprehensive ethno-gender framework and child impact assessment. While elements of these lenses are integrated into the discussion, the CBA challenges are the primary focus for considering an alternative to the current ECE model in Aotearoa New Zealand.

The Correlation between Persistent Disadvantage and ECE

Before accessing ECE, the child's environment already has dimensions of childhood support. Within the household and amongst caregivers, the quality of family life coupled with the levels of educational achievement and economic resources shape capacities to provide vital early development stimulation for formal education, career, and life (Heckman, 2008). Children born into disadvantaged dimensions are least likely to have wide-ranging childhood support. Kulic et al. (2017) identify that the child's initial environmental conditions influence markedly different basic cognitive skills and noncognitive competencies such as motivation, social skills, or persistence before entering an early learning facility. Entering the education system with disadvantages becomes a persistent disadvantage. Lower levels of learning result in lower productivity, levels of wage earnings, opportunities to get ahead, and quality of household environments. These disadvantages become intergenerational. Further, this persistent disadvantage ultimately results in reduced taxation revenues, higher social safety-net welfare costs, and lower well-being for everyone. Heckman (2008) further identifies how the subsequent poorer health, poverty, and crime rates can be addressed, at lower cost to taxpayers, by early investment in the protection and development of children born into relative disadvantage.

In this way, ECE goes beyond improved individual learning outcomes and reduced drop-out rates in higher levels of education. The correlation between quality ECE and broad-ranging social issues demands that the sector be considered a public good with non-excludable and non-rivalrous dimensions. ECE that embraces SEL has relevance for culturally responsive education in New Zealand. The Māori practice of *taonga tuku iho*, meaning treasures handed down, resonates with the teaching approaches of SEL whereby values, genealogies and history are manifest in stories (Macfarlane et al., 2017). Kulic et al. (2017) note that many scholars adhere to the argument “that early intervention not only benefits individuals but can also contribute to alleviating social inequalities if high quality care is promoted among lower class families” (p. 14). They identify that positive cognitive and noncognitive outcomes of good quality preschool programmes can remain evident through adolescence and that this is true also for children from disadvantaged environments.

While the body of global knowledge has grown to indicate that ECE is a foundational opportunity to move toward social equity and cohesion and, concurrently, increase tax revenues and reduce welfare costs, New Zealand has continued to develop an uneven market-based ECE. The Ministry of Education (MoE) licenses and monitors the functioning of most early learning facilities but does not administer the sector in the same way as schools. There is a defined range of early learning options and services currently available. While the choices can seem appropriate for the diversity within the country, if the flexibility ultimately promotes forms of persistent disadvantage, the sector needs to be reformed.

Research Questions:

- Does the current model of ECE contribute to persistent disadvantage in New Zealand?

- Should New Zealand consider a model of universal ECE as a public service and include it with primary and secondary education in the free public education continuum?

Literature Research

The global literature research that follows is of more value when considered within the context of New Zealand's current ECE policy. The primary source for this preliminary research is Te Tāhuhu o te Mātauranga, the Ministry of Education.

Current ECE Policy in New Zealand

According to the Ministry's website (Ministry of Education, n.d. -c), the education system in New Zealand has three levels. Early childhood education covers from birth to school entry age. For New Zealand citizens and permanent residents aged five to nineteen, primary and secondary education is provided free at state schools (government-owned and funded schools). The third level is referred to as further education and includes higher and vocational education. While the Ministry considers ECE to be the first level of the education system and provides licensing and monitoring services, administration of the sector has mainly been devolved to a range of ECE facilities.

The Ministry provides guidance to parents, whanau, and caregivers wanting to choose a learning option that best suits their children, family, and whanau. The Ministry's booklet *Choices* (Ministry of Education, 2014) outlines the range of options available. Teacher-led ECE is provided through Education and Care Services, Home-Based Services and Kindergartens. However, Home-based Services only require one coordinator to be qualified and not the home-based educators themselves. Other services are parent-led Playcentres,

Te Kōhanga Reo, and Playgroups, which include Māori and Pasifika language community-based playgroups. However, some Te Kōhanga Reo and Playgroups are teacher-led. Therefore the teacher/parent distinction is somewhat arbitrary and unhelpful for the MoE to provide consistent guidance and measure comparable outcomes. By averaging the learning outcomes, inequities are hidden across the range of services and facilities. Therefore, the choices available are not as consistent as the Ministry's booklet might imply.

Further, the booklet goes on to list other issues to consider when deciding upon an ECE service. These include cost, accessibility, and working hours. These variations, which can be directly related to access and quality, are consistent with a market-based service. The range of teaching quality and hidden costs contribute to uneven ECE services with the potential to contribute to persistent disadvantage. Access (by location and cost) and quality are not the responsibility of the Ministry because universal ECE is not a public good in the way that the primary and secondary education level is.

Current Global Literature

The body of academic research and literature on early childhood education and development has grown exponentially in recent years. UNICEF has had ECE as a component of successive five-year strategic plans. More than 190 UNICEF offices in developing countries formulate their programmes with host governments within these parameters. With the establishment of UNICEF's dedicated research centre in the late 1980s, the Office of Research-Innocenti has engaged with external academic and research institutions to expand knowledge on child protection and development to high-income countries. Building on earlier ECE collaborative research and publications, in 2018 UNICEF Innocenti released *An Unfair Start: Inequality in Children's Education in Rich Countries* (2018). The report notes that

“public provision of high-quality childcare is increasingly being seen as a policy that helps working parents and counteracts the unequal starting conditions of children by providing a stimulating social and learning environment for all types of family” (UNICEF Innocenti, 2018, p. 11). The research identified issues that are relevant to persistent disadvantage in New Zealand. Of these, parental occupation and family background result in inequalities when children enter preschool and tend to persist throughout the educational journey. “Everything else being equal, children aged 15 with parents in high-status jobs are much more likely to expect to continue into higher education than those with parents in low-income jobs” (UNICEF Innocenti, 2018, p. 4). Further, the difference between ECE facilities in most countries results in learning outcome differences. Learning assessments have been used to identify that there is more variation in learning and skills between ECE facilities than there is between children in the same facility.

While the report focuses on inequality in achievement toward the end of compulsory education, the fundamental influence of disparities that exist upon entering primary school is evident. The resulting league table ranks New Zealand as having some of the widest gaps in educational performance amongst OECD countries (UNICEF Innocenti, 2018, p. 8). These inequalities not only limit children’s prospects as adults. They are a driver for persistent disadvantage across generations.

Within two years of the UNICEF *Unfair Start* Report, The OECD released *Early Childhood Education: Equity, Quality and Transitions* (2020). Like UNICEF, the OECD has a history of early childhood development publications grounded in child rights but with an analytical focus on national and global development. Therefore, while the publication explores quality ECE for children to do well in school, the focus is on subsequent labour market contributions.

Investment in quality early childhood programmes and promoting equitable access is a means to supporting more prosperous societies. While the research angle may differ slightly from the UNICEF child-centric approach, the result has the same effect of contributing to addressing persistent disadvantage. In 2020, the G20 convened the Educational Ministerial Meeting with a central topic being how to realise the potential of ECE to promote equal opportunities for all. As a strategic advisor to the G20, the OECD developed this report to inform discussions at the ministerial meeting. In an earlier report, the OECD (2001) had documented how children from households with low income and levels of education, and children from ethnic minorities, remain well behind. The 2020 report further identifies how investment in ECE and ensuring universal access to quality services is one of the most efficient ways to effectively address inequities (OECD, 2020, p. 4). To address persistent disadvantage, children from suboptimal environments can benefit the most from quality ECE as the returns from interventions during early childhood are more significant than those that occur later on. Inequalities that take root in early childhood tend to grow throughout school and life, making it increasingly inefficient to address the disparities and disadvantages that manifest later in life.

In December 2020, The World Bank (Devercelli & Beaton-Day, 2020) released its most recent ECE publication *Better Jobs and Brighter Futures: Investing in Childcare to Build Human Capital*. Like the recent OECD ECE report, it is consistent with child rights and development but has a stronger focus on the importance of investing in childcare to drive countries' economic growth and particularly recovery from the COVID-19 pandemic. The Bank's perspective on ECE is economic development and therefore seemingly quite removed from child-centric research of UNICEF. But the end result is again the same: access to quality ECE to address persistent disadvantage. "Increasing access to quality childcare can have

multigenerational impacts, improving women's employment and productivity, child outcomes, family welfare, business productivity and the economy as a whole" (Devercelli & Beaton-Day, 2020, p. 12). The Bank's report presents familiar themes but from an economist's perspective. Recognising that pathways out of poverty, building human capital and increasing equity are fundamental to economic growth and productivity, the Bank considers the potential of quality ECE. Similarly, in assessing efforts to improve women's employment and productivity in both the informal and formal sectors, ECE is recognised as an opportunity to impact all working parents. Even on the matter of quality ECE, the Bank considers this as paramount to ensure that the various returns can be realised. While this financial-returns reasoning might seem to be at odds with upholding child rights, it is pertinent that the end result of mitigating persistent disadvantage has equally important child protection dimensions as it does economic development.

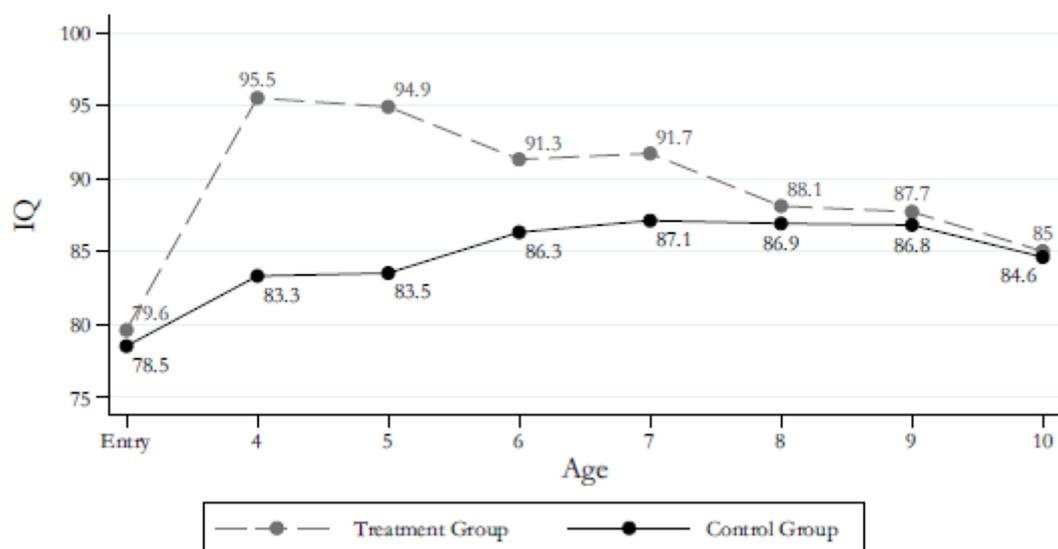
Earlier this year, UNICEF Innocenti (Gromada & Richardson, 2021) reported on where rich countries stand on childcare and how the high costs of services worsen socioeconomic inequities and deter women from re-entering the workforce. The media (Kitchen, 2021; Daly, 2021) picked up on New Zealand's alarmingly low position on the league tables for affordability but highlighted the high ranking for quality. However, there was no analysis of how UNICEF measured quality for the report. Data from comparable indicators were children-to-staff ratios and caregiver's qualifications. These may be suitable for presenting the global picture in broad strokes, but they are not adequate for understanding the hidden inequities that lead to persistent disadvantage at the national level. Due to New Zealand's ECE model, the averages hide different realities across the licensed early learning services, and these differences lead to disparities. New Zealand's ethnic and socioeconomic

composition requires indicators disaggregated by ethnicity, gender, and welfare that assess child outcomes related to social and emotional learning before entering formal education.

James J. Heckman

Continuing from the collective ECE research of the three international organisations, and particularly the World Bank's economic development perspective, we come to the work of Nobel laureate (economics) James J. Heckman, Professor of Economics at the University of Chicago. A leading advocate for the economic benefit and value of investing in quality early childhood development, Heckman (2008, 2013) has analysed two longitudinal studies to demonstrate the substantial positive effects of ECE on both cognitive and noncognitive skills. The Perry Preschool Programme was a curriculum for low-income black children in Michigan, USA, in the mid-sixties. The Abecedarian Programme in the 1970s was a focused support programme for disadvantaged children and their families who scored high on a risk index. Beginning in the first months of the child's life, intervention was full day and continued until the eighth year. Both programmes used a random assignment design and collected long-term follow-up data. Long after the programmes ended, the follow-up data has been able to show positive outcomes in schooling achievement, job performance and social behaviours. There was a consistent pattern of positive outcomes for children within the programmes compared with the control group children in both programmes. While noting that initial increases in I.Q. testing diminished within a few years, the improvement in noncognitive traits were retained. With IQ measured on the Stanford Binet Intelligence Scale from tests administered at programme entry and each of the ages indicated, Heckman presented the findings in graph form as Figure 16.

Figure 16: Perry Preschool Program: IQ, by Age and Treatment Group.

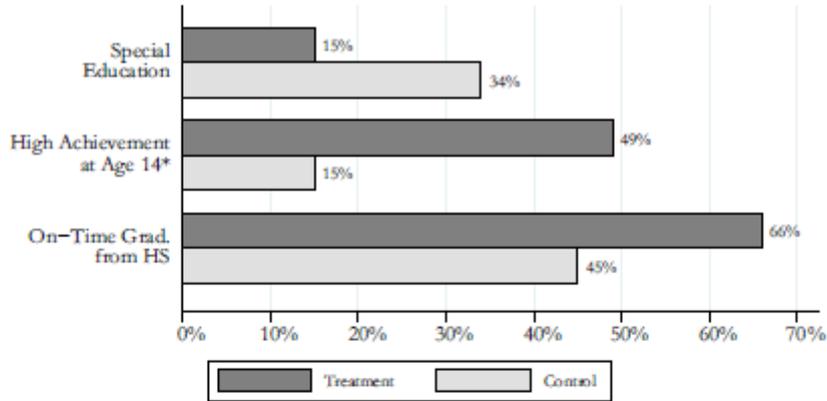


From “Schools, Skills, and Synapses” by J.Heckman, 2008, *Economic Enquiry*, 46(3), p. 309
<https://doi.org/10.1111/j.1465-7295.2008.00163.x>

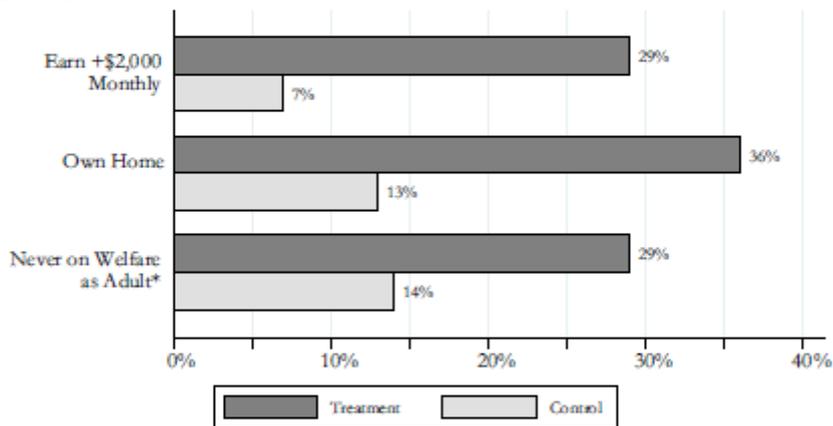
Heckman’s research found that the real impact of the Perry programme was primarily through improving noncognitive traits. Heckman presents the extent of these improvements in Figure 17 graphs. Even though I.Q. scores are not higher in the long term, the Perry treatment group does better on achievement tests at age 14 than the controls. Figure 17(a) graphs this in the second set of bar charts. Similarly, and again without sustained higher levels of I.Q., the positive effects of the Perry programme were evident in a range of social outcomes as graphed in Figure 17(b) and (c). The oldest age of follow-up testing was 40 years for the Perry Programme and 21 years for the Abecedarian. In both programmes, “individuals scored higher on achievement tests, attained higher levels of education, required less special education, earned higher wages, were more likely to own a home, and were less likely to go on welfare or be incarcerated than controls” (Heckman, 2008).

Figure 17: Perry Preschool Program.

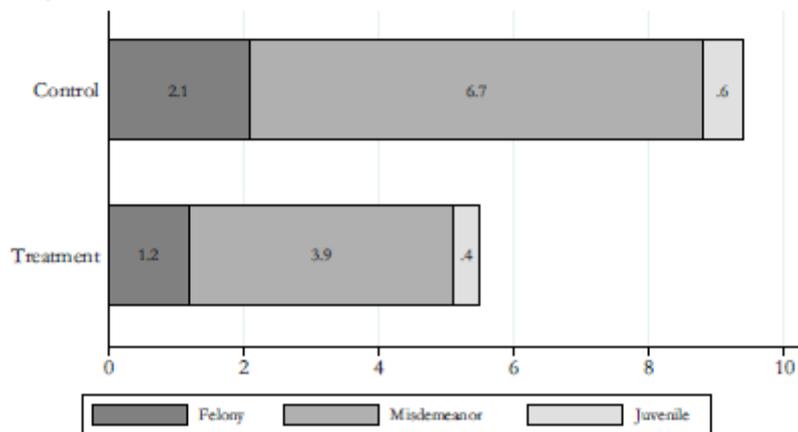
(a) Educational Effects, by Treatment Group. *High Achievement Defined as Performance At or Above the Lowest 10th Percentile on the California Achievement Test (1970). Source: Barnett (2004).



(b) Economic Effects at Age 27, by Treatment Group. *Updated through Age 40 using recent Perry Preschool Program data, derived from self-report and all available state records. Source: Barnett (2004).



(c) Arrests Per Person before Age 40, by Treatment Group. Juvenile arrests are defined as arrests prior to age 19. Source: Barnett (2004).

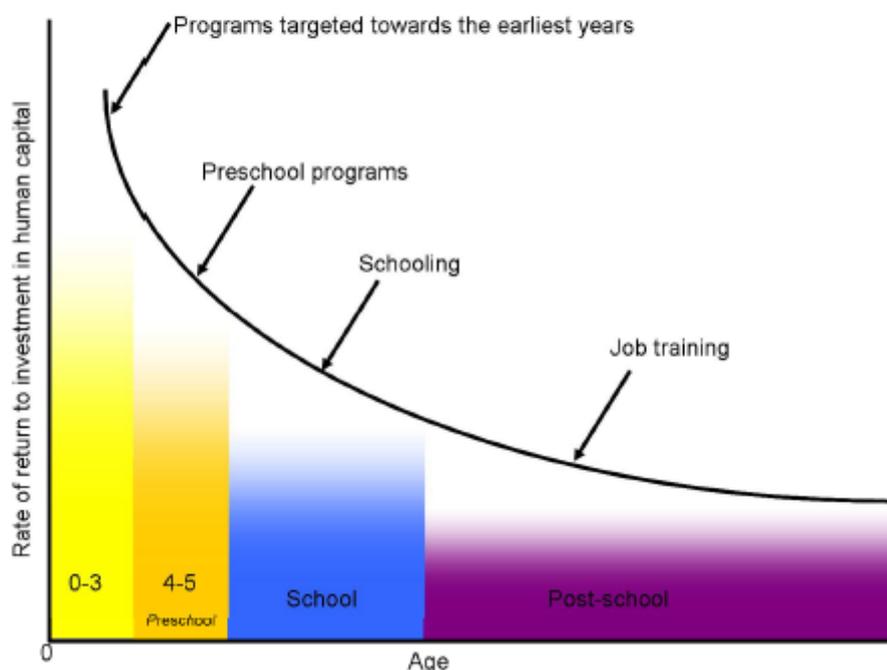


From "Schools, Skills, and Synapses" by J.Heckman, 2008, *Economic Enquiry*, 46(3), p. 310 (<https://doi.org/10.1111/j.1465-7295.2008.00163.x>)

Heckman's (2008) research concluded that early mastering of cognitive, social, and emotional skills and competencies make learning in later years more efficient, easier, and more likely to continue. Noncognitive skills and capabilities support the development of future skills and capabilities. This is more evident when compared with research findings on remedial intervention for disadvantaged adolescents who have not received a solid early childhood foundation of skill development. Such interventions are not based on economic efficiency and generally have low rates of return. There is an equity-efficiency trade-off. Heckman's (2008) research concludes that education programmes for disadvantaged adolescents, including adult literacy services, public job training programmes, and prisoner rehabilitation programmes, produce low economic returns. Heckman presents the rate of return on age-related programmes in graph form as Figure 18:

Figure 18: Returns to a Unit Dollar Invested.

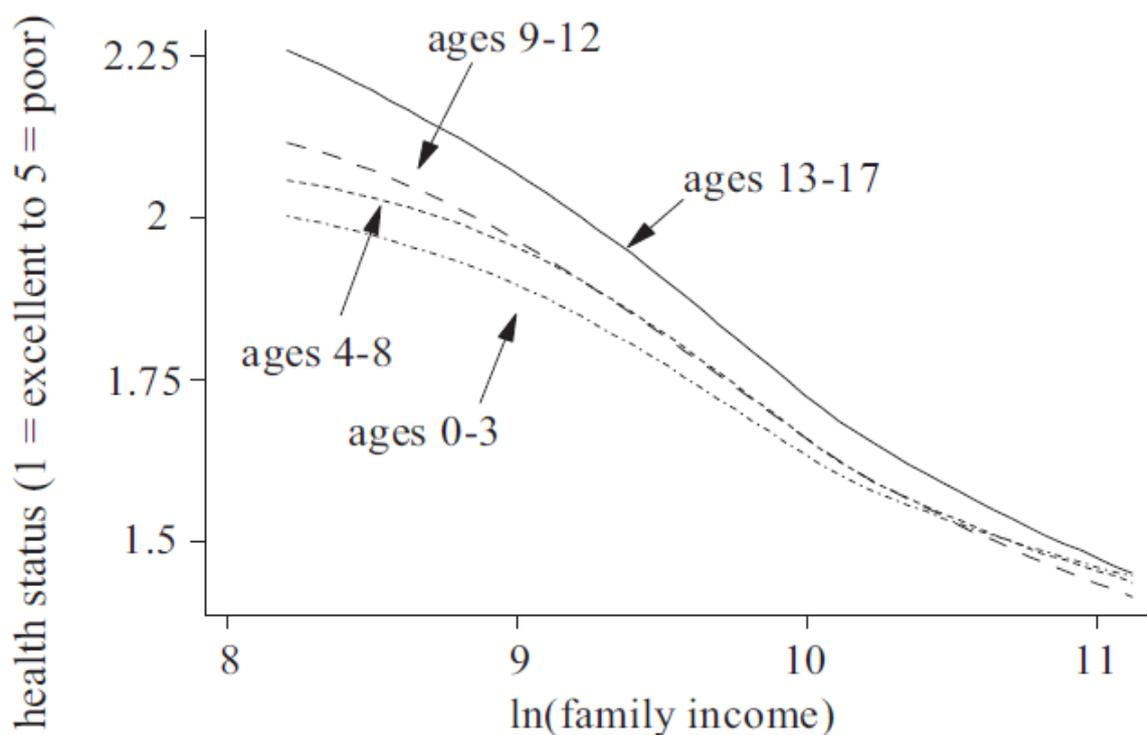
(a) Return to a Unit Dollar Invested at Different Ages from the Perspective of the Beginning of Life, Assuming One Dollar Initially Invested at Each Age



From "Schools, Skills, and Synapses" by J.Heckman, 2008, *Economic Enquiry*, 46(3), p. 311
<https://doi.org/10.1111/j.1465-7295.2008.00163.x>

Heckman (2008, 2013) summarises his evidence to argue for the economic efficiency of early childhood investment. He concludes that while later remediation is possible, to attain the levels accomplished through early investment is much more costly. If interventions are too late and individual levels of disadvantage are too low, remedial investment can be economically inefficient. Noting that middle-class children benefit from being born into advantaged environments, while children from disadvantaged environments do not, Heckman’s argument for strategic investment in the early years is relevant to addressing persistent disadvantage.

Figure A.1: Health and Income for Children and Adults, U.S. National Health Interview Survey 1986-1995.



From “Schools, Skills, and Synapses” by J.Heckman, 2008, *Economic Enquiry*, 46(3), p. 315 (<https://doi.org/10.1111/j.1465-7295.2008.00163.x>)

Heckman indicates that the “estimated rate of return (the return per dollar of cost) to the Perry Programme is around 10%” (2008, p. 309). In fact, the rate of return would be higher with consideration of the economic returns to health and other factors. Drawing on the U.S.

National Health Interview Survey 1986-1995, in Figure A.1, Heckman (2008) graphs the correlation between health and income for children and adults to highlight the disparities between households with financial advantage and disadvantage. For countries, like New Zealand, with national health systems, this is potentially a further significant area for cost-benefit analysis of investment in ECE as a means to address persistent disadvantage.

Cost-Benefit Analysis

Heckman's work lends itself to conducting a form of cost-benefit analysis (CBA). The benefit of investing in early childhood to offset the negative trends of persistent disadvantage underlies much of his research. Through his analysis of the Perry and Abecedarian programmes, he makes a strong case for basic economic efficiency or feasibility whereby the long-term benefits of investing in ECE not only exceed the costs but provide a measurable rate of return. The challenge in analysing the cost-benefit case is how the competing values of efficiency and equality can be defined. As Miller and Robbins (2007) state, "cost benefit analysis rests on difficult choices about what are costs and what are benefits" (p. 465). When efficiency is described in terms of delivering a service for the least cost and equality is pursued for beneficiaries to gain fairly from the service, the efficiency and equality trade-off can be manipulated by adjusting the scope of the service. In this way, a three-year cycle of investment in ECE could be considered in simple terms of the number of children enrolled regardless of the quality of learning. Achieving efficiency and equality in this scope of service would be entirely different from a programme with a defined quality of social and emotional learning and periodic follow-up monitoring into adulthood. The former would not consider the financial gains of the noncognitive outcomes as described in Heckman's analysis of the Perry programme. The latter could. A robust CBA considers both the immediately evident such as children enrolled, with the not so immediately apparent consequences such as the

longitudinal impact of quality ECE. Further, these broader consequences require forecasting anticipated changes and how those changes will affect the values over time. Finally, the consequences need to be costed as accurately as possible in both economic and accounting terms.

Miller and Robbins (2007) elaborate on this by outlining the three problems of estimation, forecasting, and assignment in measuring for cost-benefit analysis. Firstly, “estimation deals with the type of cost or benefit to be counted and includes benefits and costs that are real or pecuniary types, tangible or intangible, as well as direct or indirect” (Miller and Robbins, 2007. p. 471). Estimation considers costs and benefits that have consequence for society as a whole rather than as the cost for one group to benefit another. Similarly, estimation considers costs and benefits that bring about a well-being change in society rather than merely redistributing the existing, which would be regarded as pecuniary. From Heckman’s Figure 17(b), estimations of costs and benefits that impact society could include: tax revenue from increased monthly income, decreased demand on state housing, and reduction in welfare benefits. Figure 17(c) shows that reduced incarceration costs and, conversely, increased productivity in the workforce might be considered. From Figure A.1, as persistent disadvantage is addressed, the costs and benefits of reducing the caseload with high health costs could be estimated.

The second potential problem in CBA measurement is forecasting using quantitative and qualitative methods to analyse unknown data from the future. While pilots and known trajectories can support forecasting, judgment is required to select which consequences are measured. A skilled objective interpretive analysis is needed to inform these decisions. In the world of politics, this is perhaps the Achilles heel of robust CBA, where an articulate

master of spin can influence the expectations of others and promote party preference, if not *weltanschauung*. While the Perry and Abecedarian programmes give precise data to support robust investment in ECE, the extent to which the programmes could be incorporated in a revised approach to ECE in New Zealand and then used to forecast costs and benefits would likely require a team of skilled analysts with competencies in, education, social welfare, the judicial system, and the health sector. On the other hand, the range of related subject matter is media worthy and therefore well suited to the masters of spin with an agenda.

The third potential problem area relates to assigning quantitative value to benefits and costs. This is particularly difficult in public sector programmes as they involve goods that do not readily have a monetary value. Public goods relate to general outcomes rather than defined outputs which do lend themselves to costing. The opportunity of using documented costs and benefits from associated projects can provide substitutes for a CBA. These opportunity costs can be measurable and useful for analysis. In Heckman's research, tax revenue, state housing, social welfare safety nets, incarceration costs, and selected health care costs all have the potential to be formulated as opportunity costs for assigning value.

The Treasury's (2020) CBAX warrants consideration at this juncture. It is a strategic tool to address the three problems of estimation, forecasting and assignment by systematically supporting long-term and broad views of well-being impacts and their benefits and costs. Monetising possible impacts using the CBAX model brings focus to key areas with good evidence. The examples used from Heckman's work to explore the three problem areas would likely apply. However, while these provide a sense of the scope of impacts, a monetised value is complex and vulnerable to subjective analysis even within a range of proposed costs. The CBAX model supports working with the cost information and the key

impacts to work iteratively, manipulating the impact assumptions until there is a return on investment of one. This would be a helpful approach to bring Heckman's research findings into the reality of a different context, such as ECE in New Zealand. Referred to as reverse analysis, this calculation identifies the investment required for the initiative to be worthwhile and for societal costs to be outweighed by societal benefits. Consistent with other aspects of the CBAX model, reverse analysis calculations demand a transparency about the assumptions and evidence base. The Treasury (2020) points out that "the value of the information provided by CBAX depends on the quality of the information input into the tool. If a CBAX is based on poor evidence quality or assumptions, it will not be useful for decision making" (p.5).

With a substantial body of documented international knowledge and the research undertaken by Heckman and others, policy advisors looking to conduct CBA for a revised approach to ECE in New Zealand have a wealth of quality evidence to draw upon for making credible assumptions.

Discussion

There is strong evidence for accessible (by location and cost) and quality ECE being fundamental for shaping a child's opportunities to transition to adulthood. Beyond the child, ECE impacts positively on social and economic development. New Zealand's market-based ECE model has wide-ranging teaching and learning quality. Together with the inconsistency in costs, the variation in quality results in uneven opportunities for children and, ultimately, social well-being of the wider population.

ECE costs to caregivers in New Zealand vary according to the type of service selected and eligibility for benefits and subsidies. The Ministry of Education website (n.d. -d) introduces ECE administrations and caregivers to the labyrinth of government subsidies available directly to facilities and indirectly to caregivers. A robust cost-benefit analysis of the New Zealand ECE model would need to consider the current administrative management costs to the Ministry, ECE facility administrators, and ECE teachers to compare with simplified universal costing models.

Of particular importance to how the current model might contribute to persistent disadvantage is the 20 hours ECE funding option. According to the Ministry of Education's website (n.d. - a), the 20 Hours ECE is a higher level of subsidy over the existing government subsidy for all children who attend early learning services. "20 Hours ECE funding reduces cost barriers so that more children can benefit from participation in ECE" (Ministry of Education, n.d. -a). However, a deeper analysis would indicate that in some cases, accessing this benefit would mean losing eligibility to the Childcare Subsidy benefit. The Childcare Subsidy is for households with an income below a defined level. The subsidy is to cover childcare costs within the household in line with the government's child poverty reduction strategy. To measure and monitor child poverty, the government has opted to use indicators related to household financial security (Stats N.Z., 2019). In New Zealand, the government considers child poverty to be children living in poverty and therefore the Childcare Subsidy is a household subsidy. New Zealand's child poverty indicators show improvement with Childcare Subsidy payments to the household. The 20 Hours ECE subsidy does not consider the household or the relative child poverty dimension of the Childcare Subsidy. Accordingly, the 20 Hours ECE subsidy (paid to the ECE facility and not to the caregiver) demands that eligibility for 20 hours of Childcare Subsidy be forfeited. "Work and Income's

rules state that the Childcare Subsidy **must not** be claimed for 20 Hours ECE hours” (Ministry of Education, n.d. -b) (bold text as per quoted text). Initially, this may seem logical and fair. But it is plausible for caregivers and households with a low income to consider the Childcare Subsidy (paid directly to the caregiver) as preferable to support generic household expenses from which the child is assumed to benefit. Claiming the 20 Hours ECE benefit would effectively mean a loss of household income. It would be more cost-effective to deny the child ECE in order to access the Childcare Subsidy for household income. In such cases, the 20 Hours ECE subsidy conditions would drive the household further into poverty and persistent disadvantage. With consideration of the earlier reference to how the quality of family life coupled with economic resources shape caregiver capacities to provide early child development, it could be argued that, for households below the poverty line, the New Zealand ECE costing model contributes to persistent disadvantage by either compromising the financial security of these households, or by denying children from these households the opportunities that ECE provides them and, ultimately, wider society.

Market-based ECE services can result in quality being more easily compromised by costs. Successive governments have promoted the privatisation of early learning with the justification that the user-pays approach controls the supply and demand of service providers. Catchment area affordability levels regulate service provider competition and satisfaction with social and emotional learning and outcomes. The potentially lucrative investment in Education and Care Services accounts for these private facilities now providing over two-thirds of all early learning in New Zealand (Ministry of Education, 2021). The Ministry’s level of quality control for licensing is not conducted by ECE specialists and is insufficient for quality control of learning outcomes. The for-profit model of services is given priority over preschool

children engaging in quality social and emotional learning. As literature and research have shown, this ultimately perpetuates persistent disadvantages and higher taxpayer costs.

Considering the Perry and Abecedarian programme caseloads for disadvantaged and black households, a robust CBA for a revised approach to ECE in New Zealand would consider a gendered socio-ethnic breakdown of incarcerated prisoners. According to the Department of Correction (n.d.), there are 8,655 people currently in N.Z. prisons. 93.7% are men. 52.7% are Māori, although Māori comprise 15.5% of the population. What opportunity did the 4,561 Māori men have to access quality ECE in their preschool years? Today, what options do Māori boy children have to access quality ECE through the current market-based services? If incarceration rates could be reduced, as shown in Heckman's Figure 17(c), what savings would the Department of Corrections make? What welfare benefits would be reduced and tax revenues increased? Under the heading Multidimensional Well-Being, the CBAX Tool Guidance (The Treasury, 2020) gives passing reference to considering gender. The user is referred to the Ministry for Women's gender analysis tool which is primarily focused on equity and equality for women. In these circumstances, it would be possible for the Māori boy child to be invisible. It would take a determined policy analyst to expose the extent to which the current model of ECE contributes to persistent disadvantage in New Zealand.

Conclusion

Considering the evidence for how ECE quality and access (by location and cost) influence the child's early years and prepare them for formal education and transitioning to adulthood, it is already reasonable to confirm that the current model of ECE in New Zealand contributes to persistent disadvantage.

Beyond the child, the impact of substandard ECE on costs to the health sector, reduction of taxation revenues, and higher social safety-net welfare costs, indicates that the current structure of New Zealand's ECE contributes to undermining social and economic development. In this context, persistent disadvantage is inevitable.

Conclusions for the second research question are not so straightforward. Because the market failure of the current model contributes to persistent disadvantage, the government should acknowledge the evidence and initiate remedial action by reforming the ECE sector. But should reforms move toward universal ECE as a free public service together with primary and secondary schooling? Literature and research consistently emphasise quality together with affordability. The current wide-ranging teaching quality and costs result in uneven outcomes for children and ultimately negatively impacts the nation's social well-being.

Respecting the child's family and cultural environment prior to ECE, reform of the sector would need to address standardised quality that builds enduring non-cognitive skills within social and emotional learning. Programmes that focus on motivation, social skills, and persistence, are of greater importance in ECE than cognitive development alone. New Zealand's model of choices has merit if standardised quality can be achieved. However, universal free ECE through the model of choices is not necessarily the answer. A reform would need to simplify and ensure affordability for children from disadvantaged environments and unpeg it from other child related benefits. The current costing structure is a classic case of process having become more important than purpose. A revision of the sector that leaves no child behind due to cost or quality is the bottom line.

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