CENTRE FOR EDUCATION POLICY
& & EQUALISING OPPORTUNITIES

Briefing note: The potential effects of the cost of living crisis on children's outcomes

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Summary

- The cost of living crisis is expected to leave parents with less money to spend and, hence, to spend on their children.
- In general, higher income is associated with improved child outcomes in the short (higher school attainment, better behaviour) and long term (higher probability of attending university, higher wages).
- Evidence from studies on short-term changes in income suggests that lower income or a reduction in purchasing power is associated with worse short- and long-run child outcomes, especially for families that were already disadvantaged.
- Lower educational outcomes are not only a concern for those immediately impacted – they reflect a lower level of productivity, which means a lower level of economic growth and reduced prosperity in general.
- The effects of income on educational outcomes varies across the population: a decrease in income or purchasing power would have a disproportionately large effect on outcomes of the poorest families compared to the richest.
- Without suitable interventions, we would expect the cost of living crisis to negatively affect educational and later-life outcomes for the poorest children.

Recommendations

- Policymakers should be aware of the potentially long-lasting effects of temporary financial distress on educational outcomes long after the current "cost of living" crisis and the value that payments can provide to low-income parents.
- Schools should continue to be aware of the challenges, both chronic and temporary, low-income families face and the potential need to intervene to prevent children facing negative educational outcomes, which are costly to society.
- Policymakers should recognise the key role that schools can play in supporting low-income families and provide the budget necessary to allow schools to provide that support.

The Issue

The ongoing energy crisis and surge in inflation is likely to push more and more families into poverty and could leave three million more Britons under the absolute poverty line (Resolution Foundation, 2022). Parents' purchasing power is reduced by higher prices. This not only causes immediate financial difficulties which families must endure, it may also have long-lasting "downstream" effects on child development. These can even persist even into adulthood and affect educational and employment opportunities and outcomes. The effects of poverty do not solely impact poor families and their children: lower educational and adult outcomes reflect a lower level of productivity, and hence a lower level of economic growth. Therefore, it is in the interests of all of society to avoid the scarring effects of poverty and ensure prosperity and growth for future generations.

This briefing note explores the impact the current cost of living crisis might have on children in poorer families. We first discuss some of the reasons why relatively permanent differences in income between families might affect children's educational (and later) outcomes, and the specific difficulty (and possible solutions) in separating a causal impact from a correlation or association. We then present some of the key evidence from studies of temporary changes in income which suggests that there are important links between fluctuations in family income or purchasing power and children's outcomes across the lifespan with consequences relevant for the current cost of living crisis.

The impact of family income on children's outcomes – correlation or causation?

There is widespread evidence of a link between a family's income and children's outcomes, backed up by a recent comprehensive systematic review of the literature (Cooper & Stewart, 2021). Children from poorer families achieve lower grades throughout school, are less likely to attend university, and go on to earn lower wages (Bradshaw, 2001).

Pioneering studies from the United States provided empirical evidence of an association between family income and children's outcomes (both during childhood and in adulthood). Mayer (1997) analysed data from the US Panel Study of Income Dynamics (PSID) and found large effects of doubling ($15,000 p.a. to $30,000 p.a.) parental income on childhood pregnancy (down 18 percentage points [p.p.]), dropping out of high school (down 13 p.p.), and adult earnings (up $4,400 per annum), although the effect on reading and maths test scores at ages 5 and 7 was much smaller (less than 1 p.p.). Other longitudinal evidence suggests that relatively permanent differences in family income early in development affect educational and labour market outcomes across the life course (Duncan et al., 1994; Carneiro & Heckman, 2002; Gregg & Machin, 2000; Hanushek, 1992; Wolfe, 1981). Furthermore, the impact of financial difficulties on children's cognitive and emotional functioning has also been shown to the one of the prominent risk factors persistent across childhood and early adolescence (Carozza et al., 2022).

However, the extent to which this link is causal is less well understood. For example, parents who are less well-educated might have lower income and be less able to help their children with their schoolwork. In this case, although this would lead to a statistical relationship (often called a correlation or association) between education attainment and income, this is not a causal relation – the lower attainment is due to parents' lower level of education, not their income. An example of a causal relationship would be the inability of families to invest in their child's education – e.g., out of school tutoring or buying toys / equipment to aid in learning – because of a lack of income (Blanden & Gregg, 2004). In this latter case, there is a causal pathway whereby (lack of) income has a direct impact on a child's learning and hence on their educational outcomes. Understanding to what extent the association between family income and children's outcomes is causal is vital evidence to inform policy. For example, if it is solely a lack of income that is leading to lower outcomes for children in poor families, then the remedial policy is clear: give poor families more money.

However, if (hypothetically) the true cause of the lower outcomes is a lower level of education among low-income parents, then giving money to poor families is unlikely to be the best solution. Many argue that RCTs are the "gold standard" for establishing causality (Hariton & Locascio, 2018). When performed correctly, an RCT involves a randomly selected part of the population of interest being treated (receiving an increase or decrease in their income), while another part remains untreated (control group). Then the average difference between the two groups can be attributed to the change in income. However, RCTs on this issue are rare, as they are expensive to run at any sort of scale (meaning the sample often does not reflect the population) and can potentially be ethically dubious.

Evidence for the effects of temporary changes in income or purchasing power on child outcomes

We focus next on studies of temporary changes in income, which are likely to be more relevant for the cost of living crisis. There are also key differences in methodology between studies focusing on permanent versus temporary changes in income. Studies of permanent income generally focus on differences across families, attempting to compare children in similar families that differ only in their level of income. Studies focusing on temporary changes in income, however, often exploit a "within-family" design, comparing the outcomes of children within the same family (i.e., siblings), and often control for differences in permanent income.

Most of the research on temporary changes in income has relied on non-causal methods using observational data, with a few exploiting so-called natural experiments. Analysis of data from cohort studies found that changes in income can have notable lasting effects on children. Levy & Duncan (2000) analysed a sample of siblings in the PSID and found that a 2.7-fold increase in parental income at ages 0-4 lead to an average increase in total schooling of three-quarters of a year.

Korenman et al. (1995) used data from a cohort of the US National Longitudinal Study of Youth (NLSY), and also found relatively small positive effects (less than 2.4% of a standard deviation) of a $1,000 increase in income across a range of outcomes; although, they did report that there was a comparatively larger effect of increases in income on children in the poorest families compared to their more affluent peers. Levine & Zimmerman (2005) studied siblings in the NLSY and find an association between maternal welfare payments and child development. However, they conclude that there is "little evidence" for a causal impact of welfare payments.

Blanden and Gregg (2004) used British data to study the impact of changes in parental income at age 16 on a range of outcomes. When controls were included the effect sizes were reduced but still suggested that a one-third reduction in parental income led to a 3 to 7 percent fall in the probability of obtaining a degree. The same authors attempted to get closer to estimating causal effects, first by controlling for permanent income, and then by focusing on siblings to control for family effects and find slightly smaller effects: a fall in attainment of between 1 and 3% and a 3% reduction in the probability of attending university, both for a one-third reduction in parental income at age 16.

The impact of parents having more money to spend has also been tested in a series of longitudinal "cash transfer" studies. These involve parents receiving cash payments, sometimes based on specific conditions, but typically with no stipulations concerning how the money is spent. For example, Barr, Eggleston & Smith (2022) studied the timing of tax refunds in the United States to determine whether additional money provided to families (approximately $1300) shortly after a child's birth showed downstream benefits to the child in adulthood. They found that there were small benefits for first-born children: stronger mathematics and reading skills and slightly higher chances of graduating college. Similarly, a study of Native American families who received shares of profits from a local casino (on average $4000) were found to have an additional year of

schooling relative to those who did not get any money (Akee et al., 2010). The applicability of studies such as this rely on assumptions that (1) cash transfer studies are an example of where parents have more purchasing power; (2) a cost of living crisis is a situation where parents have less purchasing power; and (3) the effects of family income on education are symmetrical. If these are justified, then we would expect this crisis to yield worse educational outcomes.

In addition, many studies suggest substantial variation between individuals regarding the size of the beneficial effects of cash transfers: studies have suggested that cash transfers have the largest effects on the poorest families (e.g., Paxson & Schady, 2010). This is, perhaps, unsurprising since a change of £1,000 for a family who has an income of £20,000 represents a 5% change, whereas it is only a 1% change for a family with an income of £100,000.

Overall, it should be noted that although small cash transfers likely have relatively small effects on adult outcomes, research and commentaries on cash transfers typically reach similar conclusions: the economic benefits over an individual's lifespan are large, cost-effective and potentially greater than the cost of the cash transfer itself (e.g., Duncan et al., 2014; Shaefer et al., 2018). Therefore, these transfers should be targeted at those children who will benefit most.

The only RCT to come close to investigating our effect of interest was part of the evaluation of Minnesota Family Investment Program (MFIP) analysed by Gennetian & Miller (2002). The MFIP allowed those on the program to keep their benefits and additional labour income, while previously benefits would be reduced in line with this extra income. Each of a sample of single-parent families receiving welfare in Minnesota was placed into one of three groups: (1) full MFIP – financial incentives and mandatory employment and training; (2) MFIP incentives – only the financial incentives; (3) a control group. A $1,000 increase in income led to an increase in school engagement and positive behaviour of between a quarter and a third of a standard deviation.

If there is a consistent, but likely small, effect of temporary changes in income on educational outcomes, it is important to isolate the mechanisms which might explain these phenomena, to ensure that any interventions are designed in such a way as to not undermine their ultimate goal. For example, one mechanism that has been identified is through stress; better finances are linked to lower (parental) stress and hence better-quality parenting (e.g., Akee et al., 2010; Paxson & Schady, 2010; Barr, Eggleston & Smith, 2022). Another explanation (as reviewed in Cooper & Stewart, 2021) is that a better financial situation allows for greater spending and investment in the home environment (e.g., Duncan et al., 2017). Of course, both explanations are relevant and the balance between the two is likely specific to each household. For example, severe financial stress is likely to be most relevant for the poorest families, or those with drastic changes in circumstances (job loss, debt) while even those who are relatively richer may suffer from lack of time/money to invest in their children. Interventions should ideally be as personalised as possible.

Summary and implications

Many British families are currently faced with having less disposable income to spend due to rises in energy bills, and reduced purchasing power of that remaining income due to inflation significantly outstripping increases in their income. This cost of living crisis is concerning for parents for many reasons – including the possibility that it could have adverse effects on their children, both now and in the long-term. It also concerns society as a whole: lower outcomes on average mean a lower level of productivity, leading to a lower level of economic growth. It is well established that there is link between family income and positive child outcomes. Establishing whether it is income itself that directly affects children's outcomes is challenging as parents' education levels, environment and other factors are highly correlated with income. This interplay of factors means that it is difficult to establish "causality".

Nevertheless, evidence from studies, which can potentially be extended to the cost of living crisis, suggests that increases in family income are associated with both short-term and long-term beneficial educational outcomes – although the size of these effects are generally relatively small.

In addition, there is a recurring suggestion that changes in income have a non-linear effect on families based on their initial levels of income (Cooper & Stewart, 2021). The effects of temporary changes in income are comparatively greatest for the poorest of families. Therefore, it is important to target programmes to boost low incomes at the poorest families to ensure the costs are less than the long-run benefits to society of doing so, making this a worthwhile investment. Although evidence suggests that other factors correlated with low income are also not beneficial for childhood outcomes, low income still has a unique role in explaining poor educational outcomes and must be directly addressed.

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Date: November 2022