

Impact case study (REF3b)

Institution: University of Essex
Unit of Assessment: 18 – Economics and Econometrics
Title of case study: Using analysis of cohort studies to inform social-mobility policy
<p>1. Summary of the impact</p> <p>Essex research, conducted between 2009 and 2012, has used cohort studies to investigate the sources of intergenerational social mobility in the UK. The results show that two variables have highly significant effects on children's social mobility patterns: the educational level of parents and the prevalence of maternal breastfeeding. The cohort analysis conducted by Professor John Ermisch and Dr Emilia Del Bono shows that there are strong intergenerational correlations in educational attainment across different cohorts of UK individuals. The findings have informed UK Government policy and influenced the work of a major US charitable foundation. Analysis conducted by a team of researchers led by Del Bono has demonstrated the cognitive and socio-emotional benefits of maternal breastfeeding, and shown that its uptake can be used to foster social mobility. These findings have been vital to UNICEF UK's Baby Friendly Initiative and have provided evidence to demonstrate its efficacy and to justify its continuation.</p>
<p>2. Underpinning research</p> <p>Researchers at Essex have analysed all available UK cohort data to explore the sources of intergenerational social mobility. The research team has found that parental educational attainment and maternal breastfeeding are key determinants of cognitive achievement in children, which in turn have powerful effects in determining social mobility in adulthood.</p> <p>In 2009 Ermisch and Del Bono undertook research on inequality in Achievements During Adolescence as part of a cross-national study of the intergenerational transmission of advantage – the findings of which were published in a volume co-edited by Ermisch, <i>From parents to children</i> (2012). This cross-national study was carried out under the auspices of the Russell Sage Foundation and co-directed by Ermisch, with funding for the UK component coming from the Sutton Trust. A life-cycle approach was adopted to understand where in the life-course divergences in outcomes between high and low socio-economic status children occur, how they evolve and how those differences may be related to policies, processes and institutions operating in various countries. Ermisch and Del Bono's research showed that in England the gap between adolescents with higher-educated parents and those with lower-educated parents is clearly evident by age 11, increases between ages 11 to 14, and remains stable thereafter. They argue that the change in the socio-economic gap was most likely due to higher-educated parents sending their children to better secondary schools, as both observed and unobserved secondary-school characteristics account for most of the increase.</p> <p>An associated policy report produced by Ermisch and Del Bono for the Sutton Trust provided more detailed analysis for the UK: (i) over time (comparing the BCS70 and NCDS cohorts); (ii) over the life-course of an individual (using LSYPE); and (iii) in an international perspective (using TIMMS 2003 and 2007). This report, <i>Educational Mobility in England</i>, focused on the link between the education level of parents and the educational outcomes of teenagers. This report found, <i>inter alia</i>, no change in education mobility for the least educated households, but noted that the advantage of having degree-educated parents had diminished compared to previous generations.</p> <p>Del Bono's research on social mobility also included leading a research team that was conducting new studies on the effects of breastfeeding on early childhood outcomes. This research, conducted between 2009 and 2012, needed to explicitly consider the influence of the educational level of parents since in the UK, as in other developed countries, rates of breastfeeding are higher among more educated mothers. The main objective of this research was to investigate whether breastfeeding can have effects on health, socio-emotional and cognitive outcomes early in life that are independent of maternal characteristics. In that case, policies aimed at promoting breastfeeding among more disadvantaged families can foster social mobility.</p>

The studies analysed the relationship between breastfeeding and: (i) various child health measures; (ii) indicators of child cognitive development, including assessments of children's early literacy and numeracy skills; and (iii) aspects of children's social and emotional development. Some of the studies additionally provided an evaluation of policies to support breastfeeding at the hospital level, such as those implemented by the UNICEF Baby Friendly Initiative in the UK, or those supported by employers, such as the availability of breastfeeding facilities at the workplace.

The research found evidence that breastfeeding affects children's health and cognitive outcomes, and some aspects of social and emotional development. The findings also showed how hospital-based policy interventions in support of breastfeeding are an effective tool to increase breastfeeding rates among less educated mothers, while the availability of breastfeeding facilities at work facilitates women's return to employment but only among more educated employees. These results highlight the way in which existing policies in support of breastfeeding have different effects on different groups of the population, and while in some cases may enhance social mobility, in other cases may actually reduce it.

Research conducted at Essex in 2012, and published in *Archives of Disease of Childhood* in 2013, attempted to identify the particular mechanisms that lead to the association between breastfeeding and intergenerational social mobility. This research analysed data from the British Cohort Studies of 1958 and 1970 and found that breastfed individuals were more likely to be upwardly mobile and less likely to be downwardly mobile, with similar effects identified in each cohort. Mediation models identified a key mechanism to be that breastfeeding advances neurological development, resulting in improved cognitive performance, which in turn supports upward social mobility and protects against downward mobility.

The research team included: Professor John Ermisch (left Essex October 2011), Dr Emilia Del Bono (Reader), Dr Birgitta Rabe (Senior Research Fellow), Dr Maria Iacovou (Senior Research Fellow), Professor Amanda Sacker (left Essex December 2012), and Professor Yvonne Kelly (at Essex January 2011 – December 2012).

3. References to the research

- Del Bono, E. and J. F. Ermisch (2010) *Educational mobility in England*, London: The Sutton Trust. <http://www.suttontrust.com/our-work/research/item/education-mobility-in-england/>
- Iacovou, M. and A. Sevilla-Sanz (2010) The effect of breastfeeding on children's cognitive and non-cognitive abilities. *ISER Working Paper 2010-40*. University of Essex, Colchester. https://www.iser.essex.ac.uk/files/iser_working_papers/2010-40.pdf
- Heikkila, K., A. Sacker, Y. Kelly, M. Renfrew and M. Quigley (2011) Breastfeeding and child behaviour in the Millennium Cohort Study. *Archives of Disease in Childhood*. DOI: 10.1136/adc.2010.201970
- Del Bono, E. and B. Rabe (2012) Breastfeeding and child cognitive outcomes: Evidence from a hospital-based breastfeeding support policy. *ISER Working Paper 2012-29*. University of Essex, Colchester. <https://www.iser.essex.ac.uk/publications/working-papers/iser/2012-29.pdf>
- Ermisch, J. F. and E. Del Bono (2012) Inequality in achievements during adolescence. In J. F. Ermisch, M. Jäntti and T. Smeeding (eds.) *From parents to children: The intergenerational transmission of advantage*. New York: Russell Sage Foundation. ISBN 978-0-87154-045-4
- Sacker, A., Y. Kelly, M. Iacovou, N. Cable and M. Bartley (2013) Breast feeding and intergenerational social mobility: what are the mechanisms? *Archives of Disease in Childhood* 98 (9): 666-671. DOI: 10.1136/archdischild-2012-303199

Research funding:

Del Bono, E. (PI); M. Iacovou, B. Rabe and A. Sevilla-Sanz (Co-Is) *The Effects of Breastfeeding on*

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Children, Mothers and Employers. ESRC (grant RES-062-23-1693), 01.06.09 to 30.11.11, £192,760.

Ermisch, J. F. (PI) *Inequality in Achievements during Adolescence*. Sutton Trust, 01.07.09 to 15.10.10, £39,630.

4. Details of the impact

The research has informed social-mobility policy in two main ways. Firstly, through informing strategy, including influencing the policy of government and third-sector organisations. Secondly, through influencing the development of practical measures to support breastfeeding – a key way of fostering social mobility.

Informing social mobility strategy

The work conducted as part of the project on cross-national study of the intergenerational transmission of advantage has played an important role in informing the UK policy debate. The first major impact of the study stemmed from Del Bono and Ermisch's *Educational Mobility in England* policy report for the Sutton Trust. The Sutton Trust has stated that "the research was a centrepiece for an international summit on social mobility attended by the leaders of the three main political parties. The policy influence from this was manifested in the Coalition's 2011 Social Mobility Strategy, which set out a number of key policies attempting to improve social mobility" [corroborating source 1]. The *Educational Mobility* report was referred to in the Sutton Trust's submission (October 2011) to the House of Commons Education Select Committee inquiry into social mobility [corroborating source 2]. In addition, the research on inequality in adolescence, as well as other international evidence on the interaction between educational institutions and social mobility, was presented at a workshop held at the British Academy in May 2011 to an audience of policymakers and journalists [3].

The Russell Sage Foundation, an American charitable organisation, has outlined two specific impacts arising from Ermisch and Del Bono's (2012) chapter on inequality in adolescent achievement. Firstly, the findings of this work were central to the Foundation's engagement with policymakers and non-academic audiences. A non-technical summary of the From Parents to Children project, which highlighted the work of Ermisch and Del Bono, was devised for the purpose of engaging with such audiences [4] [5]. Secondly, the Foundation has confirmed that Ermisch and Del Bono's findings on income gradients have led to investment in "several grants looking at exactly these issues to build upon and extend the findings from the Ermisch and Del Bono work". Further to this, the Foundation now has four visiting scholars working on these issues and is looking to fund further projects on developmental patterns [5].

Influencing practical measures to support breastfeeding

Essex devised a programme of dissemination for the findings of the work on social mobility and breastfeeding, which has led to various impacts. In October 2011, Essex organised a policy workshop, 'Early Intervention and Social Mobility: Are pro-breastfeeding policies worth it?' at the British Academy in London to discuss some preliminary results from the research. The workshop was chaired by Dr Miriam Stoppard, a well-known author of books on child development. It featured a panel of healthcare experts and representatives of third-sector organisations, including Janet Fyle (Policy Advisor for the Royal College of Midwives), Alison Baum (CEO of Best Beginnings), Belinda Phipps (CEO of the National Childcare Trust), and an MP who is both a member of the Health Select Committee and chair of the All Party Group on Maternity Services [6].

As an immediate consequence of this workshop, the MP addressed the under-secretary of State for Public Health in a parliamentary debate on 21st November 2011 to ask about the provisions set in place by the current Government to support breastfeeding in the long-term [7] [8]. The MP, now a Minister in the Department of Health, has confirmed that various policy decisions have been informed by the research, including the Government's support for the Healthy Child Programme, the inclusion of breastfeeding in the Public Health Outcomes Framework, supporting breastfeeding through increasing the number of health visitors, providing information about breastfeeding through the NHS Information Services, and promoting National Breastfeeding Awareness Week [8].

Essex research on breastfeeding and social mobility has been vital to the work of UNICEF UK's Baby Friendly Initiative, which works with public services to promote and support breastfeeding. The Director of the programme writes that "ISER's research has been valuable in giving strong evidence for the efficacy of the Baby Friendly Initiative – particularly in areas of lower socio-economic status, where breastfeeding is less common" [9]. The necessity of providing such evidence is that "it is important that we can show that the programme has a measurable impact on practice and breastfeeding rates in order that the investment in staff time and resources is justifiable – particularly during a time when budgets are being cut" [9]. The Director also states that the research has been providing vital evidence on *why* breastfeeding is important, especially in providing an effective methodology to demonstrate the association between breastfeeding and IQ [9]. Further to this, Iacovou and Sevilla-Sanz's 2010 working paper is cited multiple times in a 2012 report by UNICEF UK on the benefits to health services that breastfeeding provides [10].

Most recently, the 2013 paper on breastfeeding and intergenerational social mobility from *Archives in Diseases of Childhood* has received extensive media coverage, including articles in the *Independent* and *Daily Mail*. It has also been the subject of a feature on the *NHS Choices* website [11].

5. Sources to corroborate the impact

All documents are available from HEI on request.

[1] Director of Development and Policy, Sutton Trust.

[2] Sutton Trust note for the House of Commons Education Select Committee session on the Government's new school admissions code (12 October 2011). <http://www.suttontrust.com/our-work/research/item/note-for-the-house-of-commons-education-select-comm/>

[3] Documentation regarding workshop at British Academy. <https://www.iser.essex.ac.uk/1941/04/28/pre-school-school-and-beyond-improving-social-mobility-through-education-2011>

[4] Pew Charitable Trusts' summary of *From Parents to Children*. See p.4. [http://www.pewstates.org/uploadedFiles/PCS_Assets/2011/CRITA_FINAL\(1\).pdf](http://www.pewstates.org/uploadedFiles/PCS_Assets/2011/CRITA_FINAL(1).pdf)

[5] Senior Program Officer, Russell Sage Foundation.

[6] Summary of event outcomes, which documents the event. <https://www.iser.essex.ac.uk/projects/breastfeeding/events>

[7] Hansard: 21 Nov 2011: Column 209W. <http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm111121/text/111121w0008.htm>

[8] Minister in the Department of Health.

[9] Programme Director, UNICEF UK Baby Friendly Initiative.

[10] Renfrew, M. J. et al. (2012) *Preventing disease and saving resources: The potential contribution of increasing breastfeeding rates in the UK*. UNICEF UK. See pp. 35, 63-65, 70. http://www.unicef.org.uk/Documents/Baby_Friendly/Research/Preventing_disease_saving_resources_policy_doc.pdf

[11] Media coverage of 2013 paper in *Archives in Diseases of Childhood*:
<http://www.nhs.uk/news/2013/06June/Pages/Breastfed-babies-upwardly-mobile-study-claims.aspx>
<http://www.independent.co.uk/life-style/health-and-families/health-news/revealed-breastfeeding-babies-improves-their-chance-of-climbing-social-ladder-8672173.html>
<http://www.dailymail.co.uk/health/article-2347581/Breastfed-babies-likely-climb-social-ladder--likely-fall-it.html?ito=feeds-newsxml>