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Assembly

## Research and Library Service Briefing Paper

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# Free School Meal Entitlement as a measure of deprivation

This briefing paper considers the use of Free School Meal Entitlement (FSME) as a proxy indicator for deprivation. It presents a brief outline of FSME as a measure of deprivation and possible alternatives, considering their relative strengths and weaknesses. It finds that while there are many limitations to using FSME as a measure of deprivation, there are also challenges associated with other potential measures.

## Key Points

- Family income can have an impact on children’s attainment, with educational disadvantage linked to lower family income;
- Typically, levels of deprivation among schools and their pupils are inferred using data on children’s entitlement to free school meals;
- Free School Meal Entitlement (FSME) is a proxy measure (rather than a direct measure) that is frequently used in educational research and policy;
- Advantages to using FSME in this way include that it is linked to the children in the school, is readily understood and available and is updated annually;
- However, there are concerns regarding the robustness of FSME as a measure of deprivation, including the following:
  - Likely to under-report deprivation: many eligible parents choose not to apply and therefore will not be included in the statistics; in addition, families whose income is just above the threshold will not be included;
  - Measures income only: it does not take account of other aspects of deprivation;
  - Changing eligibility of individual children: the educational disadvantage of children who cease to be eligible for free school meals is not recognised;
- Alternatives to FSME as a measure of deprivation tend to be area-based in nature: this is an issue due to differences in socio-economic circumstances within areas, in addition to the fact that a school’s intake is likely to include pupils from diverse areas;
- The Northern Ireland Multiple Deprivation Measure and Census data provide a broader picture of deprivation; however they are area-based and not all measures are updated annually; and
- An “ever FSM” measure has been suggested; this would take account of the changing eligibility of individual children over time by including those who had been eligible in the past.

## Executive summary

### Introduction

Family income is known to be linked to children's educational attainment, with children from less well-off backgrounds, on average, less likely to achieve well at school than those from families with higher incomes.

Typically, levels of deprivation among schools are inferred using information on the proportion of children eligible for free school meals, as these are available to children from families with a low income, among other circumstances. Free School Meal Entitlement (FSME) is therefore used as a proxy, rather than a direct, indicator of deprivation. There are concerns about the robustness of FSME as a measure of deprivation. This briefing paper considers whether entitlement to free school meals is an appropriate indicator for deprivation in schools, and outlines possible alternatives.

### Appropriateness of Free School Meal Entitlement as a measure of deprivation

Free school meals are available to children from families meeting certain eligibility criteria, for example if they receive particular benefit entitlements, or meet other criteria such as having a statement of educational need and requiring a special diet, or where a school believes a child may be in need. The maximum taxable income for FSME is currently £16,190.

FSME is a widely used proxy indicator for deprivation in Northern Ireland, England, Scotland and Wales. The suggested strengths of FSME as a measure for deprivation include that it is:

- Linked to the children in the school;
- Readily understood;
- Readily available;
- Updated annually; and
- Income-based.

However, many authors state that FSME is not a fully robust indicator for deprivation, highlighting concerns around its validity as a proxy measure in this regard. There are a range of issues highlighted in the literature; these include:

- **Reflects registered rather than actual eligibility:** Eligible parents may choose not to apply for free school meals for their children, perhaps due to a perceived stigma, particular dietary requirements or the extent to which schools encourage parents to seek entitlement;
- **Measures income only:** FSME does not take account of other factors relating to deprivation;

- **Changing criteria for FSME and changing eligibility of individual children:** changing criteria results in difficulties in comparing data over long periods of time; in addition, individual children's eligibility may change over time, meaning that their educational disadvantage is no longer recognised when their eligibility ceases; and
- **Families close to the eligibility threshold may experience similar disadvantage:** children from families whose income is just above the threshold for FSME are not included when it is used as a proxy for deprivation, although they are likely to experience similar levels of deprivation to those who are entitled.

### **Alternative measures**

Many alternative measures of deprivation relate to geographical areas, rather than to the individual children attending a school. This is an issue because a school's intake of pupils may come from an area different to that in which the school is situated (this is particularly the case at Post-Primary level), and due to the fact that there may be large socio-economic differences within an area that do not reflect the situation of individual pupils.

Alternative measures that could be considered include the Northern Ireland Multiple Deprivation Measure (NIMDM), which provides information across a spectrum of deprivation (for example: income deprivation, employment deprivation and living environment), and census data. While these measures potentially provide a broader picture of deprivation, challenges include that they are area-based, and are not updated annually.

Another measure that has been suggested is an 'ever FSM' measure, which would address the issue of children's changing eligibility for free school meals over time by including children who had in the past been entitled to free meals in school.

### **Conclusion**

The literature indicates that there are a number of challenges relating to the use of FSME as a proxy measure for deprivation. However, alternative indicators often take an area-based approach and therefore may not reflect the true socio-economic situation of individual pupils.

The Committee may wish to consider the use of FSME as a proxy measure for deprivation, in the absence of other, more robust, indicators. However, the Committee may wish to give consideration to the future introduction of an "ever FSM" measure that would include pupils who have been eligible for free school meals in the past. It could also consider the cross-referencing of FSME data with data from the Census and/ or the NIMDM in order to provide a broader picture of deprivation experienced by pupils.

## 1 Introduction

There is widespread recognition that family income can have an impact on children's educational outcomes, with children from less well-off backgrounds, on average, less likely to perform well at school than those from families with a higher income.<sup>1</sup>

As a result of this correlation, educational research often seeks to take levels of deprivation among children into account. Levels of deprivation are typically inferred using children's entitlement to free school meals as a proxy indicator, as free school meals are available to children from families with low incomes or to children of asylum seekers, as well as to boarders at special schools and pupils with a statement of educational needs who require a special diet.

However, there are concerns regarding the appropriateness of using Free School Meal Entitlement (FSME) as a measure for levels of deprivation, with some commentators highlighting concerns relating to its robustness and validity. This briefing paper considers whether FSME is an appropriate measure of deprivation in schools and outlines possible alternatives.

## 2 Free School Meal Entitlement

The Department of Education currently provides an entitlement for free meals for school children from households with a low income, among others. Guidelines from the Department of Education outline the criteria for FSME; parents or pupils are entitled to free school meals if they meet any of the criteria outlined in the following table.

**Table 1: Criteria for Free School Meal Entitlement**

Pupil or their parent in receipt of benefits	Criteria unrelated to benefit entitlement
<ul style="list-style-type: none"> <li>• Income Support or Job Seeker's Allowance;</li> <li>• Income-related Employment and Support Allowance;</li> <li>• Child Tax Credit and is ineligible for the Working Tax Credit because they work less than 16 hours per week; and has annual taxable income not exceeding an amount as determined by the Department; or</li> <li>• Guarantee element of State Pension Credit.</li> </ul>	<ul style="list-style-type: none"> <li>• The pupil has a statement of educational needs and is designated to require a special diet;</li> <li>• Is a boarder at a special school;</li> <li>• Is the child of an asylum seeker supported by the Home Office National Asylum Support Service; or</li> <li>• If none of the above apply, but a school believes a child may be in need.</li> </ul>

Source: Department of Education (2009) *Arrangements for the provision of milk, meals and related facilities under the Provisions of Articles 58 and 59 of the Education and Libraries (Northern Ireland) Order 1986, as amended*. Bangor: DE

<sup>1</sup> Blanden, J. and Gregg, P. (2004) *Family Income and Educational Attainment: A Review of Approaches and Evidence for Britain* London: Centre for the Economics of Education

The maximum taxable income for FSME is £16,190.<sup>2</sup> The proportion of pupils in a school who are recorded as being eligible for free school meals provides a measure known as FSME for that school.

Children's entitlement to free school meals is widely used as a proxy indicator for family income in educational research, being used regularly by organisations across Northern Ireland, England, Scotland and Wales to indicate levels of deprivation among a school's population of pupils.

### 3 Appropriateness of FSME as a measure of deprivation

#### Strengths of FSME

Some authors<sup>3</sup> note that FSME has the advantage of reflecting the specific characteristics of individual pupils; being easily collected and widely understood. A correlation generally found between whether a pupil is registered as eligible for FSM and underachievement is also put forward as a reason for using FSME as a measure of deprivation.

A number of advantages to using FSME as an indicator have been identified; these include that as a measure it is:

- Linked to the children in the school;
- Readily understood;
- Readily available;
- Updated yearly; and
- Income-based.<sup>4</sup>

However, some authors suggest that Free School Meal Entitlement (FSME) is used as a measure of deprivation due mainly to its availability on a school-by-school basis, rather than its robustness as a measure.<sup>5</sup>

#### Challenges relating to FSME

Much of the literature indicates that FSME is not a fully robust measure of deprivation. The Centre for the Economics of Education conducted research<sup>6</sup> into the validity of

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<sup>2</sup> *School Milk and Meals* [online] Available at: [http://www.deni.gov.uk/index/85-schools/5-schools\\_meals.htm](http://www.deni.gov.uk/index/85-schools/5-schools_meals.htm)

<sup>3</sup> Department for Education (2010) *Consultation on school funding 2011-12 Introducing a pupil premium*. London: Department for Education, Styles, B. (2008) 'Moving on from free school meals: national census data can describe the socio-economic background of the intake of each school in England' *Educational Research*, Vol. 50:1 pp 41-53

<sup>4</sup> DfES (2006) *Indicators of Deprivation for Use in School Funding: September Draft of Notes for Authorities* London: Department for Education and Skills

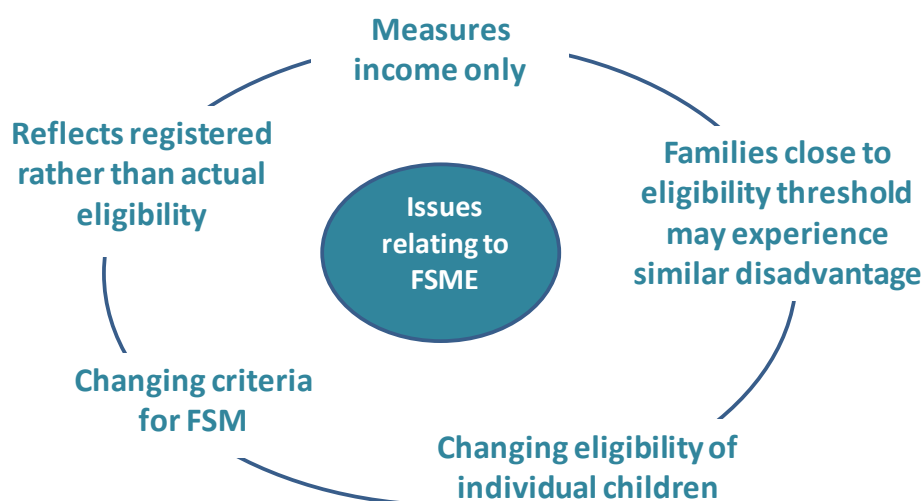
<sup>5</sup> Croxford, L. (2000) 'Is Free-Meal Entitlement a Valid Measure of School Intake Characteristics?' *Educational Research and Evaluation* Vol. 6, No. 4, pp. 317-335 and Kounali, D. et al. (2008) *The probity of free school meals as a proxy measure for disadvantage* Education Department, University of Bath

<sup>6</sup> Hobbs, G. and Vignoles, A. (2007) *Is Free School Meal Status a Valid Proxy for Socio-Economic Status (in Schools Research)?* London: Centre for the Economics of Education

FSM status as an indicator for deprivation. It found that FSME ‘does not always do a good job as a proxy for the true socio-economic status of the child’, noting that it is an imperfect proxy of low income or ‘workless’ families and of one-parenthood.

The key issues relating to its validity as a proxy indicator for deprivation are outlined in the following figure and explored in the following paragraphs.

**Figure 1: Key issues regarding the use of FSME as a proxy measure for deprivation**



Source: Adapted from Department for Education (2010) *Consultation on school funding 2011-12 Introducing a pupil premium*. London: DE; Kounali, D. et al. (2008) *The probity of free school meals as a proxy measure for disadvantage* Education Department, University of Bath; and Styles, B. (2008) ‘Moving on from free school meals: national census data can describe the socio-economic background of the intake of each school in England’ *Educational Research*, Vol. 50:1 pp 41-53

### ***Measures income only***

Some commentators have highlighted that FSME only takes account of a family’s income, and not of other factors. For example, Croxford<sup>7</sup> argues that FSME acts as an ‘inconsistent’ measure of poverty, suggesting that it does not measure the propensity for learning of children entering a school, or their skills and attainment. The article states that no single measure can take account of all variations in socio-economic circumstances between schools.

Another study asserts that it will always be difficult to measure disadvantaged populations through single, ‘catch all,’ indicators. It calls for better documentation of the data already collected, including documentation of how data is collected and used, as well as for more research validating the quality and scope of its use.<sup>8</sup>

<sup>7</sup> Croxford, L. (2000) ‘Is Free-Meal Entitlement a Valid Measure of School Intake Characteristics?’ *Educational Research and Evaluation* Vol. 6, No. 4, pp. 317-335

<sup>8</sup> Kounali, D. et al. (2008) *The probity of free school meals as a proxy measure for disadvantage* Education Department, University of Bath

### ***Reflects registered rather than actual eligibility***

A key challenge with regard to using FSME as a proxy for deprivation is that many eligible parents may choose not to apply for free school meals for their children, perhaps due to a perceived stigma, particular dietary requirements or the extent to which schools and local authorities encourage parents to seek entitlement.<sup>9</sup> A consultation report by the Department for Education notes that in England and Wales, 16% of pupils are eligible for FSM, which indicates lower levels of deprivation than suggested by other indicators.

### ***Changing criteria for FSME and changing eligibility of individual children***

A further issue relating to using FSME as a proxy for deprivation is the changing criteria for FSME, leading to potential difficulties in considering and comparing data over prolonged periods of time.<sup>10</sup>

In addition, individual pupil's eligibility for free school meals may change over time. For example, one study found that there was substantial change in pupils' eligibility for free school meals over a four year period. Possible reasons for this include changing family structure, changes related to the home (usually linked to home ownership status) and the flexible labour market.<sup>11</sup> This may mean that some children who have been eligible for free meals in the past are no longer included within FSME data, and that their disadvantage is no longer acknowledged.

### ***Families close to the eligibility threshold may experience similar disadvantage***

A further issue is that families with an income just above the threshold for FSME, while experiencing similar levels of disadvantage, are not included when FSME is taken as a proxy for deprivation.

For example, a study by Kounali et al.<sup>12</sup> examined data from the National Pupil database in England in order to consider whether FSME is a valid indicator of poverty. It used three proxies for income: FSM, Working Tax Credits and Home Ownership to estimate whether FSM is an appropriate measure of deprivation. It found that 'FSM is both a coarse and error-prone instrument,' stating that the income cut-off will result in a significant proportion of low-income families with low capital assets being characterised as 'non-disadvantaged.'

It also found that children from 'non-disadvantaged' families close to the threshold had similar levels of attainment in maths as those who qualified for FSM, risking underestimation of the associated educational disadvantage. In summary, the study

<sup>9</sup> Croxford, L. (2000) 'Is Free-Meal Entitlement a Valid Measure of School Intake Characteristics?' *Educational Research and Evaluation* Vol. 6, No. 4, pp. 317-335

<sup>10</sup> Kounali, D. et al. (2008) *The probity of free school meals as a proxy measure for disadvantage* Education Department, University of Bath

<sup>11</sup> Kounali, D. et al. (2008) *The probity of free school meals as a proxy measure for disadvantage* Education Department, University of Bath

<sup>12</sup> Kounali, D. et al. (2008) *The probity of free school meals as a proxy measure for disadvantage* Education Department, University of Bath



found that many schools will face greater levels of disadvantage than currently measured using FSM.

## 4 Alternative measures

### Area-based measures

Many measures currently used to identify levels of deprivation take an area-based approach. However, the difficulty with this approach is that geographical areas do not necessarily reflect the true socio-economic characteristics of the school in question. For example, there may be large socio-economic differences within an area that do not reflect the situation of individual pupils. In addition, a school's intake area is often socio-economically different from the area in which it is located.<sup>13</sup>

As such, area-based data is described as being useful only in cases where the school is situated in a fairly homogenous area and taking a representative selection of pupils from the area in which it is situated.<sup>14</sup> This is particularly the case in the Post-Primary sector.

### ***Northern Ireland Multiple Deprivation Measure***

Multiple deprivation measures developed in 2005 were commissioned by the Northern Ireland Statistics and Research Agency (NISRA) and constructed by a team led by Professor Mike Noble at the University of Oxford, and as such, are often referred to as the Noble Measures. Government Departments recommended in 2009 that these measures be updated, resulting in the Northern Ireland Multiple Deprivation Measure (NIMDM) in 2010.

NIMDM is the official measure of spatial deprivation in Northern Ireland. It provides information on seven 'domains' or types of deprivation, as well as an overall multiple deprivation measure comprising a weighted combination of the seven domains. The seven domains and their weighting within the overall deprivation measure are outlined in the following table.<sup>15</sup>

**Table 2: Seven Deprivation Domains comprising the NIMDM**

Deprivation Domain	Weighting
Income Deprivation	25%
Employment Deprivation	25%

<sup>13</sup> Styles, B. (2008) 'Moving on from free school meals: national census data can describe the socio-economic background of the intake of each school in England' *Educational Research*, Vol. 50:1 pp 41-53

<sup>14</sup> DfES (2006) *Indicators of Deprivation for Use in School Funding: September Draft of Notes for Authorities* London: Department for Education and Skills

<sup>15</sup> NISRA (2010) *Northern Ireland Multiple Deprivation Measure 2010* Belfast: NISRA

Deprivation Domain	Weighting
Health Deprivation and Disability	15%
Education Skills and Training Deprivation	15%
Proximity to Services	10%
Living Environment	5%
Crime and Disorder	5%

Source: NISRA (2010) *Northern Ireland Multiple Deprivation Measure 2010* Belfast: NISRA

Within the Education Skills and Training Deprivation Domain, indicators include educational attainment (for example, Key Stage 2 Teacher Assessments and GCSE points score); absenteeism and proportions of school leavers who have not entered Higher or Further Education, Employment or Training. The 2005 measure was updated in 2010 to include indicators relating to children at primary school, and to include school leavers not entering employment, education or training, rather than simply those not entering education.<sup>16</sup>

Entitlement to free school meals is not used as an indicator within the Education Skills and Training Domain, because children living in income deprived households will be included within the domain measuring income deprivation (which is intended solely to measure this type of deprivation). The Education, Skills and Training Domain, on the other hand, focuses on educational outcomes, and it is stated that children who receive free meals and do not perform well at school will be included in this way.<sup>17</sup>

DfES guidance on deprivation measures considered the Index of Multiple Deprivation (2004) which has similar domains to the NIMDM. It states that the benefits of the Index include that it takes account of deprivation across a wide spectrum of factors and that it is based on considerable research and consultation. However, it notes that some of the deprivation measures are not particularly relevant to education, and that the focus is on adults and households so some deprivation may not be relevant to children (for example, pensioner poverty).<sup>18</sup>

Further challenges to using NIMDM data or to cross-referencing it with FSME data (using postcodes from the annual school census) include that it is area-based, and that not all of the measures are updated annually. Nonetheless, the Department of Education has undertaken an analysis into the correlation between FSME and NIMDM for the purposes of validating FSM data; this found a strong correlation between the two measures.

<sup>16</sup> NISRA (2010) *Northern Ireland Multiple Deprivation Measure 2010* Belfast: NISRA

<sup>17</sup> NISRA (2010) *Northern Ireland Multiple Deprivation Measure 2010* Belfast: NISRA

<sup>18</sup> DfES (2006) *Indicators of Deprivation for Use in School Funding: September Draft of Notes for Authorities* London: Department for Education and Skills

### **Census data**

One study<sup>19</sup> advocates using national census data in conjunction with FSME in order to maximise the information available on pupils attending a school. The English Pupil-level Annual School Census (PLASC) contains postcodes for all pupils in schools in England, allowing census data to be matched to pupils and then aggregated to school level. This enables the provision of a socio-economic picture of either the immediate area in which a pupil lives or the intake of each school.

This approach provides a wide socio-economic spectrum of deprivation and relates to the area in which a child lives rather than the area in which the school is situated. However, the data still does not relate directly to the pupil themselves and therefore may not reflect their true socio-economic circumstances. In addition, the study notes that data derived from the census should be used more cautiously towards the end of the census period.<sup>20</sup>

### **Other measures**

Another potential measure that has been suggested by the Department for Education in England and Wales is an “Ever” FSM measure. This indicator would take into account pupils who have been registered as eligible for FSM at any point in the previous three or six years. This measure would attempt to address the issue of individual pupil’s changing eligibility, recognising that pupils do not lose their additional educational needs when they cease to be eligible for FSM. When this measure was considered, an analysis of the data found that the eligibility level would increase from 16% to 24%.<sup>21</sup>

An article in the Times Educational Supplement highlighted calls from lower funded education authorities in England for a measure of deprivation based on classroom behaviour and parents’ education. This is particularly due to the link between free school meals and funding for schools. The local authorities suggested that census data on parents’ educational achievements and school records of pupils’ behavioural or emotional problem correlate with deprivation and could be therefore used as an indicator.<sup>22</sup>

However, little research has been carried out into the validity of classroom behaviour as a measure for deprivation. While some evidence links parents’ educational attainment to children’s outcomes, further research would be required on its robustness as a measure of deprivation and into the viability of collecting this data for all pupils.

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<sup>19</sup> Styles, B. (2008) ‘Moving on from free school meals: national census data can describe the socio-economic background of the intake of each school in England’ *Educational Research*, Vol. 50:1 pp 41-53

<sup>20</sup> Styles, B. (2008) ‘Moving on from free school meals: national census data can describe the socio-economic background of the intake of each school in England’ *Educational Research*, Vol. 50:1 pp 41-53

<sup>21</sup> Department for Education (2010) *Consultation on school funding 2011-12 Introducing a pupil premium*. London: Department for Education

<sup>22</sup> *Call to ditch free school meals as deprivation gauge* [online] Available at: <http://www.tes.co.uk/article.aspx?storycode=6010554>

### **FSME in the absence of other robust measures**

Styles<sup>23</sup> notes that despite limitations for FSM as a deprivation indicator, it nonetheless acts as a 'significant predictor of educational outcome measures when better measures of socio-economic status are unavailable.'

### **Conclusion**

The evidence suggests that Free School Meal Entitlement has limitations as a proxy measure for deprivation, including under-reporting of deprivation, measuring income and not other factors, and the changing eligibility of individual pupils. However, alternative measures tend to take account of the areas in which a school is situated or in which a pupil lives, and therefore may not reflect the true socio-economic characteristics of the pupils attending a school.

The Committee may wish to consider the use of FSME as a proxy indicator for deprivation in the absence of more robust indicators. However, the Committee could give consideration to the future introduction of an "ever FSM" measure that would include pupils who have been eligible for free school meals in the past (over a specified period of time), in order to ensure that the disadvantage experienced by pupils who have been eligible previously is not overlooked. The Committee may also wish to consider the future cross-referencing of FSME data with data from the Census and/ or the Northern Ireland Multiple Deprivation Measure to provide a broader picture of the deprivation experienced by pupils within schools.

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<sup>23</sup> Styles, B. (2008) 'Moving on from free school meals: national census data can describe the socio-economic background of the intake of each school in England' *Educational Research*, Vol. 50:1 pp 41-53