



Accounting for needs? Formula funding in the UK schools sector

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Abstract

Purpose – The purpose of this paper is to analyse whether the development of a needs-based funding formula for resource allocation incorporates the needs of funders or the needs of the service providers.

Design/methodology/approach – The paper analyses interview data and documentary evidence gathered from a UK local education authority about the creation of a “needs-based” formula for sharing resources to schools. It employs and extends a framework developed by Levačić and Ross to evaluate needs-based formula funding.

Findings – Although formula funding is purported to be a more objective method of resource allocation, the paper finds that as with other resource allocation methods the power relations between the funder and the service provider impacts on the extent to which service provider needs are incorporated into the funding formula.

Research limitations/implications – This paper considers only the funding of schools. Further work is needed to investigate formula funding for other public services.

Practical implications – Debates between funders and service providers should be encouraged by policy makers to ensure that allocations based on the funding formula are acceptable to service providers.

Originality/value – The paper provides a useful analysis of a needs-based funding formula for resource allocation in schools and whether this incorporates the needs of funders or the needs of the service providers.

Keywords Financing, Resource allocation, Education, Schools, United Kingdom

Paper type Research paper

Introduction

Allocation of public funding continues to be an essential aspect of resource management in public sector organisations for the simple reason that it provides the revenue flow for the provision of the service (Mayston, 1998). Insufficient levels of funding may hamper the development of public services such as education (Rose, 2007). It is important therefore to identify expenditure needs of services for incorporation in resource allocations. Methods used in resource allocation aim for transparency for recipients of funds, especially when funds are subsequently devolved to them for self (site-based) management. Formula funding methods are significant in this arena because, in addition to providing transparency, these methods seem to offer a more equitable basis for recognising different expenditure needs (Heald and Gaughan, 1994; Levačić and Ross, 1999; Smith, 2003).

Formula funding models are mechanisms that transfer resources to public sector organisations based on explicit calculations aimed at ensuring the needs of recipients are

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taken into account (Heald and Geaughan, 1994). There has been some research into the use of formula funding methods in the public sector (Heald and Geaughan, 1994; Edwards *et al.*, 1995, 1996, 1997; Mayston, 1998; Levačić and Ross, 1999). In some studies, the rationale for and the design of funding formulae have been examined from the perspective of the funders (Heald and Geaughan, 1994; Edwards *et al.*, 1995, 1996, 1997). The role of government as the main provider of funding has been studied (West *et al.*, 2000). Other research has analysed the effects of allocations from users' perspectives (Mayston, 1998; Angluin and Scapens, 2000). Most research has studied formula funding in the public sector from economic and statistical perspectives (Levačić, 1992, 1993; Smith, 2003).

There remain gaps, however, in the study of formula funding. For example, there is a paucity of research that considers the role of funders other than central government involved in the provision of funds. There remains also a lack of studies that have explored in detail the issue of "whose" needs and it seems needs are assumed to be end-user needs. However, needs may be categorised into service provider needs (for example, the needs of the schools), the needs of funders, as well as the end service user needs (for example the educational needs of school children). All these needs may influence the development of funding formulae in diverse ways. Whilst there is recognition of the importance of dialogue and debate in developing the funding formula within the academic literature, there is a lack of examples of such dialogues in which the debates form the main emphasis of study (Smith, 2003). Within the education literature, the focus of research has been on the use of formula funding in higher education and the funding of research (Whittington, 1994, 2000; Talib, 2001). Apart from the work of Levačić and Ross (1999) and the work of Edwards *et al.* (1995, 1996, 1997) there are no studies that focus on formula funding in the UK schools sector.

This paper aims to address these gaps in the literature by analysing issues surrounding a practical implementation of formula funding method known as "needs-based" formula funding. The needs-based formula approach is offered by Levačić and Ross (1999) as a method that specifically aims to incorporate into the formula the expenditure needs of school education. The Levačić and Ross needs-based formula framework concentrates solely on the funding of school education. The framework provides six criteria to evaluate needs based formula funding for school education.

The purpose of this paper is to analyse the extent to which the development of a needs-based funding formula incorporates the needs of the funder or the expenditure needs of the service provider. It is argued that the expenditure needs of the service provider include and subsume needs specific to the characteristics of end service users as well as needs pertaining to the provision of the service (the service provider needs). Whilst it is possible that the end service user needs and the service provider needs may differ, this paper does not dwell on these differences but rather argues that ultimately the service provider receives funding for the total expenditure needs of the service. The paper focuses on whether funding reflects the demands for service provision as identified by the provider. The paper examines the relationships between the funder and the service provider in the process of developing the formula. It empirically investigates and extends the evaluatory framework developed by Levačić and Ross (1999) to examine needs-based formula funding approach. A case study about the creation of a funding formula in a local education authority (LEA) in the UK schools sector analyses funder and service provider needs. The LEA is conceptualised as the

funder and schools as the service provider. The central argument made is that although needs-based formula funding purports to incorporate the expenditure needs of services, funder non-economic needs may be privileged in its development.

One of the tenets of the new public management (Hood, 1991, 1995) has been the shift to decentralised financial decision making. In the UK schools education sector, this was reflected in the devolution of funds to the governing body of schools for self management. The initial focus of funding reforms within the UK Education Reform Act 1988 was to enhance pupil enrolment and competition within the market based approaches of the NPM (Broadbent *et al.*, 1993; Edwards *et al.*, 1995, 1996, 1997; Simkins, 2000). Since 1997 when the Labour Government came into power, this emphasis has shifted to using funding to stimulate educational outcomes and also to foster a more socially inclusive education system (Power and Whitty, 1999; West *et al.* 2000; Levačić, 2008). Demand-driven resource allocation methods, such as the needs-based funding formula method explored in this paper, may be critical in meeting these aims.

The paper makes several contributions to the literature. It shows empirically the multiplicity of needs impacting on the development of funding formulae in the UK schools sector. Service provider needs in this case study were situational and specific rather than generic. Funder needs reflected the demands made on them by local and central government policies. The case study illustrated that power relations between the funder and the service provider may impact on which needs dominate in funding formulae, thus the needs driving the formula may not be the calculated needs of end-users. Although formula funding through its calculations provides transparency for the allocation processes, the method should not be considered solely on the basis of the underlying calculations. Relational factors are as important as calculative elements in the development of the funding formula.

The extant literature of formula funding has signalled some of these relational and power issues. There is however a lack of empirical case studies (the exception being the work of Edwards *et al.*, 1995, 1996, 1997) that have explored them from an engagement with officers actually involved with the development of the formulae. Most research on formula funding has tended to consider the subject matter from economic and statistical perspectives (Levačić, 1993, Smith, 2003) or from a conceptual approach (Mayston, 1998; Levacic and Ross, 1999; Levačić, 2008). Such work has tended to infer the implications of formula funding from secondary data. Smith (2003), for example, discusses the possibilities of gaming, rationing and risk-averse behaviour that may be implicit in the development of funding formulae.

The insights from this paper are important for policy makers as they continue to use formula funding models to encourage local decision making within the new public management (Hood, 1991, 1995). In the UK, an estimated £150 billion of public expenditure is devolved annually by way of the formula method (Smith, 2003). In the education sector, the drive towards decentralisation and school-based self-management continues in most organisation for economic co-operation and development countries. Incorporating service provider needs into a funding formula in this context remains vitally important if the goals of improving educational outcomes are to be achieved. The impacts of formula-based funding require critical evaluation since its use continues to grow.

The language of “needs” pervades much of the public sector as governments attempt to individualise, customise and make public services responsive (Flynn, 2007; Pollitt *et al.*, 2004). But, financial resources are always limited and meeting the needs of

services (both in terms of specific provider needs and specific end-users needs) may require additional funds, which may not be immediately available. Thus, the acceptance by providers of services, (who are the users of funds) of the decisions of funding allocations is crucial. To allow for this, debates between service providers and funders need to be encouraged so that the rationale for funding allocations becomes transparent.

The paper is organised in the following manner. The next section reviews previous literature on different funding approaches used in the public sector. It locates the “needs-based” formula method within formula funding methods, and within education drawing on the work of Levačić and Ross (1999) who have studied it in some detail. The following section discusses the methods of data collection and analysis used in this study, and provides background information about the funding of education in the UK. The case study is then presented, focussing on the negotiation processes between the LEA and its schools. In the “Discussion” section, these processes are analysed in detail. The paper concludes by highlighting some limitations of the research, areas for additional research and some implications for policy.

Alternative funding approaches in the public sector

Formula funding is one of several approaches used to allocate resources in the public sector. Other methods are the incremental approach, political funding and activity-led funding (Heald and Geaghan, 1994; Mayston, 1998; Smith, 2003).

The incremental approach maintains “historical relativities” where current resource allocation depends on past resources received (Heald and Geaghan, 1994; Mayston, 1998). In the political method, funding is distributed according to political discretion and tends to be directed towards the needs of the median voter as politicians seek to gain the middle ground to enhance their chances of electoral victory (Mayston, 1998). Both the incremental approach and the political approaches are recognisably provider led, “top-down” approaches to funding. In contrast, the activity-led approach relates funding to individual activities to remove the arbitrariness associated with top-down resource allocation. It is an approach that implies a “bottom-up” user led determination of expenditure needs. Arguably, activity-led funding derives from zero-based budgeting processes. Mayston (1998) suggests its use as a means of determining resource allocation is beset with three substantial problems. First, there is a need for the specification of the target level of service outcomes. Second, there is a need for the identification of the minimum expenditure level required to achieve the target level of service outcome. Third, there is the need to reconcile the target expenditure levels and outcomes with the total available resources. The use of activity-led funding presupposes that there are sufficient resources to finance the required needs that the activity led analysis identifies.

The formula-funding approach is founded on explicit calculations, and seemingly offers a means of sharing resources objectively. The amount received depends on the measured characteristics of the recipient as calculated by the formula. Heald and Geaghan (1994) suggest that formula funding models “are traditionally conceived as instruments of empowerment rather than of control” because recipients understand why they have received the allocation. The formula method therefore may be a more transparent way of sharing resources (Heald and Geaghan, 1994; Mayston, 1998). Transparency in resource allocation is important as Angluin and Scapens (2000) argue

that it is only where there is a high degree of transparency that resources allocation may be perceived to be fair. The formula approach through the use of specified indicators best handles issues of equity and fairness (Mayston, 1998; Smith, 2003). Thus, for example, the use of measures of healthcare utilisation may allocate resources more fairly than an incremental approach based on historical allocations. Talib (2001) in discussing formula funding for the allocation of public funds for research in the UK universities discusses the advantage of the method as serving policy objectives with a “hands-off approach”. Broad objectives may be achieved whilst maintaining recipients’ autonomy as the method can have “as much or as little prescription, regulation and control as one wants” (Talib, 2001). Formula funding is widely used in the public sector because of these advantages.

Levačić and Ross (1999) in looking at the funding of school education, discuss a variant of formula funding which they refer to as “needs-based formula funding”. They define it in the following manner:

Needs-based formula funding is a specific approach to designing a funding formula so that the amount which is allocated is directly derived from an analysis of what the school needs to spend in order to provide a specified quality of education for students (Levačić and Ross, 1999, p. 26).

Needs-based formula funding as defined above by Levačić and Ross relates specifically to the formula funding of schools, although the term “needs-based resources allocation” has been used in healthcare for a significant period of time. The approach is dependent on an analysis of the underlying activities of the service and therefore builds upon activity-led funding to specifically incorporate an assessment of school needs into the funding formula.

Whereas, Mayston (1998) suggested that activity-led funding is a “bottom-up” approach Levačić and Ross (1999) discuss needs-based funding in a more normative way, identifying what it should incorporate. They argue that the characteristics of students, physical characteristics of the schools and the programmes of learning that underpin the educational activities should be considered in the distribution of budgets to the schools. Levačić and Ross (1999) suggest the “needs consideration” should include an assessment of an allocation per student (i.e. a basic allocation), curriculum enhancement, school site needs and supplementary educational needs enhancement. Levačić and Ross (1999, pp. 33-5), offer six main criteria for evaluating needs-based funding. These are:

- (1) *Effectiveness*. The relative amounts allocated per student should reflect the cost of providing the resources required for the education of children.
- (2) *Efficiency*. The provision of signals within the formula to encourage efficient school management.
- (3) *Equity*. The extent to which funding formula reflects cost differentials due to supplementary education needs, school site differences and regional differences.
- (4) *Integrity*. The extent to which the formula is based on indicators and information that is not easily manipulable.
- (5) *Administrative costs*. The formula should be easy to calculate and maintain.
- (6) *Accountability and transparency*. The extent to which the formula is readily understood by stakeholders and ensures accountability to policy makers.

Although a useful way of evaluating needs based funding formula, the Levačić and Ross (1999) criteria seem to ignore that needs may be evaluated from a service provider, a service user, as well as from a funder perspective and that such an evaluation may lead to different insights. Aspects of some criteria (for example, specific pupil allocated amounts in the effectiveness and equity criteria) may pertain specifically to needs of service users (the educational needs of the school children) whilst other elements such as school site differences relate to the actual provision of the service. The service provider, arguably, is interested in meeting both the needs of service users and the needs associated with the provision of services. Whilst the service provider may be concerned about translating the service needs into finance, the funder may have other concerns such as adhering to government policy. Smith (2003) suggests that any criterion of “need” implies a departure from efficiency as it brings issues of equity into consideration. Evaluating needs based funding formulae may be more complex than the criteria above suggests.

Both the service provider and the funder may be interested in the integrity, administrative costs, accountability and transparency criteria but may have different perceptions about them. For example, Heald and Geaughan (1994) discuss the needs of funders and argue that as the orchestrators of the formula, they may be interested in broad policy objectives or may have more interventionist concerns. Ultimately, in the public sector, central government is responsible for the use of resources collected through taxation from the populace. Other organisations involved in the provision of resources operate within frameworks set by central government. There is accountability between these different levels of funders. In the UK, local government is involved with resource allocation in local education and decisions taken by local authority politicians, such as the level of local taxation, may impact on the funding formulae. Funding bodies such as the LEA are accountable to service providers such as schools. Service providers such as schools are accountable to parents and children using their services. Levačić and Ross’s criterion of accountability both subsumes and obscures the many facets of accountability that may be operating in formula funding. There are also tensions between the technical accuracy of the formulae (which may allow efficiency and equity criteria to be met) and accountability (which may favour simplicity) in the derivation of the formula (Smith, 2003). The extent to which the Levačić and Ross (1999) criteria impact on the formula may become evident from an empirical analysis of a formula funding exercise as is undertaken later in this paper.

The notion of “needs” requires further analysis as it entails much complexity. Krohwinkel-Karlsson and Sjögren (2008) in looking at public financial interventions in healthcare highlight the problematic nature of needs and needs assessment. They suggest that “needs” can represent basic needs, situation specific needs or the need for intervention. Sheaff *et al.* (2002, p. 436) argue that the language of needs is used by public sector managers to explain their “own normative and technical judgements over users’ demands about what services should or should not be publicly financed”. Need is also argued to refer to the services which consumers want to receive (Richard, 1994, cited in Sheaff *et al.*, 2002) and thus can also be thought of as user demands or wants. Sheaff *et al.* (2002) provide a useful definition of user needs as “rational demands that are well informed” as opposed to user demands or wants that may not be well informed. The difference relates to the underpinning amount of information or knowledge upon which the needs are founded.

Levačić and Ross (1999) seem to privilege economic rationales in their evaluation of needs-based formula funding. They hint at other rationales by acknowledging that school funding formulae are dependent on government policy objectives, whether equity, directive or aimed at market regulation. The equity objective reflects the need for like treatment of similar recipients (horizontal equity), and also the application of differential funding levels for recipients with different needs (vertical equity). With the directive objective, the funding formula contains incentives or penalties to promote specific government policy objectives. The market regulation objective encourages the funding formula to develop market-like mechanisms for the system as a whole such that funding follows students to popular schools. In making funding decisions, however, both political and economic rationales are drawn upon by budget decision makers and often the pressures on time and resources mean economic rationales for budgetary decisions may be underplayed in order to meet the requirements of social, legal and political problems (Thurmaier, 1992, 1995). This suggests that choices are made in the creation of the formulae which may reflect non-economic needs such as social, legal and political issues.

Some of these social, non-economic and political issues were raised by Edwards *et al.* (1995, 1996, 1997, 2005) in their work on the creation of school funding formulae by local education authorities in the aftermath of the UK Education Reform Act 1988. Although they did not consider the development of the funding formulae in terms of funder and service provider needs, they highlighted issues not raised explicitly by the Levačić and Ross (1999) criteria such as the LEA desire for consensus from schools, the LEA desire for organisational legitimacy and the central government's requirement for quick implementation of the new devolved budget system. Some of these issues may only partly be inferred from Levačić and Ross's (1999) accountability criterion.

Wildavsky (1961) in his seminal discussion of budgetary reforms emphasised the political nature of resource allocation. The core issue in budgeting (and by implication, resources allocation) is "whose preferences are to prevail in disputes about which activities are to be carried on and to what degree, in the light of limited resources" (Wildavsky, 1961, p. 184). Thus, the power relations between the funders and the recipients of funding, their relative knowledge of the effects of decisions, their understanding of the information used to determine the formula, may influence the negotiations and the extent to which the funding formula meets provider and/or user needs. The funders may have "esoteric knowledge and skill" (Reed, 1996) relevant to the management of the organisations for which funding is being provided which gives them power over the process of deciding the formula.

Although it has been studied in many ways, power remains a difficult concept to pin down. It has been defined as the ability to influence behaviour and overcome resistance (Pfeffer, 1992 cited in Collier, 2001). Power is both structural (through the possession of power sources, position, expertise, information) and relational (achieved through inter personal relations) (Astley and Sachdeva, 1984; Pettigrew and McNulty, 1998). Power is also argued to be situational, contextual and dynamic (Pettigrew and McNulty, 1998). In more recent literature, Collier (2001) reminds us that power can be enabling as well as constraining. Power may be enabling where interests of different groups are shared and there is the potential for "power to do". Oppressive power on the other hand reflects "power over". Collier (2001) discuss three sources of power; institutional power reliant on legal and external regulation; organisational power that is hierarchical and reliant on management

structure and processual power formed in coalitions. Pfeffer and Salancik (1978, p. 49) in another seminal work about resource dependency considered that having control over resource allocation is source of power. For example, they state that control (i.e. power) derives from “the ability to make rules or otherwise regulate the possession, allocation and use of resources and to enforce the regulations”. In similar vein, Morgan (2006) suggests resource scarcity and dependence are key sources of resource power. Some or all these different forms of power may be drawn upon by service providers and funders to make the case for particular levels of funds. In discussing needs-based formula funding however, the Levačić and Ross (1999) framework does not consider these issues. In this study, the different sources of power drawn upon by the LEA are explored.

The research puzzles addressed by this paper are how and why needs-based formula funding is affected by relationship between the service providers and the funders and their respective needs. The paper illustrates the relationships between the funders and providers when developing a user needs distribution formula. It thereby develops the Levačić and Ross (1999) framework by incorporating some of these issues into their model. The paper reports on research undertaken into a school formula funding development in the context of the School Standards and Framework Act 1998 which was the first major education legislation the UK Labour Government introduced when it came into office in 1997. Within it, the fair funding initiative replaced and built on the Local Management of Schools (Edwards *et al.*, 1995, 1996, 1997, 2005). The policy emphasis changed from encouraging market forces and competition between schools to the raising of educational standards. There was a concern by the labour government to utilise funding to raise educational performance. For example, in one government document, the following statement appeared (Department for Education and Employment, 1998 (DfEE)):

Money, people, property and information are the key resources available to the education service. The way in which schools and the LEA spend money – nearly £20 billion every year – should be part of the solution for educational underachievement.

Schools were to receive extra delegated funds to help raise standards of education in schools. Fair Funding required the LEA to devise a funding formula for sharing the individual schools budget. LEAs were confirmed as the orchestrators (Heald and Geaghan, 1994) of the funding formula which had to be developed in consultation with schools, and in recognition of the requirements of the government. Money was to be distributed to schools based mainly (at least 75 per cent) on the number of pupils enrolled, weighted according to their age as was the case under the local management of schools. The remaining 25 per cent could be allocated to reflect the circumstances or the “needs” of the schools. In effect, the government had set up the “provider needs” as requisite drivers for the funding. Additionally, there was the proviso that the funding formula needed to be “simple, objective, measurable and predictable in effect and clearly expressed” (DfEE, 2001, Statutory Instrument No. 475).

Research approach

A qualitative case study approach was used to explore the process of developing the funding formula (Scapens, 2004; Berry and Otley, 2004). Qualitative methodologies focus on meaning, involve analytical induction and aim to stay close to the data, rather than measuring phenomena (Daft, 1983; Ahrens and Chapman, 2006). The case study

analysed information gained from LEA officers in charge of planning and resources management, (the funders) and from head teachers and governors (the service providers) in the schools about the approach taken to develop a new “needs-based” funding formula for distributing funds to schools. This development was considered by the LEA to be a major review of the existing funding formula. The old funding formula was developed in 1990 at the start of the Local Management of Schools. Changes were made to this formula during the funding review process studied in this research. Both, the LEA and schools had to live with the consequences of the new funding formula decisions. This funding review situation thus offered a useful domain for addressing the research question about service provider needs, funder needs, their relationships and factors influencing the development of the funding formula (Ahrens and Chapman, 2006).

Data collection

Eight senior managers and the Director of Education were interviewed during 2001 and 2002 from a LEA in Southern England. Three primary school head teachers were also interviewed[1]. All the interviews were semi-structured, tape-recorded and transcribed. On average, each interview lasted one hour. The interviews of the head teachers took place after the interviews of the managers and so some questions asked sought to confirm (or otherwise) issues raised by the managers. The purpose of the interviews was to gain an understanding of what the respondents considered important in developing the funding formula. The semi-structured nature of the interviews also allowed a probing of their understanding of the concept of needs. Additional data were collected from LEA internal documents. These documents included minutes of meetings between LEA and schools, documents presented by the LEA officers to meetings of the council and consultation documents sent from the LEA to schools. The consultation documents and the LEA responses to schools provided evidence of the direction of LEA thinking with respect to the formula funding. As part of the research, letters and copies of e-mails sent from schools in response to the LEA consultations were also reviewed. These provided some evidence of the thinking of schools. A total of 35 letters from schools were reviewed. Non-participant observation was undertaken of two meetings between head teachers and LEA officers. Three public meetings among LEA officers, the political leaders of council, head teachers and school governors were also attended. During all these meetings, issues pertaining to the formula funding were discussed. Notes taken during the meetings were analysed and drawn on in this paper.

Data analysis and interpretation

All the interview data were manually coded and analysed to provide themes. This process was undertaken as the interviews progressed and as such the emerging themes could be and were discussed with the LEA officers for further clarification. These themes helped to identify the funder’s needs. A coding approach was also used on the letters and documents from the schools in an attempt to identify any patterns in the responses. For example, the written responses from secondary schools were compared to those from primary schools. These written responses of the schools were analysed by paying attention to the frequency with which items were referred to. A crucial aspect of the documentary review was the analysis of schools responses into needs and wants. This analysis was done, somewhat intuitively by judging the language and tone

of the requests. Using ideas from Sheaff *et al.* (2002), the wants were those demands that from the researcher's perception seemed to depend on subjective justifications without any reference to evidence. On the other hand, school needs reflected those for which some evidence, such as a government specified indicator, was referred to in the letter. Such a process of analysis does have limitations. However, in qualitative research the perceptions of the researcher are as important as the research tools used (Ahrens and Chapman, 2006).

The Levačić and Ross (1999) criteria provided an initial theoretical lens by which to explore whether the new formula for funding achieved its purpose of being "needs-based" and to consider possible reasons why items were included or not within the revised formula. But, this theoretical lens has been further developed in this paper by the separation of needs into "funder needs" and "service provider needs". The qualitative nature of the study allowed other criteria, such as power and relationships between the LEA and schools to be incorporated into the Levačić and Ross (1999) framework. In the analysis of the case study that follows the relevance of the Levačić and Ross framework is first discussed in terms of funder and service provider needs. Then, a discussion of the negotiations that took place between the LEA and schools is provided to tease out those other factors that were important but are not reflected in the Levačić and Ross evaluation criteria, thus contributing to the development of this theoretical framework.

The formula funding review case study

The case study LEA, the LEA, is situated in Southern England. It is a relatively large urban LEA responsible for the education of around 40,000 school children. There are four times more primary schools in the borough than secondary schools. The primary schools population comprised 22,000 pupils, whilst the secondary school population was 16,000 with the balance being pupils in special schools. Potentially, the balance of funding between primary and secondary schools, as indicated by Edwards *et al.* (1996, 1997), was an area of tension within resource allocation. The majority of the school population come from minority ethnic communities and over half of all pupils have English as an additional language. This aspect also presented a potential area of tension in the funding of supplementary educational needs.

During the empirical work, several of the interviewees referred to the tight financial constraints under which the LEA operated and the resulting lack of capacity these created. One finance officer during interview referred to a political commitment from the council to keep the level of local council tax[2] down which affected all the budgeting decisions the Council took. The Office for Standards in Education (OFSTED)[3] Inspection Report showed that the LEA had been consistently funding education below the government specified standard spending assessment[4] for education. The under funding of education was another challenge that this LEA funder needed to manage.

Funder needs: accountability dominates

The development of the new funding formula was undertaken through several staged consultations between the LEA and schools. This involved an iterative process of consultation letters from the LEA, responses from schools, feedback, more consultations, negotiations and meetings. Table I summarises these stages.

During the first stage consultation, the LEA stated its objectives for the review. These were to ensure that:

- the funding available for schools is shared out in a way which is open, fair, transparent and understandable;
- the formula allocation to each school reflects the costs of meeting the particular learning needs of each school relative to other schools; and
- the way that the schools' budget is divided up does not inhibit the flexibility of self-managing schools to deploy their resources to achieve the highest possible standards of education (first stage consultation document).

The first aim reflects the accountability and transparency criteria suggested by Levačić and Ross (1999) as essential criteria for needs-based formula. By featuring transparency and fairness together, the LEA seemed to acknowledge these as crucial provider requirements. Only where there is a high degree of transparency would allocations be perceived to be fair by users (Angluin and Scapens, 2000). In the second aim, the LEA showed a concern for vertical equity (Levačić and Ross, 1999) in their desire to meet the relative needs of schools. The third aim above suggests that the LEA wanted to encourage school self management but not to direct school management. Regulations contained in the Schools Standards and Framework Act 1998 required schools to be responsible for self management of devolved budgets. Thus, within the third aim the LEA was reinforcing its legal responsibility of supporting school self management. The third aim seemed also to be suggesting that the LEA, as funder, did not want to influence the criteria that Levačić and Ross (1999) labelled efficiency. Although need-based funding formula could be used to provide signals for efficient school self-management, this LEA emphasised:

[. . .] the overall purpose of the funding formula is to provide a means of dividing up the total resources available [. . .] It is not a means of identifying what schools should spend on specific services (First stage consultation document).

Heald and Geaughan (1994, p. 269), suggest that funding bodies (such as the LEA), will prefer to win acceptance for the distribution bases and divert argument away from the outcomes of the allocations. The LEA, as shown above, emphasised distribution bases and seemed to retreat from looking at the aggregate levels of funding. In response to a challenge by a head teacher at the first stage of the consultation, the LEA had to make this point clear by stating:

Date	Stages	Issues and debates
Autumn 2000	First stage consultation	Introduction and aims
Winter 2000	Second stage consultation	Necessity for further analysis agreed
Summer 2001	Third stage consultation	Negotiations on lump sum and curriculum weightings
Autumn 2001	Final stage consultations	Changes to lump sum and curriculum weightings
Winter 2001	Two open forum meetings	Curriculum weightings agreed; devolved funding review report
Spring 2002	New formula implemented	

Table I.
LEA and school funding review process

The formula consultation is purely about the method of distribution of resources, not about the level of resources (LEA finance officer 1 in a written response to head teacher).

The LEA made clear its preference for what it termed “the clean sheet approach”. This would challenge the appropriateness of the existing formula. A needs-based formula approach was signalled by the LEA. It emphasised that it wanted to:

Develop a formula primarily from the point of view of its purpose and in which the method of distribution would be secondary. This would mean creating factors based more on curriculum need, examination results, and socio-economic factors, etc. (First stage consultation document).

The consultation documents seemed to orchestrate the formula review. In some areas, the LEA messages were contradictory. For example, the two quotes above seemed unclear about the purposes with respect to distribution. In the response to the head teacher, the officer states the consultation is about the method of distribution but the first stage consultation letter stated that methods of distribution were secondary. In other areas, the LEA documents quoted from Regulations and Guidance Notes from the Department of Education and Skills to support their position. For example, the LEA needed the formula to be simple and it also needed the formula to recognise social deprivation as required by the Department for Education and Skills. The following extracts were included in the first consultation letter to support these needs:

However, the government wishes to aim for a school funding system which is more transparent and simple in every respect [...] (extract from DfEE, 2001 quoted in the first stage consultation document).

One of the most important of differences between schools in many areas is the extent of social deprivation affecting their pupils. [...] authorities are asked to consider whether their formula does enough in this regard (extract from DfEE, 2001 quoted in the first stage consultation document).

Two officers during interviews confirmed that before the review the LEA did not recognise socio-economic needs of children within its funding formula. There were significant areas of deprivation within the borough and there was a need to reflect this in the funding formula. During interview, one LEA finance officer stated with respect to meeting the additional educational needs of socially deprived children:

It's a case of, if we don't they [the government] will (LEA finance officer 1 during interview).

At the time of the review, the Labour Government was very much concerned with targeting resources to areas with high levels of poverty to steer educational performance (Power and Whitty, 1999; West *et al.* 2000). Clearly, the LEA perceived the need to respond to external pressure from the Department of Education and Skills. In this, respect the Levačić and Ross's (1999) criterion of accountability for policy seemed to be the driving force for the funder decisions.

Service provider: needs or wants?

The responses from the schools highlighted their concerns as service providers. There seemed to be dissatisfaction with several of the criteria identified by Levačić and Ross (1999), although the schools referred to them using different language.

The amounts allocated for education, Levačić and Ross's effectiveness criterion (i.e. relative funding required to achieve educational outcomes) was not being met as the following comments from the schools written responses to the first stage consultation exemplify:

Important as the formula is, though, the main concern we have with funding is the size of the cake not simply *how the cake is shared*. I know you are well aware of the way [LEA's name] funding compares poorly with that provided by other [***] boroughs (written response # 10, chair of governing body of primary school). [Italicised emphasis in the original].

We noted with disappointment that in the current financial year [LEA name] was only one of a small number of councils that failed to pass on the funding earmarked for education (written response No. 13, chair of governing body of a secondary school).

The overall size of the education budget was an issue that the service provider argued for as a need. The information sources used to support this need were government documents that compared this particular LEA to other LEAs and the government's standard spending assessments. This LEA's total education budget was lower than the government set standard spending assessment for education. Indeed, during this period the UK Central Government was increasingly unhappy about its inability to control education funding that was transferred to the LEAs through the revenue support grant but was not used on education by the LEAs (Levačić, 2008). There was tension between central government, local government and schools with respect to school funding. However, the local political commitment by the council with respect to the council tax meant the size of the education budget in this LEA was not likely to change. One finance officer signalled the political rationale underlying the review when during interview he referred very generally to the council's "wants":

Standard Spending Assessments are notional. It does not mean cash; it does not take into account what Council *wants* to do and *we want* to keep the council tax down (LEA finance officer 2) [my emphasis].

It did not suit the local political needs of the LEA to discuss the aggregate education budget. According to the LEA, the formula had to do with the sharing of resources and not the absolute size of the budget. The LEA preferred to concentrate on the distribution of funds, although the schools preferred to discuss the size of the budget. School needs were reduced to school "wants" (Sheaff *et al.*, 2002) by the LEA as it seemed to reject the evidence of the standard spending assessments used by schools to support their need. This seems to demonstrate the relative power the LEA (the funder) had over the formula funding process as the officers' interpreted information in the manner that seemed convenient to them. As funders, the LEA seemed to create its own set of "rules" (Pfeffer and Salancik, 1978, p. 49), choosing not to enter debates about the overall size of the education budget. Formula funding may allow funding bodies to distance themselves from the impact of the formula (Heald and Geaughan, 1994).

There was much disquiet from schools about the structure of weightings for the different age bands. The perception of primary schools was that it did not reflect the relative needs of their sector. Thus, there was a problem with vertical equity as described by Levačić and Ross (1999). Some schools suggested that the existing structure did not incorporate adequate contact time for the primary schools and unfairly gave more preparation time to the secondary schools. For example:

There is a need for a revised formula based on the real costs of delivering the primary curriculum as envisaged by the DfEE and OFSTED [...] If the LEA is genuine about constructing a formula which meets the needs of primary age pupils it needs to acknowledge that the historic pattern of relatively generous levels of non contact time allocated to secondary teachers needs to be replicated in primary schools [...] It is therefore argued that any serious review of the costs of delivering the primary curriculum should not only consider the number of specialist teachers that might be required in primary schools to deliver the Key Stage 2 curriculum, but how the demands made by OFSTED to raise teaching standards are to be met in funding terms (Written response No. 15, a primary school head teacher).

Thus, there was a demand for an increase in primary school weightings which required more sophisticated costing of staff time and per student costs. But, in their arguments, the schools seemed to combine vertical equity, effectiveness and integrity issues to show their dissatisfaction with the information provided by the LEA. The focus on the “real costs” of education also highlights a concern for the formula to provide some signals towards efficient school management (the efficiency criterion). Some schools called for further analysis of the outcomes of education to determine the pupil weightings thereby showing a concern for the effectiveness criterion. For example, one school suggested that the LEA was asking the wrong questions about the weightings and rather needed to focus on asking:

What evidence do we have about the educational outcomes of differing levels of age related funding; and in particular, what evidence there is from outcomes of the relative level of funding primary and secondary schools? (Written response No. 10, a primary school).

It seemed that the desire from schools was for the funding formula to recognise whether educational performance standards were being achieved. However, how this was to be factored into the formula was not readily obvious from their varied comments. In particular, the link between how educational outcomes related to the socio-economic profile of pupils was not clear. Moreover, the indicators to use to reflect this were not obvious. The following comment typifies these issues:

To address all the needs identified by the Social Inclusion agenda may require an alternative factor which takes account of the challenges certain types of pupil pose [...] Historically there has been a call by some for a factor which generates funds for schools based on pupils’ free school meals entitlement. This in itself is a crude measure and time should be taken to consider alternatives which could more accurately measure the needs of deprived pupils within the school setting (written response no. 19, a primary school).

Some schools agreed that funding needed to be attached to pupil attainment before entry to the school but were loath for there to be to additional testing to assess this attainment. Other schools argued against what they labelled “funding for failure” (a term used by head teacher three during interview), that is, against extra funding for schools that did not achieve examination performance targets. These varied comments from the schools, conflated the issues of equity, efficiency, effectiveness and integrity (Levačić and Ross, 1999) about the formula.

The primary and secondary school weighting was a historical issue the LEA officers were aware of and worried about. For example, during interview an officer commented:

The primary schools are unhappy with the secondary schools factors. We are not sure how to crack this issue. In principle, there are issues. Why should a year 7 students get more funding than a year 6 student? (LEA finance officer 1).

They worried about it because it went to the heart of the funding issue, fairness. They wanted the formula to be seen as fair by schools. However, judgements about fairness may depend upon the reasons given to justify the resources allocated (Ahrens and Chapman, 2006). Acceptability of the formula was important to the LEA and the officers searched for credible reasons for the discrepancies between primary and secondary children, especially at the point of entry into secondary schools. At a later stage, the LEA attempted to address this by throwing the issues back to the schools for debate as shown later.

Schools commented on physical and non-physical site issues. The range of comments included that the provider needs of smaller schools were not being catered for and that the age and condition of school buildings for some providers needed to be taken into account. Some schools also wanted incorporated into the formula the particular provider needs of their schools. For example, foundation[5] schools argued they had extra responsibilities towards school governors that needed to be recognised in the formula. The needs of the service provider therefore could not be generalised. There was a requirement for specific provider needs to be recognised. Nevertheless, these needs appeared as demands or wants as anecdotal rather than actual evidence was given to justify the demands (Sheaff *et al.*, 2002).

This section has shown that whilst the Levačić and Ross (1999) criteria are useful for evaluating the development of needs-based funding formulae, the issue of needs is messier than the model suggests. In the next section, the negotiations that underpinned the development of the formula are discussed to draw out the other factors impacting the formula.

Negotiations, power and relationships

The LEA provided all the underpinning information upon which the funding review revolved. For example, they provided tables of calculations to show the effects of various scenarios. All school responses came back to the LEA and the officers could interpret the comments as they saw fit. The LEA circulated all schools' written responses to all the schools. But the LEA did not provide individual responses to queries made by the schools and some comments were left hanging. The funder was very much involved with the provision of information and in a powerful position because of this (Reed, 1996; Collier, 2001). Moreover, the LEA finance officers had the expertise to interpret information. Such accounting knowledge is useful in assessing resource allocations (Angluin and Scapens, 2000) but it was not necessarily available in the schools.

The schools' initial responses led to the LEA re-considering three aspects of the formula in further detail. These were "the curriculum/pupil weighted factor", "the lump sum proposal" to handle school site issues and the "needs led or social deprivation factor". Coincidentally, these items reflected those suggested by Levačić and Ross (1999) as fundamental to a needs based funding formula, a basic allocation per student, and elements for school site needs and supplementary educational enhancement. In terms of the formulaic approach to the formula development, the LEA therefore pursued the Levačić and Ross (1999) calculative methodology.

A closer look at the interactions between the LEA and the schools seem to suggest that it was the requirements of the LEA officers that drove the process rather than the needs of the schools. As Wildavsky (1961) suggested, resource allocation is by its very nature political in terms of whose decisions prevail. Needs-based formula funding as exemplified in this case study does not diminish the political nature of resource allocation. Some issues the schools seemed concerned about, noticeably the issues about the overall size of the education budget, were not investigated further by the LEA. The LEA officers made broad sweeping statements to propel the process along. For example, in an internal report to political leaders they stated:

The responses to the first consultation paper showed a clear agreement that the principles and criteria were acceptable and that the needs-led “clean sheet” approach had general approval (Devolved Funding Review Report).

Based on the responses, there would seem to be a broad agreement to a formula which contained the following elements [...] (Devolved Funding Review Report).

The three aspects the LEA decided warranted further analyses formed the focus of negotiations.

The primary school/secondary school weightings were tackled by the LEA commissioning representatives from the sectors to analyse and cost the teaching requirements in each sector. The groups met separately and were then brought together by the LEA to compare and debate curriculum costing issues. This, it seems, was a deliberate strategy on the part of the LEA to manage an issue it felt was difficult. One officer hinted at this when he commented during interview:

It won't be so difficult if we could get a group of primary and secondary sector heads together. (LEA finance officer 2).

By allowing the schools to cost the curriculum themselves, the structure of the weightings would be more acceptable to them. Acceptability to schools could mean the formula was effective (Levačić and Ross, 1999). Schools involvement would ensure accountability to the schools and to the Department for Education and Skills. The LEA, it seems, strategically asked the schools to cost the curriculum themselves as it offered a solution to a historical problem. However, the representatives of the two sectors met separately and used different approaches.

The approach the primary head teachers took was to identify:

[...] in an ideal world how much it would cost us to deliver the primary curriculum (primary head teacher during interview).

This involved identifying the direct costs of teachers' salaries for teaching time spent in the classroom as well as recognising time spent on preparation and other activities that supported the curriculum. Other costs included the salary cost of the support staff providing pastoral care, and the cost of learning material. A teacher pupil ratio of 1:27 was used to undertake this costing.

The costing approach used by the secondary head teachers differed and was based on historical trends. The actual costs of the largest secondary school were compared to the costs of the smallest school and an average cost calculated. The ratio of teachers to pupils used was 1:22, and whereas the primary schools budgeted for 1.3 teachers per class, the secondary schools used 1.7 teachers per class. Thus, the levels and the

parameters used for key elements in the costing, the average class sizes, the teacher-pupil ratios and teacher preparation times differed. The consequence of these differences was that primary school pupils were costed at £1,000 per year less than secondary school children were.

The primary schools were irate and challenged the activity-led costings of the secondary schools. For example, one comment was:

Why does the secondary model assume 1.7 teachers? Not only are extra teachers needed, secondary schools are also asking for additional allowance for administrative staff and support staff. [...] we fail to understand why secondary schools need more equipment in years 7-11 (written response from a primary school head teacher).

On the other hand, the secondary schools supported the costing of their sector curriculum costs. To them, it recognised the rising delivery costs associated with the secondary curriculum. For example:

We are very much in favour of the model presented [...] Our calculations support the figures set out [...] Although there will be differences between schools, the model set out is a very good way of moving towards a calculation based on the real costs of curriculum delivery (written response from a secondary school head teacher letter).

Although the costing used different bases (ideal for primary schools and historical for secondary schools) none of the comments from schools referred to this. There are problems with both approaches, the ideal leading to perhaps a wish list whilst the historical contains elements of current inefficiencies. Comments from head teachers clearly showed the subjectivity and self-interest involved with using needs-based funding. This also seems to demonstrate the tensions in the identification of needs through expressions of demand (Krohwinkel-Karlsson and Sjögren, 2008). To meet such diverse needs would require some method of standardisation of the costing of the curriculum. Despite this, the LEA officer during interview insisted that the approaches taken by secondary and primary heads were essentially the same. His argument was that:

It is driven by what schools need to deliver the curriculum for the pupils that they have got. Our aim was for simplicity and reducing the complexity and making it more needs led that is driven by the curriculum and by needs of the school and not decided by historical out of date factors patterns (LEA finance officer1).

The LEA, therefore, was very much interested in removing the perception of historical funding, that made the funding appear unfair even though the secondary school calculation was historical. The LEA, it seemed, needed the schools to accept that it was their needs that were being incorporated into the formula. Thus, the appearance of equity was perhaps more important than equity as defined by Levačić and Ross (1999). The LEA, it seems, had its own definition of fairness. In a report it stated:

A second issue which is important to consider is that of fairness [...] Although the formula is applied equally fairly to all schools [...] it is less certain that the result is a fair distribution [...], i.e. that each school gets the funding it needs relative to all the other schools. (Devolved funding review report).

It seems the LEA was successful in getting the schools to accept that the new formula weightings were fairer. Although the schools commented critically on the differing parameters, and the effects on the relative amounts of funding (for example, one school

argued that the pupil weightings needed to be fully funded with additional resources if they were to be meaningful), they accepted the new weightings after two meetings between themselves and the LEA. During these special meetings, the curriculum profiling was discussed and some of the parameters were changed as a result of negotiation between the schools. One finance officer explained:

We revisited all the weightings particularly around years 5 and 6. We've upped the weighting to acknowledge that there is a closer relationship between years 5, 6 and year 7. We also did a bit of tweaking with the younger pupils in year 1. We have also introduced an examination element to the curriculum of year 11 and sixth form as there is a cost for examination fees. So those were the key issues that came through the meetings. We've addressed these through the head teachers group. We widened the group out a bit to include all the current heads of primary schools and secondary school representatives [...] (LEA finance officer 1).

Rather than standardising, the approach to costing the LEA encouraged negotiation between the schools. These negotiations lead to the formula being "tweaked" to gain some acceptability from both sectors. Thus, the relational approach facilitated and enabled the technical changes in the formula. One head teacher, during an interview, explained the leading LEA officer was seen by head teachers to be a "man of integrity" and because of this the review did not turn into a "dog fight". Another primary head teacher stated during an interview:

We were also given very good information from [***]; opinions were sought and acted on. Yet it was a very difficult thing to do because of course, there were gainers and losers. Now, in fact, great credit to [***], because he managed it, so that none of us felt bad about it (head teacher of a primary school during interview).

Despite this assertion, she added that:

It was never fully explained why secondary schools were allowed a ratio of 1:22. (Head teacher of a primary school during interview).

It seems that although the schools received information and explanations from the officers it was the use of more relational methods by the LEA finance officers that led to agreements. The source of power that the LEA officers depended on was relational rather than structural (Pettigrew and McNulty, 1998). Because, LEA Finance officer 1 was viewed positively by the schools as a "man of integrity", the schools accepted the outcomes of the weightings.

The second major area of negotiation related to school site issues. The LEA tackled this with a proposal that each school would be entitled to a lump sum of money depending on the size of the school. The rationale given by the LEA for this factor was the need to recognise those costs that are not pupil-driven (though relating to school size) but which are incurred to allow the day-to-day operations of schools to continue. These costs were the costs of non-teaching functions associated with the role of the head teacher, the secretary, the site supervisor, and the welfare assistant. Some of these costs were fixed irrespective of the size of the school; other costs were semi fixed with costs increasing with the size of the school. The LEA had knowledge of the financial management of all the schools and was able to reflect this in the lump sum proposal. Reed (1996) suggests that owning "esoteric knowledge and skills" provides a source of control and this typifies the LEA position.

The documentary analysis showed that most schools supported this approach to recognising school size although again there was evidence of self-interest being the driving factor for whether the approach was acceptable or not. For example, one head teacher commented:

The proposal for a lump sum factor seems to be a more productive way of supporting small schools like ourselves [...] (Written response from primary school head teacher No. 14).

So long as a school felt the approach maintained or ensured its position, it was acceptable. From the LEA perspective, there was satisfaction as the following statement suggests:

The other big change is in the lump sum. In the past we had a few very small lump sums, minor really. Now we are introducing a very major lump sum which is to cover the cost of management of the school. We are simplifying it all (LEA finance officer 1).

The lump sum change was significant because it simplified the formula and made the formula predictable. Simplicity was a core aim of the funding review, and predictability was a goal that the Department for Education and Skills emphasised. By reducing the number of factors within the formula, therefore, the LEA could demonstrate that it had followed the requirements of the government. In terms of the administrative costs associated with the formula, a single large lump sum would be easier to calculate and maintain. Thus, through the lump sum element the LEA was able to meet its aim for simplicity.

The third area of debates concentrated on how to recognise the supplementary educational needs of children. In this LEA, supplementary educational needs had not previously been recognised in the existing formula. Usually, the factor includes an assessment of the socio-economic background of children, and of the individual learning needs of children (Levačić and Ross, 1999). However, in the case study, the LEA conflated the needs-led/social deprivation factor with the pupil achievement factor defining it in its own way as:

The additional cost of supporting low achieving pupils at point of entry into school (final stage consultation document).

According to Sheaff *et al.* (2002), public service managers have a normative view of user needs. It was the view of the LEA that socio-economic deprivations led to poor educational performance and consequently, in the funding review[6], they linked these together. The LEA view was that social deprivation be recognised on the basis of the proportion of children in each primary school receiving free school meals, and on the proportion of students not achieving a specified standard in the cognitive assessment tests on entry to secondary school.

There were varied responses from the schools. Debates centred on how the factor would be financed, and also the indicator that would be used to trigger recognition of the school's entitlement. The issue here was the integrity (Levačić and Ross, 1999) of the formula; it needed to be based on acceptable indicators of performance and not subject to manipulation. The comments hinted at distrust of the LEA with respect to this issue. Examples of comments were:

We are cautiously in favour of further investigation of this suggestion, although we feel that measures applied in the past have penalised success rather than raise standards in real terms.

We are in favour of pupil attainment levels on entry, and value added data [...] BUT ONLY IF nationally collated and accredited figures are used. We would like to see support for deficiency balanced with some rewards for success (written response secondary school head teacher No. 15).

The primary head teachers are concerned that any money allocated to this new factor should not be cash recycled from other factors. It would be unacceptable to target more funding at socially deprived pupils by taking it away from other pupils, given that all schools are suffering from historic under funding (written primary head teacher No. 16).

Another view was that the factor for additional educational needs was controversial and would lead to the rewarding of deprived status rather than the rewarding of the raising of standards. There were conflicts between using objective measures and achieving equity. For example:

I am totally opposed to this factor forming part of the new formula. It is extremely difficult to find an objective way of measuring achievement [...] Apart from the difficulty of gaining an objective measure, the educational reasons for considering this factor are spurious. After all if children are doing well at a particular stage in their school career this will in no small part be due to the resources that have been concentrated on them up to that point. If a school receives less funding because schools are doing well, how are they likely to maintain this (primary school head teacher No. 10).

There was unease within the primary schools about the use of free school meals as an indicator of social deprivation. These schools argued that the entitlement and the actual uptake of free school meals differed, so some schools would lose out. The cultural orientation of most parents was such that although entitled to free school meals, they did not actually take it. This meant that the indicator suggested did not meet the integrity indicator criterion.

The LEA argued that the social deprivation factor was a requirement of the Department for Education and Skills. It needed to demonstrate to the Department for Education and Skills that the requirement for a deprivation factor had been met. Accountability to the Department of Education and Skills again shows up as driving the decisions of the LEA. During the interview with the leading LEA finance officer, he was quite adamant about the additional educational needs factor:

We are funding schools where the children coming into the schools would need extra resourcing because of low achievement. So we are not rewarding schools for not achieving but we are putting money in up front to recognise the low achievement at the beginning. Social deprivation factor is required by the Department for Education and Skills. So we had to meet that requirement.

The LEA was able to rebut most of the schools arguments by insisting that the free school meals and the cognitive assessment tests were the most objective measures of social needs. The officers argued that other boroughs were using these measures. One head teacher during interview concluded that they had “no choice but to accept the factor” implying a reluctant acceptance. The consensus the LEA achieved was therefore forced rather than negotiated. The schools had been allowed to voice their opinions but the LEA’s determination to use the free school meals indicator was in the final analysis imposed upon them. As Heald and Geaughan (1994) suggest the evaluation of the impacts of formula funding requires recognition that that these models are “an instrument in the hands of potentially diverse orchestrators”. The LEA

had considerably more power than the schools in deciding on the funding formula. Its power was both structural and relational (Astley and Sachdeva, 1984; Pettigrew and McNulty, 1998). This power was also enabling (Collier, 2001) and gave the LEA “power to do” rather than “power over”.

During an interview, the LEA officer leading the review expressed his satisfaction about the level of involvement of the schools. He explained this as the success of the review process:

The process was successful and yes I am satisfied because at the end of the day we did well with comments from schools. A number of comments from schools have been incorporated. Schools did not have concerns about the level of consultation. They may not feel that the end result was what they would have liked, but, they cannot say that they were not consulted (LEA planning and resources officer).

Developing the funding formula necessitated the engagement of schools as required by the School Standards and Framework Act 1998. The LEA was accountable to the Department of Education and Skills for this. Thus, as the funder, the LEA needed to have the schools involvement in the process. Also important was the LEA need for consensus from all the schools, in this way the formula would not be seen as being imposed on schools. This was also important because the LEA’s tight financial constraints meant the likelihood of additional funding would not be forthcoming. As the officer continued during the interview:

The extent to which schools can change things is quite limited [...] But it is an opportunity to comment on the plans [...] The decisions that we make are constrained by the budget position. We are doing the best we can with the resources we’ve got [...] (LEA planning and resources officer).

In a comment in the report to political leaders at council, the LEA reiterated this point by stating:

There are no direct financial implications for the council arising from this report [...] None of the proposed changes are relatively significant in cash terms in relation to their impact on the budget shares of an individual school (Devolved Funding Review Report).

It seemed a hidden aim for the review therefore was for schools to understand and accept the consequences of choices underlying the funding formula. Acceptance arguably need not be consensual but may be forced. This funder need for acceptance of the formula does not appear in the Levačić and Ross (1999) criteria and yet from the LEA perspective, it was an important criterion for evaluating the funding formula. Although formula funding takes resource allocation into the technical domain, it does not circumvent the political nature of resource allocation (Smith, 2003).

To summarise, although the negotiation processes underpinning the formula review aimed at facilitating the development of a needs – based funding formula, it was the needs of the funder that guided the process rather than the needs of the service provider. Although the LEA officers encouraged schools to deliberate and comment on the contents of the formula, they also directed schools towards their own objectives for funding. These objectives included meeting the LEA accountability requirements to the Department of Education and Skills, in terms of simplicity, measurability, predictability of the formula. Most crucially, there was also a need to support the additional educational needs of socially deprived children. Additionally, the LEA

wanted the formula to be acceptable to schools. The needs of the service providers guided the debates, and helped to achieve the transparency that would allow this acceptance. In this way, the LEA managed service provider expectations in the light of the financial constraints it faced. The formula funding review process became a discourse about resources.

Discussion and conclusions

The purpose of this paper was to examine whose needs are privileged in the development of needs based funding formulae. The Levačić and Ross (1999) criteria for evaluating needs-based formula funding was offered as a starting point for this examination. This framework was extended by analysing needs into “funder needs” and “service provider needs” and considering the non-economic factors such as relationships and power that may influence needs based formula funding. The analysis of the case study shows that five criteria suggested by Levačić and Ross (effectiveness, efficiency, equity, integrity and accountability/transparency) featured in varying degrees within the process of developing the formula. Although the Levačić and Ross framework discusses these criteria separately, this research finds some of them to be closely integrated and not easily separable.

Some of the definitions offered by Levačić and Ross did not seem to match the way the service providers and funders used them. For example, the criterion of administrative costs as defined by Levačić and Ross did not seem to have had any impact in the case study. Other criteria seemed to be accorded different meanings and differing levels of importance by service providers and the funder.

The service providers were particularly interested in the “effectiveness” criterion. The “size of the cake” reflected a core need and mattered more to them than the portion of the cake that formed the focus of the formula funding review. The LEA, however, downplayed this criterion mainly because of the budget situation which it had to manage. Although it could have used the under funding of the education budget to argue for extra funding from council, it did not and rather accepted that the council decided the aggregate levels. The focus of formula funding was on sharing and distribution of resources rather than on the aggregate amounts (Heald and Geughan, 1994). But this also meant it allowed issues of effectiveness to be underplayed and seen as “wants” rather than actual service provider needs. In terms of effectiveness, it seems the pressures on the funder influenced the extent which service provider needs were incorporated into the formula. The council had organisational power (Collier, 2001) which impacted upon the responses the LEA could make to meet the effectiveness criterion.

Similarly, the efficiency criterion did not feature much from the funder’s perspective. Apart from suggesting that one objective of the review was that the formula should facilitate school self-management, the efficiency criterion overtly was not prioritised by the LEA. From the schools perspective, efficiency conflated with equity especially in terms of the primary/secondary curriculum weightings and site issues. There appeared to be some general needs, for example the need to include teachers’ salaries into the formula. But there were also specific provider needs or wants, such as the recognition of different preparation time, different pupil teacher ratios and differing school characteristics. Efficiency and equity may be dependent on the situational and contextual factors of the different providers, making their recognition within the formula problematic.

The LEA was primarily concerned about the need for the formula to be seen as fair. This relates to the accountability and transparency criterion which Levačić and Ross (1999) combine but which in this case may warrant separation. Transparency related to the need for acceptability of the process and of the distribution bases being used and thereby suggests the Heald and Geughan (1994) argument that formula funding methods allow a focus on distribution rather than on outcomes. Transparency was important especially with regard to the perception of fairness (Angluin and Scapens, 2000). Moreover, it also illuminates unfairness as happened with the curriculum weightings. Transparency was prioritized by the LEA so it sought to include schools in negotiations. By involving the schools with the detailed calculations, the schools were able to understand the constraints of funding. Although the head teachers did not agree with all the decisions, the apparent transparency of debates ultimately led to user acceptance. The review was undertaken in a collaborative manner, with issues openly discussed. An enabling relationship was established by the LEA that allowed the needs of the funders to prevail.

Multiple accountabilities permeated the formula funding review, and as with the other Levačić and Ross criteria, were more complex than implied by the model. From the LEA perspective, it was the accountability to the Department for Education and Skills that seemed to drive the funding review. The LEA had to consider the legal requirements contained in the Fair Funding regulations. Part of this included accountability to the Department for Education and Skills for the involvement of schools in the process. It was also necessary for the LEA to meet requirements of the council. These accountabilities to other funders impacted on the accountability to service providers, positively as well as negatively. The LEA was compelled to involve schools in debates; this was an important and positive way of being accountable to them. However, some debates were kept closed because of the LEA organisational accountability to the council. As Smith (2003) suggests, there may be tension between efficiency, equity and accountability in formula funding.

The service providers were interested in accountability between themselves. This was obvious from the concerns for their individual needs and their sector needs (primary vs secondary). Their position was weakened by the use of subjective identification of needs. They tended to argue for “wants” or a wish list of demands rather than “needs” (Sheaff *et al.*, 2002). According to Heald and Geaughan (1994) recipients hold considerable political lobbying power in formula funding situations. However, by not offering a united front the schools in this case study were reduced to accepting the LEA arguments about the objectivity and fairness of the process. The question that arises is whether there can be generic needs and whether all needs are by their nature contextual. The Levačić and Ross (1999) model implies more generalizability of needs than perhaps exists as shown in this case study.

Within the development of the formula, the indicators used to incorporate the supplementary educational needs were questioned by the schools suggesting that the integrity criterion, arguably, was not achieved. But integrity was seen in the behaviour of the LEA officer leading the review. This relational integrity then made the indicators acceptable to schools. Levačić and Ross (1999) do not recognise the importance of relationships and how these may impact on needs based funding formulae. Their focus seemed to be on the statistical and calculative elements of funding formulae. This study shows that relational factors can be as important as the calculative elements.

The relational aspects signal the non-economic rationales that underlie formula funding. A critical look at the role of the LEA may inform us of some these rationales and may illustrate the power sources drawn upon by the funder in the development of funding formulae. This also signals the political nature of needs-based formula funding and despite Mayston's (1998) suggestion that it may best handle equity and fairness.

The LEA acted as information managers at the "centre" of the decentralised units of schools, conducting the participation of the schools. Information came from the LEA, to the LEA and was dispersed through the LEA. LEA interpretation, collation and direction of information facilitated the creation of the formula. From this position, the power source of the LEA was information management. The schools were dependent on the LEA for financial and information resources and although some schools hinted that they did not trust the numbers the LEA produced there still was overall acceptance of LEA information by most schools (Pfeffer and Salancik, 1978; Morgan, 2006). "Power over" information gave the LEA "power to" manage the review (Collier, 2001). The officers made the review an enabling process rather than a process of conflict (Collier, 2001). Although schools were encouraged to contribute to the debates the process was more "top-down" rather than "bottom – up", indicative of the power of the LEA. Formula funding continues to allow the funding body to steer service providers although the steer may be more indirect.

Part of the reason for this could be the problematic nature of the concept of needs and consequently the problematic nature of needs-based formula funding. Krohwinkel-Karlsson and Sjögren (2008) point to three meanings of need; basic needs, situation-specific needs and the need for intervention. Arguably, whilst the LEA may have been assessing the basic needs of schools, schools were more concerned about their situation specific needs (i.e. their wants) and/or the need for intervention in order to improve their performance. Needs-based formula funding becomes subject to political factors because of these constraints on the meaning of needs.

The schools were able to argue for their "needs" using the language of finance and, paradoxically, appeared to be satisfied that their needs were recognized despite the significant amount of power wielded by the LEA. Edwards *et al.* (1996) in their study suggested that in the early years of the Local Management of Schools, schools and LEAs struggled to attribute costs to their activities and consequently historical budgets were reproduced. This study, however, showed the head teachers at schools actively attempting to assess their needs financially, and using the language of finance. Formula funding and the debates that surround the development of formulae may be useful in improving the financial literacy of users and through this allow for a more realistic assessment of what is fair. Moreover, to be made aware of "wants" (Sheaff *et al.*, 2002) is important as it signals to funders the types of activities that may require financing in future.

Both the schools and the LEAs tried to use the needs-based approach to remove the historical entitlements. One head teacher during interview highlighted that there were gainers and losers, thereby suggesting that the outcome of the review was not the maintenance of historical resource allocation patterns. This assessment of the outcome of the review is questionable, however, since the impacts were minimal. With schools having ongoing commitments, it is likely that historical patterns may have continued and only a modicum of change achieved. Whittington (2000) in his review of the Higher Education Funding Council for England (HEFCE) formula found a similar result.

Although the intention was to remove historical funding patterns, historical differentials were preserved. Unless needs-based funding formulas are completely zero-based, they risk maintaining elements of historical entitlements.

As with all research, there are limitations which set the boundaries of the research. The focus of this study has been on the processes involved in developing a needs-based funding formula. Thus, the research has not focused on studying in detail the outcomes of the review. An analysis of numerical outcomes could have provided a different insight into the extent to which the needs of schools were impacted upon. Furthermore, it may have provided an alternative way of looking at the distinction between service provider needs and wants. An additional limitation is that only primary school head teachers were interviewed. The views of the secondary school teachers have been inferred from documentary analysis. Not interviewing the secondary school head teachers meant not being able to probe fully their views about a crucial aspect of the formula. However, all the documents pertaining to school responses were carefully analysed and an understanding of the secondary school views was ascertained by this process.

Only one LEA was analysed which means the findings may not be generalisable. Although LEAs all operate within the same regulatory framework, there are likely to be different contextual factors impacting on their funding decisions. Although data for this research was collected some years ago the methodology used for funding school education in the UK continues to be based on formula funding. Thus, the lessons from this case study remain pertinent. Moreover, the central issue of how to finance service provider needs remains one that all governments continue to grapple with as they attempt to make all public services more responsive to consumers. This paper has focussed on the funding of education. Further work is needed on other public services to consider how issues of user needs are managed.

Despite these limitations, the paper has contributed to the literature by providing insights into how service provider needs, funder needs and relationships between funders and service providers can influence needs based formula funding. It is through providing evidence such as contained in this case study that policy makers may assess the robustness and legitimacy of methods they employ to incorporate needs into funding formulae. Providing academic insights through research continues to be an important way to support the development of public policy. There are very large sums of public funding involved in formula funding; however the volume of research remains "pitifully small, particularly in the local government sector" (Smith, 2003, p. 317).

There are several implications of this study for future research and policy. First, this research has highlighted the problems associated with the central idea of service provider needs and how these may be conflated with "service provider wants and demands". An area of possible future research is for a comparison of funding in schools with that of funding processes used in other educational organisations and other public sector organisations to consider how the needs and wants debates are managed.

Second, funders also have needs especially with respect to accountability for policy requirements. In developing funding formulae, funders are faced with assessing service provider needs, managing service provider demands and meeting their own needs. All funding processes are underpinned by the power relationships between the users and the funders that influence the allocation processes. The formula funding approach is no different in this respect to other methods. The benefits of the formula funding method are to be found in the debates that its formulation depends upon.

Considering the process as a technical process reduces the value of the method. The problem remains that resources are finite and therefore by its nature resource allocation may always remain competitive and political.

Notes

1. Although invited, secondary school head teachers declined to be interviewed.
2. In the UK, council tax is a local charge set and collected by the local authority. It is based on the value of property.
3. OFSTED that carries out inspection and regulatory visits of schools and local education authorities.
4. The standard spending assessment is a notional cost unit of local services. It is calculated by the central government based on a statistical analysis of the demographic, physical, economic and social characteristics of the locality. It determines the amount of revenue support grant provided by the central government to local authorities. It does not represent actual expenditures and any differences between them (actual and notional) theoretically should be financed by increasing the council tax.
5. Foundation schools are schools where the governing body employs the schools staff and have primary responsibility for admission arrangements. The schools land and buildings are owned by the governing body or by a charitable foundation.
6. In 2003, the Department of Education and Skills reviewed the revised funding formula. It required the LEA to separate “needs-led” from social deprivation. In 2003/2004, the LEA allocated £522,675 to the “needs-led” distributing it to primary schools on the basis of free school meals and to secondary schools on the basis of cognitive assessment test results on entry to secondary school. A smaller amount, £100,000, was allocated in recognition of social deprivation on the basis of the percentage of pupils on the roll at each school who lived in the seven most deprived wards of the local area.

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