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**Accounting for needs? Formula funding in the UK School
Sector**

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Accounting for needs? Formula funding in the UK School 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.

Methodology: 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 (1999) 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 users and the providers of funds impact on the extent to which service provider needs are incorporated into the funding formula. The main benefit of a funding formula lies in the debates that surround its creation. This allows the formula to be accepted though it may not necessarily fund service provider needs.

Research limitations: This work considered only the funding of schools. Further work is needed to investigate formula funding for other public services.

Research type: Case study

Practical Implications: Debates between funders and service providers should be encouraged by policy makers to ensure that outcomes of resource allocation are acceptable to users.

Keywords: Needs based; formula funding; public sector; resource allocation; service provider needs; service provider wants; education funding

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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 and to incorporate them 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 Geaughan, 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 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, Ezzamel, Robson and Taylor 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 funding providers (Heald and Geaughan 1994; Edwards, Ezzamel, Robson and Taylor, 1995, 1996, 1997). The role of government as the main provider of funding has been studied (for example West, Pennell and West, 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 is a lack of studies that have explored how the needs of both the service provider and the funder influence the development of funding formulae. 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 outcomes of 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 (for example, Whittington, 1994; Whittington, 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 is unique in concentrating solely on school education. Additionally, Levačić and Ross (1999) also provide six criteria to evaluate needs based formula funding.

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 service provider. Thus the paper empirically investigates and extends the evaluatory framework developed by Levačić and Ross (1999) to examine needs-based formula funding approach. Specifically, the paper analyses whether the needs that drive needs based funding formulae reflect those of the funder or those of the service provider. A case study about the creation of a funding formula in a Local Education Authority (LEA) in the UK schools sector is studied to analyse funder and service provider needs. The local education authority 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, Laughlin, Shern and Dandy, 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, Pennell and West 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, and tended to conflate with “user demands / wants”. 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 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. This case study suggests that the main benefits of the formula funding method stem from the discourse between funders and service providers that surrounds its development.

The extant literature of formula funding has signalled some of these 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 (for example, Levačić, 1993, Smith, 2003) or from a conceptual approach (for example; Mayston 1998; Levacic and Ross, 1999; Levačić, 2008). Such work has tended to infer the implications of formula funding from secondary data. For example, Smith (2003) 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 OECD 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.

Furthermore the language of “needs” pervades much of the public sector as governments attempt to individualise, customise and make public services responsive (Flynn, 2007; Pollitt, Talbot, Caulfield and Smullen, 2004). But financial resources are always limited and meeting the needs of service providers may require additional funds to finance specific needs, which may not be immediately available. Thus, the acceptance by 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 section after that 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. 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 Geaughan, 1994; Mayston, 1998). In the political method funding is distributed according political discretion and tends to be directed towards the needs of the median voter arguably because politicians seek to gain the middle ground which enhances 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 employs activity based costing methods 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. Firstly, there is a need for the specification of the target level of service outcomes. Secondly, there is a need for the identification of the minimum expenditure level required to achieve the target level of service outcome. Thirdly, there is the need to reconcile the target expenditure levels and outcomes with the total available resources. Its use 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 Geaughan (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 Geaughan 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 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, page 26).

Needs-based formula funding as defined by Levačić and Ross relates specifically to the

formula funding of schools and in this respect is unique. Whilst most studies discussed above refer to formula funding, none use the term “needs-based”. However, 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 argued 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) offer six main criteria for evaluating needs-based funding. These are:

- *Effectiveness*: the amounts allocated per student should reflect the cost of providing the resources required for the education of children.
- *Efficiency*: the provision of signals within the formula to encourage efficient school management.
- *Equity*: the extent to which funding formula reflects cost differentials due to supplementary education needs, school site differences, and regional differences.
- *Integrity*: the extent to which the formula is based on indicators and information that is not easily manipulable.
- *Administrative costs*: the formula should be easy to calculate and maintain.
- *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 both a service provider as well as from a funder perspective and that such an evaluation may lead to different insights. Whilst the service provider may be concerned about translating the service needs of users 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.

Funders and service providers may be interested in meeting the effectiveness criterion, but may have different ways of assessing it. Both the service provider and the funder could have different views about accountability, transparency and equity and could be searching for different sorts of accountability, transparency and equity. For example, Heald and Geaghan (1994) discuss needs of funders and argue that as the orchestrators of the formula, they may be interested in broad policy objectives or may have more interventionists concerns. Ultimately in the public sector, central government is responsible for the use of resources collected as 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. 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 there may be 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 notion of "needs" requires further analyses 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, Pickard and Smith (2002) 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" (page 436). 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, Ezzamel, Robson and Taylor in their work on the creation of school funding formulae by Local Education Authorities in the immediate aftermath of the UK Education Reform Act 1988 (Edwards et al, 1995, 1996, 1997, and 2005). 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 seminary 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, page 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 Collins, 2001). Power is both structural (through the possession of power sources, position, expertise, information) and relational (achieved through interpersonal 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, Collins (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". Collins (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. 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:

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 (Department for Education and Employment 1998).

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%) on the number of pupils enrolled, weighted according to their age as was the case under the Local Management of Schools. The remaining 25 % could be allocated to reflect the circumstances or the “needs” of the schools. In effect, the government had set up the “needs of schools” 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” (Department for Education and Employment 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 local education authority 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 local education authority 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 local education authority in Southern England. Three primary school head teachers were also interviewed. Although invited the secondary school head teachers declined to be interviewed. 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 was 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 emails sent from schools in response to the LEA consultations were also reviewed. These provided some evidence of the thinking of schools. A total of thirty five letters from schools were reviewed. Non participant observation was undertaken of two meetings between head teachers and LEA officers. Three public meetings between 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 was 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 analyses 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 local education authority, the LEA, is situated in Southern England. It is a relatively large urban LEA responsible for the education of around 40000 school children. There are four times more primary schools in the borough than secondary schools. The primary schools population comprised 22000 pupils, whilst the secondary school population was 16000 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 tax¹ down which affected all the budgeting decisions the Council took. The OFSTED² Inspection Report showed that the LEA had been consistently funding education below the government specified Standard Spending Assessment³ 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 1 summarises these stages.

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

¹ In the UK, council tax is a local charge set and collected by the local authority. It is based on the value of property.

² OFSTED is the Office for Standards in Education that carries out inspection and regulatory visits of schools and local education authorities

³ 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.

- 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;
- 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 Geaghan (1994), page 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:

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 Department for Education and Employment 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 Department for Education and Employment 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 [meaning 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, Pennell and West, 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: Conflating of Needs and Wants

The responses from the schools highlighted the service provider concerns. 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. Moreover, the criteria seemed to become conflated as the schools argued for their resource needs.

The amounts allocated for education, Levacic and Ross's effectiveness criterion 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). [Underlining 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 #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. The 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 this political rationale underlying the review when during interview he referred 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).

It did not suit the local political needs of the LEA to discuss the aggregate education budget. 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 wanted to discuss the size of the budget. School wants were therefore conflated with school needs with respect to the effectiveness of the formula. Formula funding may allow funding bodies to distance themselves from the impact of the formula (Heald and Geaghan, 1994). The funders, the LEA, chose not to enter debates about effectiveness as defined by Levačić and Ross (1999).

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 #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 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 integrity 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 #10, a primary school)

It seemed that desire from schools was for the funding formula to recognise whether educational performance standards were being achieved. But how this was to be factored into the formula was not readily obvious from their varied comments. In particular, 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:

However 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 # 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 a head teacher 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 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 (Angluin and Scapens, 2000). 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 needs of smaller schools were not being catered for and that the age and condition of school buildings needed to be taken into account. Some schools also wanted

incorporated into the formula the particular needs of their schools. For example, foundation⁴ 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 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; Collins 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 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

⁴ 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.

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 primary group met separately from the secondary group. This, it seems, was a deliberate strategy to handle a difficult issue as one officer 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.

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 £1000 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 #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. This, usually, 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 they linked these together in their review. 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# 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 #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. 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 #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 Gaughan (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 (Collins, 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 users 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. One criterion, administrative costs, did not seem to have had any impact in the case study and was not mentioned either by schools or the LEA. However, the other criteria were viewed differently between service providers and the funder. Despite this, 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.

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 (Collins, 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 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 user 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 users, making their recognition within the formula problematic.

The LEA was 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.

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 necessary for the LEA also 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 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 Geughan (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 (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. 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. “Power over” information gave the LEA “power to” manage the review (Collins, 2001). The officers made the review an enabling process rather than a process of conflict (Collins, 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 benefit of the method remains in the discourses that its development encourages.

The schools were able to argue for their “wants” 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 “user wants” 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 the interviews 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, page 317).

There are several implications of this study for future research and policy. Firstly 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.

Secondly, 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.

REFERENCES

- Ahrens, T. & Chapman, C. (2006) Doing Qualitative Field Research in Management Accounting: Positioning Data to Contribute to Theory. *Accounting, Organizations and Society*, **31 (8)**, pp 819-841.
- Angulin, D. & Scapens, R. (2000) Transparency, Accounting Knowledge and Perceived Fairness in UK Universities' Resource Allocation: Results from A survey of Accounting and Finance. *British Accounting Review*, **32(1)**, pp 1-42.
- Astley, G. W. & Sachdeva, P. (1984) Structural Sources of Intraorganizational Power: A Theoretical Synthesis. *Academy of Management Review*, **9 (1)**, pp 104 -113.
- Berry, A. & Otley, D. (2004) Cased Based Research in Accounting. IN HUMPHREY, C. & LEE, B. (Eds.) *The Real Life Guide to Accounting Research: A Behind the Scenes View of Using Qualitative Research Methods*. Oxford, Elsevier.
- Broadbent, J., Laughlin, R., Shern, D. & Dandy, N. (1993) Implementing Local Management of Schools: A Theoretical and Empirical Analysis. *Research Papers in Education Policy and Practice*, **8 (2)**, pp149-176.
- Collier, P. M. (2001) The Power of Accounting: A Field Study of Local Financial Management in a Police Force. *Management Accounting Research*, **12**, pp 465 - 486.
- Daft, R. L. (1983) Learning the Craft of Organisational Research. *Academy of Management Review*, **8 (4)**, pp 539-546.
- Department for Education and Employment (1998) Fair Funding: Improving Delegation to Schools. Consultation Paper. DfEE.

- Department for Education and Employment (2001) Statutory Instrument, No 475 the Financing of Maintained Schools (England) Regulations 2001. HMSO.
- Edwards, P., Ezzamel, M. & Robson, K. (2005) Budgetary Reforms: Survival Strategies and the Structuration of Organisational Fields in Education. *Accounting, Auditing and Accountability Journal*, **18 (6)**, pp 733-755.
- Edwards, P., Ezzamel, M., Robson, K. & Taylor, M. (1995) Budgeting and Organisational Change. *Financial accountability and management*, **11 (4)**, pp 297-315.
- Edwards, P., Ezzamel, M., Robson, K. & Taylor, M. (1996) Comprehensive and Incremental Budgeting in Education: The Construction and Management of Formula Funding in Three English Local Education Authorities. *Accounting, Auditing and Accountability Journal*, **9(4)** pp 4-37.
- Edwards, P., Ezzamel, M., Robson, K. & Taylor, M. (1997) *The Local Management of Schools Initiative: The Implementation of Formula Funding in Three English LEAs*, London, CIMA.
- Fligstein, N. (1998) The Politics of Quantification. *Accounting, Organizations and Society*, **23 (3)**, 325-331.
- Flynn, N. (2007) *Public Sector Management*, London, Sage Publications.
- Hannon, V. (1999) On the Receiving End: New Labour and the LEAs. *Cambridge Journal of Education*, **29 (2)**, pp 207-217.
- Heald, D. & Geaghan, N. (1994) Formula Funding of UK Higher Education: Rationales, Design and Probable Consequences. *Financial Accountability and Management*, **10(4)**, pp 267-289.
- Hood, C. (1991) A Public Management for All Seasons. *Public Administration*, **69**, pp 3-19.
- Hood, C. (1995) The 'New Public Management' in the 1980s: Variations on a Theme. *Accounting, Organizations and Society*, **20**, pp 93-109.
- Krohwinkel-Karlsson, A. & Sjögren, E. (2008) Identifying Need through Expressions of Demand: Deciding on Public Financial Intervention within the Fields of Healthcare and Development Aid. *Public Management Review*, **10 (2)**, pp 197-220.
- Levačić, R. (1992) An Analysis of Differences between Historic and Formula School Budgets: Evidence from LEA LMS Submission and from Detailed Study of Two LEAs. *Oxford Review of Education*, **18(1)**, pp 75-100.

- Levačić, R. (1993) Assessing the Impact of Formula Funding on Schools. *Oxford Review Of Education*, **19(4)**, pp 435-457.
- Levačić, R. & Ross, K. N. (1999) Principles for Designing Needs-Based School Funding Formulae. IN ROSS, K. N. & LEVACIC, R. (Eds.) *Needs-Based Resource Allocation in Education Via Formula Funding of Schools*. UNESCO, International Institute for Educational; Planning.
- Levačić, R. (2008) Financing Schools: Evolving Patterns of Autonomy and Control. *Educational Management Administration and Leadership*, **36**, pp221-234.
- Mayston, D. J. (1998) Devolved Budgeting, Formula Funding and Equity. *Management Accounting Research*, **9**, pp 37-54.
- Morgan, G. (2006) *Images of Organisations*, Thousand Oaks, Sage Publications.
- Pettigrew, A. & McNulty, T. (1998) Sources and Uses of Power in the Boardroom. *European Journal of Work and Organisational Psychology*, **7 (2)**, 197 -214.
- Pollitt, C., Talbot, C., Caulfield, J. & Smullen, A. (2004) *Agencies: How Governments Do Things Through Semi-Autonomous Organisations*, Basingstoke, Hampshire, Palgrave Macmillan.
- Power, S. & Whitty, G. (1999) New Labour's Educational Policy: First, Second or Third Way. *Journal of Education Policy*, **14 (5)**, pp 535-546.
- Reed, M. (1996) Expert Power and Control in Late Modernity: An Empirical Review and Theoretical Synthesis. *Organization Studies*, **17(4)** pp 573-597.
- Richard, S. (1994) Making Sense of Needs Assessment. *Research, Policy and Planning*, **xii (1)**, pp 5-9.
- Rose, G. C. (2007) The Role of Principal Empowerment within a Site-Based Management Environment: Empirical Testing of a Structural Model. *Journal of Educational Change*, **8 (3)**, pp207-233.
- Ross, K. N. & Levačić, R. (Eds.) (1999) *Needs-Based Resource Allocation in Education Via Formula Funding of Schools*, UNESCO Publishing, International Institute for Educational Planning.
- Salancik, G. & Pfeffer, J. (1974) The Bases and Use of Power in Organisational Decision Making: The Case of a University. *Administrative Science Quarterly*, **19 (4)**, pp 453- 473.
- Scapens, R. (2004) Doing Case Study Research. IN HUMPHREY, C. & LEE, B. (Eds.) *The Real Life Guide to Accounting Research: A Behind the Scenes View of Using Qualitative Research Methods*. Oxford, Elsevier.

- Sheaff, R., Pickard, S. & Smith, K. (2002) Public Service Responsiveness to Users' Demands and Needs: Theory, Practice and Primary Healthcare in England. *Public Administration*, **80 (3)**, pp 435-452.
- Simkins, T. (2000) Educational Reform and Managerialism: Comparing the Experience of Schools and Colleges. *Journal of Educational Policy*, **15 (3)**, pp 317-332.
- Smith, P. C. (2003) Formula Funding of Public Services: An Economic Analysis. *Oxford Review of Economic Policy*, **19(2)**, pp 301-322.
- Talib, A. (2001) Formula Based Allocation of Funds: The Case of Higher Education Research Funding. *Public Money and Management*, January -March.
- Thurmaier, K. (1992) Budgetary Decision-making in Central Budget Bureaus: An Experiment. *Journal of Public Administration Research and Theory*, **2 (4)**, pp 463-487.
- Thurmaier, K. (1995) Decisive Decision Making in the Executive Budget Process: Analysing the Political and Economic Propensities of Central Budget Bureau Analysts. *Public Administration Review*, **55 (5)**, pp 448-460.
- West, A., Pennell, H. & West, R. (2000) New Labour and School-Based Education in England: Changing the System of Funding. *British Educational Research Journal*, **26 (4)**, pp523-536.
- Whittington, G. (1994) On the Allocation of Resources within Universities. *Financial Accountability and Management*, **10(4)**, pp 305-22.
- Whittington, G. (2000) Unto Everyone That Hath Been Given: The Allocation of Resources between Subject Areas under the HEFCE Formula. *Financial Accountability and Management*, **16 (3)**, pp 251-264.
- Wildavsky, A. (1961) The Political Implications of Budgetary Reform. *Public Administration Review*, **21(4)**, pp 183-190.
- Wildavsky, A. (1992) Political Implications of Budget Reforms: A Retrospective. *Public Administration Review*, **52(6)**, pp 594-599.

TABLES

Table 1: LEA and School Funding Review Process

| 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 | 2 open forum meetings | Curriculum weightings agreed ; Devolved Funding Review Report |
| Spring 2002 | New formula implemented | |