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Spatial Variations of Financial Devolution in Primary Schools

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Abstract : After the UK Education Reform Act of 1988, schools were given considerable independence to manage their own budgets while the powers of the local education authorities(LEAs) were diminished. This process of devolution, known as local management of schools(LMS), gave schools enhanced powers to raise their own budgets. One consequence of this process of devolution has been geographical variations in the ability to raise revenue. This paper explores the financial consequences of devolution among primary schools in Southampton, UK, relating inequalities in revenues to variation in the socioeconomic composition of the school catchment areas. The paper concludes with a discussion of the implications of the results for understanding the changing welfare state.

Key words : devolution, welfare state, LMS, independent fund

요약 : 영국과 같은 서구 복지국가들은 최근 공공복지분야에서 많은 변화를 경험하고 있다. 특히 '신관리주의'에 근거한 '자치위임(devolution)'은 변화하는 복지국가의 중요한 특징 중의 하나이다. 영국에서 자치위임은 교육분야에서 가장 잘 진행되고 있다. 1988년의 교육법 개정 이후 영국의 초등학교들은 이전에 가지지 못했던 자치권을 지역관할교육청(LEA)으로 부터 위임받았다. 특히 LEA로 부터의 학교재정에 관한 자치위임은 매우 중요하게 인식되고 있다. 지리적인 관점에서 이와 같은 공공복지분야에서의 변화들이 공간적으로 불균등하게 진행되고 있다는 점을 인식하는 것은 매우 중요하며 '자치위임'의 공간적 특성도 예외는 아니다. 본 연구를 통하여 영국 남부 사우스햄톤시의 초등학교의 자치위임은 지역적으로 매우 불균등하게 진행되고 있다는 것을 알 수 있으며 특히 이러한 불균등한 진행은 지역의 사회경제적 특성에 의해 크게 영향받고 있는 것으로 나타났다.

주요어 : 자치위임, 복지국가, 독립기금

1. Introduction

1) Purpose of the study

Devolution involves service providers, as independent units, having more power to manage their own budgets. This approach aims to demolish the large hierarchical structure that used to dominate welfare organizations and is a distinctive feature of the changing welfare state (Pinch, 1997). Jessop has used the notion of 'hollowing-out'[1] (Walsh, 1995) to describe the reduction in the powers of the nation-state through transference to bodies at other levels. This power may be ceded upwards to supranational bodies, across to cross-national alliances of local states, or down to local levels of government. Devolution is based on the 'New Wave' management theory which stresses the advantages of a leaner, flatter ('coat hanger') management structure[2] (Walsh, 1995) and has been widespread in Britain, New Zealand, Australia and the Netherlands.

One of the best examples of devolution in the UK has been in education with major changes to the extent in which schools control their own budgets, known as local management of schools (LMS). Devolved finance involves giving managers increased control over the budgets for which they

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are responsible, frequently combined with explicit targets either at the individual or the organizational level or both. At its simplest, devolution can take the form of limited cost center management, with managers being given more freedom in the way that they control their budgets.

The numerous features of a changing welfare state, including investment and technical change, intensification, flexibilization, contracting-out, internal markets, commercialization and corporatization, devolution, decentralization, have been analyzed from a geographical perspective (Bradford, 1995). What is clear is that the impact of these features has been very uneven across space and it can be expected that financial devolution in education will show a similar pattern. However, although it has been argued the GM schools[3] have been spatially uneven (Bradford, 1995), we have relatively little knowledge about the geographically uneven character of devolution in education in comparison with the other features of a changing welfare state. There has been no systematic attempt to analyze the geographically uneven character of financial devolution of schools on a local scale. The following exploration of the process of financial devolution will also attempt to provide a some explanation for geographical perspectives of financial devolution.

One basic assumption made by most sociologists in their analyses of the structure and operation of communities is that patterns of social arrangement and institutional system are interrelated and can influence each other directly or indirectly. More generally, city schools mostly reflect the social composition of the city (Herriott *et al.*, 1966). Thus, it can be argued that the spatial aspects of financial devolution is influenced by various institutional systems. Therefore, financial devolution in education is likely to reflect the different socioeconomic levels of schools catchment areas.

In this paper I note the geographically uneven development of financial devolution and the spatial inequalities of financial devolution by socio-economic levels at a local scale. In order to this, firstly, I review some theoretical explanations of educational devolution and LMS, secondly, I will focus on the geographically uneven financial devolution of primary schools and thirdly, I will analyse spatial inequality of financial devolution by socioeconomic variables. Finally, I hope to draw some conclusions from these results about spatial research on the various features of the changing welfare states.

2) Data and methods

This study includes two important measures describing the process of financial devolution in primary schools. The 'balance carried' are designated as a balance between total income and total expenditure for 1996/97 financial year, which obtained from inspection report for primary schools by OFSTED (*the Office for Standards in Education*). The 'other income' as independent fund are obtained from Dept. for Employment and Education in Southampton City Council and includes three categories: other income as a percentage of the total income; total other income per school; and total other income per pupil. The geographically uneven distribution of these independent funds are shown by choropleth maps.

Correlation and regression analysis may be applied to examine the relationship between socioeconomic variables of school catchment area and funding variables. The linear regression model is most valuable for modelling 'dependency' relationship between a continuous response variable and one and more explanatory variables. By dependency, we mean that the patterns observed in the response variable can be described by looking at how they relate to changes in the values of the explanatory variables. These changes may correspond to social or physical processes

which influence or condition the behaviour of the response variable.

The dependent variables as response variables (Y) for simple correlation and regression analysis are independent funds, measured by the other income for schools; other income rates as a percentage of total income and total other income per school. The independent variable as a explanatory variables (X) is social class. The 'Social class' variable means social class Ⅰ, Ⅱ (professional etc. occupations and managerial and technical occupations), which based on UK Census 1991 (10% sample).

Most social and environmental systems display a more complex assortment of relationships than simple univariable models. The inspection of the residuals from the simple regression model occasionally suggests that spatial autocorrelation is a problem. Some attempt should be made to model the spatial pattern explicitly and multiple regression analysis is useful. These involve many different responses and explanatory variables. A series of regression models are estimated using two dependent variables: other income rates as a percentage of total income (Y_1) and total other income per schools (Y_2). The set of independent variables[4] are comprised of social class Ⅳ, Ⅴ (X_1: partly skilled occupations and unskilled occupations) plus SEG (socioeconomic group) 1~5 (X_2: employees and managers, professional workers, intermediate non-manual workers.), school meals (X_3) and lone parent (X_4) as a supplementary variables. The 'lone parents' means single parent with child(ren) aged 0-15 and 'school meals' means the proportion of children receiving free school meals. The 'school meals' are an index of relative poverty with a service for poor children (Oakley & Williams, 1994). The 'social class' and 'SEG' variables are based on 10% sample, while 'school meals' and 'lone parent' are based on the whole by UK Census 1991 (Small Area Statistics: Southampton by Ward).

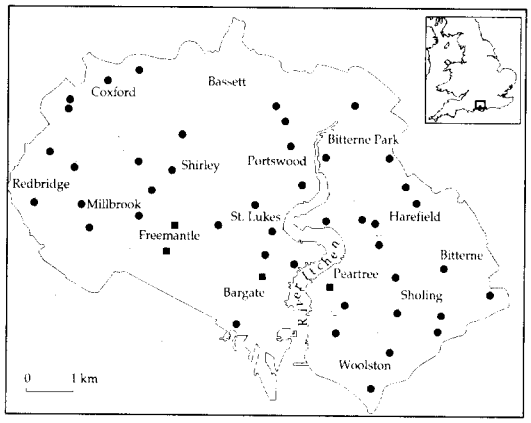


Figure 1. Study area and the distribution of primary schools in Southampton, UK.

○ RC(A) schools
◇ C of E(A) schools school
U Infant school
● Schools without voluntary aid
■ C of E(C) schools
+ junior

The spatial aspects of relationships between variables are examined by plotting the standardized residuals on a map. In effect, standardized residuals provide a most important clue to the appropriateness of the fitted model in describing the patterns and relationships in the observed data. Maps of residuals are used to test for the presence of spatial autocorrelation.

The study area involved the city of Southampton in southern England in which there are 69 primary schools controlled by Hampshire LEA. These schools may be divided into two types: those that have voluntary school status[5] and those who do not (Figure 1).

2. Changing welfare state: devolution in education

1) The financial devolution in education

In the UK, after Education Reform Act of 1902, local education authorities (LEA) were the universal provider or monopoly producer, a status that remained unquestioned until the mid-1970s. But the LEAs' monopoly of the public education service was broken by Education Reform Act of

1988, reflecting a philosophy which is skeptical of medium - or large - scale planning in the public sector. Therefore, the Education Reform Act 1988 has more significance than the other Education Acts[6]. This Act fundamentally altered the traditional tripartite system of education based on the relationship between central government, local government, and schools, which had been unchanged since 1944. It enhanced the powers of schools to become more independent from their local education authorities. The process of devolution can be related to 'New Right'[7] ideology which believe that market mechanisms are the most efficient ways of ensuring the production and distribution of goods and services (Pinch, 1997).

In devolving management responsibilities to the school level,[8] LEAs had to recognize that their role in the future lay in providing overall leadership. The intention was that they should enable heads and governors to manage schools efficiently by providing information, while giving them the freedom to determine the use of resources to meet the needs and priorities they have identified. By devolving the management of cash resources, personnel and premises to local level schools, the aim has to improve the quality of education and learning for pupils and achieve better financial management (Rao, 1996).

Generally speaking, schools cannot increase income by raising independent funds through attracting more pupils, but through commercial initiatives on the basis of the accommodation-based school allocation. Other income is raised by various agencies (e.g. school families, the community, commerce and industry, official bodies, charitable bodies) in the community. Table 1 shows a wide range of sources of independent funds. 'In For a Penny', schools can also raise a funds by selling badges, calendars and diaries, commemorative souvenirs, photographs, publications etc. 'Out For a Pound', schools can raise significant fund by sales if properly organized and publicized. There are many different types of sales-auctions and schools generally prefer to raise funds by sales. Figure 2 shows the example of an activity to raise a

Table 1. 'Who can help?'

School family
parents, pupils and staff, present and future; friends and relations; volunteers and user of the school; neighbours of the school; suppliers
The Community
individuals, organizations and groups(e.g. civic, political, social, sports, recreational, arts, caring and service, churches, youth or elderly etc.)
Official Bodies
local councils, national bodies and government organizations, official or semi-official bodies for sport, the arts, science, etc.
Commerce and Industry
businesses, shops and commercial organization
Charitable Bodies
local and national trusts

Sources: adapted from Knight (1993)

Figure 2. Example of raising independent fund by schools ('Race Night')

independent fund by primary school in Southampton.

2) The progress of financial devolution in primary schools

The Education Reform Act 1988 made financial devolution to schools compulsory, and gave them considerable independence in the way that they controlled their funds. There is considerable agreement over financial factors affecting devolution in primary schools.

The devolution of financial control to schools involves the separation of income from expenditure, so that budgets do not automatically balance. Consequently, schools must become concerned about their income as well as controlling their expenditure. The significant difference between the devolution of finance to schools and other experiments in devolved control lies in the greater degree of freedom for schools and the ability to carry surpluses from one year to the next.

For example, in a study of the first year of the operation of local management of schools in one shire county, Marven and Leva *i* (1992) found that the majority of schools underspent, with a total carry-over of £6.8 million, although much of this was committed to future projects. The Audit Commission, in a later study, found that many schools were holding balances of £100,000 or more. British Government figures showed that schools were holding balances totalling nearly £ 400,000,000 million in 1993 (Walsh, 1995).

Table 2 shows the total holding balances carried by primary schools in Southampton in the 1996/97 financial year. There were holding balances carried forward to next year totalling over £1,600,000 for primary schools in Southampton and every ward carried forward a balance. The balances carried are between 1.33~14.48 percent, compared with the total income for the current financial year, although there is uneven distribution throughout the city. These carried balances had no significance before the Education Reform Act of 1988, but since then school managers have recognized the importance of these carried balances and have tried to increase

Table 2. Balance carried forward to next year

(1996/97 financial year)

ward / index	Total income(£)	Balance carried(£)	Balance carried per school(£) (SN*)	Balance carried per total income(%)
Bargate	2,835,760	78,267	19,567 (4)	2.76
Bassett	942,645	136,495	68,248 (2)	14.48
Bitterne	2,383,173	59,341	11,868 (5)	2.49
Bitterne Park	2,166,115	146,646	29,329 (5)	6.77
Coxford	2,443,145	99,436	16,573 (6)	4.07
Freemantle	1,479,927	161,312	53,771 (3)	10.90
Harefield	1,835,680	60,761	12,152 (5)	3.31
Millbrook	1,895,027	104,037	34,679 (3)	5.49
Peartree	2,256,676	78,081	15,616 (5)	3.46
Portswood	2,387,504	141,579	35,395 (4)	3.46
Redbridge	2,229,383	79,589	13,265 (6)	3.57
St.Lukes	1,878,474	107,073	26,768 (4)	5.70
Shirley	2,758,876	169,395	28,233 (6)	6.14
Sholing	3,063,743	164,523	23,503 (7)	5.37
Woolston	1,775,338	23,612	5,903 (4)	1.33
Southampton	32,331,466	1,610,147	23,335 (69)	4.98

Sources: Southampton Primary School Inspection by OFSTED (*the Office for Standards in Education*)
*School Number

Table 3. Increasing rate of other income of primary schools in Southampton, UK

financial year	1993/94	1996/97	increasing amount
total other income(£)	321,689.24	377,847.18	56,157.94
percentage of total income(%)	1.16	1.84	17.5

Sources: Dept. for Employment and Education, Southampton City Council

their total carried balances.

The progress of devolution in education is also demonstrated by an increase in sources of independent funds for schools. The independent funding of schools has increased rapidly after cutting-backs in public finance for schools and devolution of the power to the schools in 1980s. In the official data, independent funds are represented by 'other income' for schools. Independent funds consist of donations, room lettings, sales, fees/charges, rents, miscellaneous etc.

Table 3 shows a comparison of total other income between the 1993/94 financial year and the 1996/97 financial year. In the 1996/97 financial year, the total 'other income' is 1.84 percent of the total income compared with 1.16 percent in the 1993/94 financial year. The rate of increase is 17.5 per cent (nearly £56,100.00) between two financial years. These increase suggest that other income will be a more important resource following educational devolution, although other income is still relatively small compared with total income.

3. The geographically uneven distribution of independence fund

1) 'Balance carried'

The degree of balances carried forward to the next year is an important element in explaining primary school devolution. In the previous system, schools themselves could do relatively little to prevent spending, since the balancing of income and expenditure was not their responsibility, but that of the local authority. In the new system there is no reason why the finances allocated should match historical expenditures.

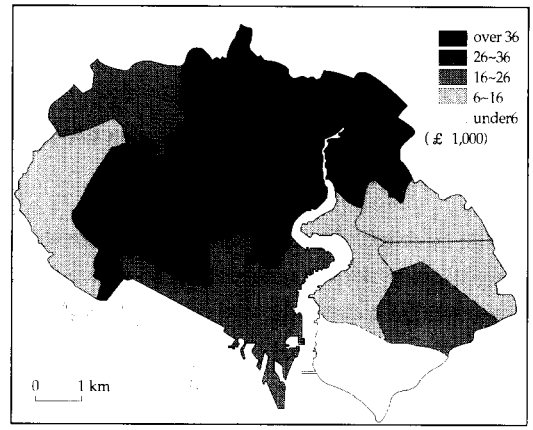


Figure 3. Balance carried per school forward to next year

Figure 3 shows the distribution of the balances carried per school forward to next year for the 96/97 financial year in Southampton (Table 2). In general, this map shows that the pattern of distribution is very uneven, although there are considerable variations in carried balances. There are obvious differences between east and west around the 'River Itchen', with the having west a higher carried balance than the east. There is an uneven pattern of variation between wards such as an inner city-periphery of city split and the west-east split, while there are broad trends in the financial devolution of primary schools. The highest balances are in Bassett near the inner city; by contrast, the lowest balance is in Woolston which lies on the periphery of the city. The balances of this highest ward amount to 12 times those of Woolston. Millbrook, Shirley, Portswood, St. Lukes and Bitterne Park are higher than Bargate, Coxford, Sholing. Redbridge, Harefield, Bitterne and Peartree have relatively low balances.

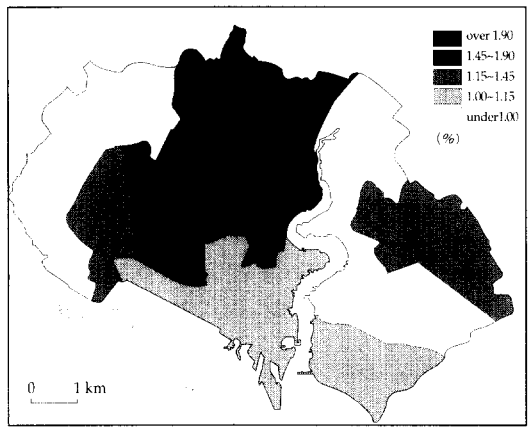
2) 'Other income' as independent fund

As noted previously, 'the other income' of schools is a significant element in financial devolution in education. The 'other income' of primary schools for 15 wards in Southampton is mapped as Figure 4. This shows other income as a percentage of the total income; total other income per school; and total other income per pupil. The other income rates (as a percentage of total income) are higher in Bassett, Shirley, Portswood, Freemantle, St. Lukes which are located near the inner city. In contrast with these wards, other income rates are lower near Coxford, Redbridge, Bitterne Park and Sholing which are located in the periphery of the city. In general, the west of the 'River Itchen' is higher than the east, although there is an exception with higher other income rates in Harefield, Bitterne (Figure 4A).

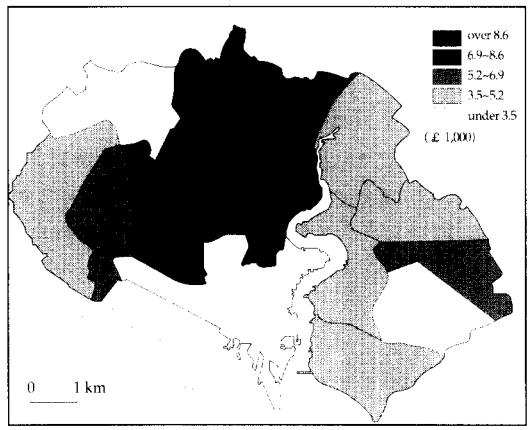
The pattern for total other income per school is similar to other income rates represented by Figure 4A. Bassett, Portswood and Freemantle have higher than the other wards and Shirley and St. Lukes also have positive sums. In contrast, Coxford and Sholing which are located on the periphery of the city have the lower rates. Bargate is the only region in the inner city that has lower total other income per school. There is clear pattern of inequality between east and west divided by the 'River Itchen', with the west being higher than the east (Figure 4B).

There is a very similar pattern for the total other income per pupil and per school. Again, Bassett, Portswood and St. Lukes have an usually high total other income and Shirley and Freemantle are similar to these wards. In contrast with these wards, Coxford and Sholing have lower sums and Bargate is the lowest. Relatively, Bitterne Park, Redbridge and Peartree have the lower sum throughout the city (Figure 4C).

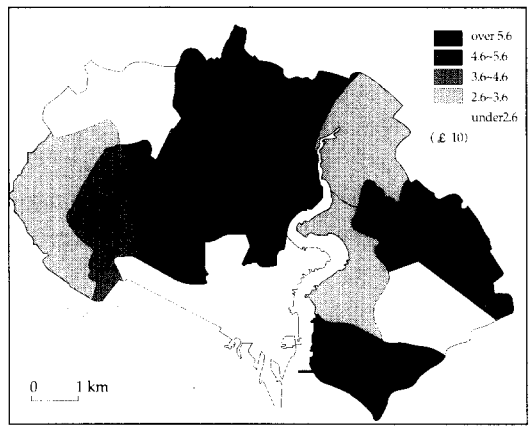
In general, it is clear that higher other incomes are located nearer the inner city, with the exception



(A)



(B)



(C)

Figure 4. Distribution of 'the other income'

Note: A : other income as a percentage of total income
B : total other income per school
C : total other income per pupil

of Bargate. There is an obvious higher distribution of other income in Bassett, Portswood, Shirley and St. Lukes. The regional differentiation between higher west and lower east by the 'River Itchen' are showed in Figure 4.

4. Spatial inequality of financial devolution by socioeconomic level

Together with the uneven distribution of independent funds, there are considerable spatial inequalities of funds related to socioeconomic characteristics. These differences in funding are likely to influence the equality of education received by the pupils. There is a common assumption in social science that patterns of social arrangement and an institutional system are interrelated and can influence each other directly or indirectly. City schools are therefore likely to reflect the social composition of the city. Consequently, it can be argued that the spatial aspects of financial devolution in a educational institution will reflect the different socioeconomic levels of schools.

1) The relationship between independent fund and social class

The hypothesis is that there is a positive association between independent funds for schools and social class of the school catchment area. The positive association between them can be proved by simple correlation and regression coefficients. Table 4 shows that the result is r = 0.8538, a very close relationship between total other income per school and social class. The coefficient of determination r^2 is 0.73, which means that almost 73 percent of variance in the total other income per school can be accounted for statistically by variable social class. The relationship between social class and the other income as a percentage of total income is also a strong positive one with correlation

Table 4. Coefficient of simple regression and r / r^2

variables	relationship
social class / total other income	$Yi(a) = 17.69 + 3.894Xi$ (r= .8538 r^2= .73)
social class / other income rate	$Yi(b) = 13.40 + 20.668Xi$ (r= .7947 r^2= .63)

coefficient r is 0.7947. The coefficient of determination of r^2 = 0.63 indicates that more than 60 percent of the variance in the other income as a percentage of total income can be accounted for by social class. Consequently social class is spatially correlated with other income for schools as independent funds.

Figure 5, 6 show the spatial pattern of standardized residuals between social class and other income variables as independent fund. The pattern of residuals reveals autocorrelation in the relationship between social class and other income rates. The positive residuals where the observed value exceeds the estimated are in Portswood and Freemantle which have higher rates of other income, while the negative residuals where the estimated value has larger value are found in Coxford, Bitterne Park, Sholing, Bargate and Peartree which all have lower other income rates. This is mostly overestimated in Shirley and St. Lukes which have higher other income rates, although the smaller residuals do not affect to basic assumption. In the relationship between social class and total other income, the positive residuals are distributed throughout Bassett, Portswood, Shirley, Freemantle, Millbrook, Bitterne which have higher total income per school. In contrast with these wards, negative residuals are found throughout the Bargate, Sholing, Coxford, Bitterne Park and Harefield wards which have lower total other income per school. There is a strong contiguity between *'observed'* and *'estimated'* in Shirley and Peartree.

From this residuals map, it is suggested that the relationship between social class and other income variables is obvious and higher other income can

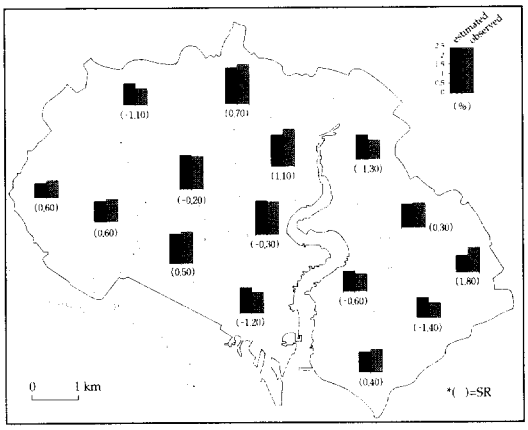


Figure 5. Residuals map from regression equation *Yi (a)*

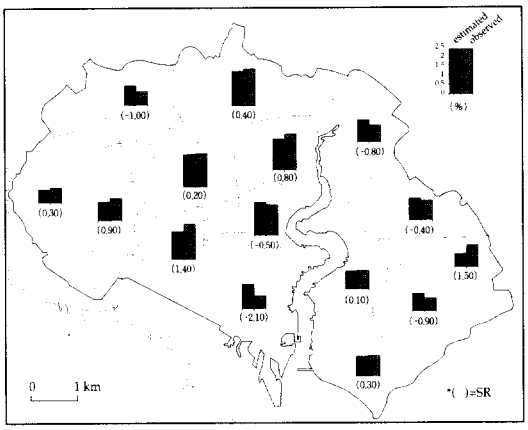


Figure 6. Residuals map from regression equation *Yi (b)*

be explained by the higher social class of school catchment areas and that there is a distinct spatial pattern to the residuals which indicates spatial autocorrelation is present in the model. As this distinction is quite clear cut, it follows that another variables ought to be incorporated explicitly within the model rather than be reflected in the residuals.

2) Spatially uneven pattern by socioeconomic level

The results of multi-regression analysis are shown in Table 5. The relationship between other income rates and socioeconomic variables (Y_1) reveals a strong one. The coefficient of multiple correlation r is 0.8785, indicating a very close relationship. The coefficient of determination r^2 = 0.7719 indicates that almost 77 percent of the variance in the other income of primary schools is accounted for by the three variables. The other income rates is significantly positively related to socioeconomic group; and is significantly negatively related to social class, and school meals.

The relationship between total other income per schools and socioeconomic variables (Y_2) is also a strong positive one with multiple correlation coefficient r is 0.8730. The coefficient of determination of r^2 = 0.7621 indicates that more than 75 percent of the variance in the total other income per schools can be accounted for by socioeconomic variables. Total other income is significantly positively related to socioeconomic group; and is significantly negatively related to social class and school meals, and lone parent.

From those results, F value indicates that most of the variation in Y_1, Y_2 is explained by the regression equation and that the model is useful. It is suggested that socioeconomic level is spatially correlated with independent funds. F-test is superior to multiple t-tests. Because of multicollinearity, the t-test may indicate that some independent variables not linearly related to the dependent variable, when in fact they are. The problem of multicollinearity does not affect the F-test.

Table 5. Multi-regression model

regression equation	r	r^2	*signif* F
$Y_1 = 89.7878 - 1.1645X_1 + 8.5153X_2 - 6.5133X_3$	0.8785	0.7719	0.0007
$Y_2 = 766.1872 - 24.9912X_1 + 30.2115X_2 - 65.2192X_3 - 2.4718X_4$	0.8730	0.7621	0.0036

Figure 7 shows the pattern of standardized residuals between socioeconomic level and other income rates as a percentage of total income. The positive residuals where the observed value exceeds the estimated value are in Bassett, Bitterne, Harefield, Portswood which have higher other income rates (Figure 4A). In contrast with these wards, the negative residuals where the estimated value exceeds the observed value are in Bargate, Bitterne Park, Coxford which have lower other income rates. There is strong contiguity between 'observed' and 'estimated' in Shirley, Millbrook, Freemantle, St. Lukes which have average other income rates. From this residuals map, it is suggested that higher other income rates of primary schools can be explained by higher socioeconomic levels of school catchment area.

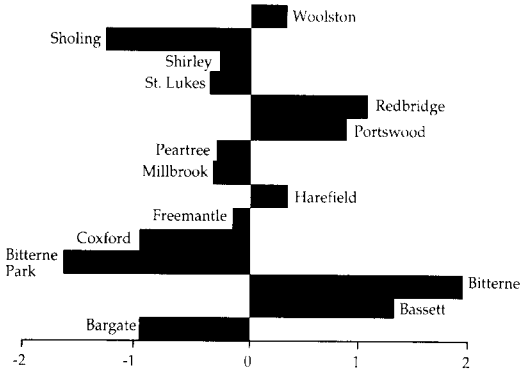


Figure 7. Residuals graph from regression equation Y_1

Figure 8. Residuals graph from regression equation Y_2

Figure 8 shows the pattern of standardized residuals between socioeconomic level and total other income per school. Smaller residuals ($-1.86 \sim 1.84$) indicate that the equation (Table 5) is adequate. Positive residuals are distributed throughout Bassett, Bitterne, Freemantle, Portswood, Shirley which have larger total other income (Figure 4B). In contrast with these wards, negative residuals are found throughout the Bargate, Bitterne Park, Coxford, Millbrook, Sholing which have smaller total other income. As a whole, higher socioeconomic level of school catchment area have higher total other income of primary schools.

Consequently, there is a very similar pattern between these residuals graphs, and they suggest that socioeconomic level is an important factor in explaining the spatial diversification of primary school independent funds.

3) Financial devolution and socioeconomic level

Under the previous system, resources were allocated to schools by the education departments of local authorities[9]. In recent years, however, schools have been given considerable independence in the ways which they can control their funds in order to inject a market element by giving a powerful incentive to raise funds. In addition to raising more fund, schools can increase their other incomes through attracting more pupils and commercial activities with an increased emphasis upon marketing.

There is usually a limited choice available to parents with primary school aged children because schools often have a high degree of local monopoly through an accommodation-based system. Therefore, school managers are more concerned to raise funds through commercial activities rather

than through attracting more pupils. Schools usually reflect the socioeconomic characteristic of the region where they are located. The other income of schools such as independent fund are correlated to community characteristics. In organizing fund-raising, there are many community based sources such as parents, local firms, local organizations, local authority.

This indicates that the socioeconomic level of the region where schools are located can influence fund raising through commercial activities by schools thereby creating various spatial patterns of independent funds with devolution in education.

The findings suggest that financial devolution in primary schools has related in geographically uneven outcomes. It also argues that higher socioeconomic variation among primary schools would tend to promote greater inequality of financial devolution in the spatial aspects.

5. Conclusions

In the late 1980s there were major educational reforms in the UK, which reflected the ideas of the New Right. These reforms have been associated with major changes in world economy. Schools have been given a genuine increase in power and have so far been able to exercise their new freedom. Thus in recent years, primary schools in the UK are placed in different situation following the introduction of the Education Reform Act of 1988.

In the Education Reform Act of 1988, there were the structural elements that concerned the governance and finance of schools. This is identified as 'financial devolution in education' that involves service providers being established as independent units with their own budgets. The process of financial devolution in primary schools, however, has been geographically very uneven and spatially unequal. The exploration of uneven geographical pattern of financial devolution will provide a comprehensive explanation for process of devolution.

The main conclusion to be drawn from this paper is that there are broad trends in financial devolution in education throughout the city of Southampton. The financial devolution to primary schools is manifest in a very uneven geographical pattern between the school catchment areas. The independent fund and balances carried for the next financial year for schools were used to explain this distributional unevenness.

The other important conclusions are associated with the relationship between financial devolution and the socioeconomic level of school catchment area. The results from regression analysis showed positive relationships between these variables. There are considerable spatial inequalities in financial devolution of primary schools by socioeconomic level, which appears throughout the city. The spatial patterns of financial devolution by socioeconomic levels are very similar to the pattern of independent funding. From these results, it is concluded that the socioeconomic level of the region where schools are located has a crucial influence on financial devolution of schools. These findings suggest that socioeconomic composition of schools play the dominating roles on all sorts of management in schools and higher socioeconomic variation among schools would tend to promote greater inequality of financial devolution in the spatial aspect.

More research will be needed on financial devolution in various types of schools across the country and from such research, it will be possible to compare patterns to find significant elements of influencing the financial devolution in education at different regional scales. A theoretical approach is needed to provide a systematic explanation of the geographically uneven character of financial devolution in schools, and to understand this crucial feature of the changing welfare state.

Notes

1) The national state is now subject to a series of changes which results in its 'hollowing-out'. This involves two contradictory trends. First, the capacities of nation-state to project its power even within its own national border are decisively weakened both by the shift towards internationalized, flexible production system and by the growing challenge posed by risks emanating from the global environment. Second other powers are devolved to restructured local or regional levels of governance within the nation-state emerging horizontal networks of power - local and regional - which by-pass central states and connect localities or regions in several nations.

2) Devolved control argues that the problem of producer dominance can be overcome by the separation of the political and operational levels of public organizations. There were two main ways in which the political and the managerial can be separated: first, devolution of financial control to managers at lower levels of the organization, and second, the establishment of internal agencies within the public services, operating as relatively autonomous units. In the early 1980s the former approach dominated, as the emphasis on managerialism grew, and the cost and profit-center based systems of organization became more common. More recently there has been an emphasis on the establishment of agencies and other bodies with considerable autonomy within public service organizations.

3) The 'Grant-Maintained' school are independent by LEAs and GM status was attained by parents voting for their children' s schools to opt out of local-government control. The GM schools are typical example of educational devolution in UK.

4) These independent variables are selected after analyzing correlation between combination of independent variables (including the above four variables together with other variables: 'ethnic group', 'unemployed', 'no car', 'owner occupied', 'long term illness', 'divorced') and dependent variables.

5) Voluntary schools involve CofE (Church of England Controlled (or Aided) school and RC(A) (Roman Catholic Voluntary Aided) school.

6) In the UK, there were several important periods during the development of an education policy since 1960s. In the first, the challenge to state education was offered in the radical Right's Black Papers, which criticized progressive practices and emphasized the need for educational quality and basic learning during 1969-75. In the second, the idea of 'parents' 'charter' was developed. This gave parents for the first time statutory places on governing bodies, and the right to information on such matters as examination results during 1974-1987.

7) The neoliberal wing of the New Right has pushed the introduction of market principle and individual choice into educational provision, whereas the neoconservatives have stressed strong government, discipline, words and the importance of the nation.

8) Probably the most widely used term for decentralized school management is 'school-based management'. It is also known as 'site-based management', 'delegated or devolved management', 'school autonomy', 'local management of schools', 'self-managing school'.

9) Traditionally there has been little budgeting on the basis of individual school or college: the local education authority controlled resources, distributing them to schools and colleges on the basis of relatively unclear principles, only partially based upon the number of pupils or students in the institution.

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