

Annex

The Supply and Demand Position for Primary Teachers 1989-2000

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Introduction: General Background

The purpose of this exercise is to review the position regarding the requirements for Primary Teachers up to the year 2000 in the light of the likelihood of a continuation in the decline in pupil enrolments.

The relationship between the numbers of pupils and teachers (the "pupil/teacher ratio") is of course a further significant factor influencing the number of teacher posts. Certain variations in this latter ratio, which result from changes in the Departmental Staffing Schedules which Primary schools must adhere to, are taken account of in the projections. These Schedules involve enrolment ranges which, in effect, determine the teacher complement for each school in a given year; the manner of their implementation is described in Section II of this Report. The Schedule currently in use is shown in Appendix A. The Government has given an undertaking to alter this Schedule in 1990/91 by the reduction of one unit applied in a cumulative fashion. For the remainder of the assessment period the school staffing schedule is assumed to remain unchanged.

The assessment also takes account of a number of supply and demand effects such as the graduate output from the Teacher Training Colleges, the influence of teachers going on and returning from career breaks, age related and other retirements, natural wastage etc. It will be noted that, as a working hypothesis, for the years subsequent to 1992/93 the outflow from the Teacher Training Colleges has been set at a constant level of 260 (which will be the actual outflow in 1992/93 calculated on the basis of current student numbers).

All of the above mentioned influences are taken account of in the context of compiling a detailed set of supply/demand balances for Primary teachers which are set out in Section III.

1. Future Enrolments

Variations in enrolment levels are crucially influenced by the number of births in prior years. It is appropriate therefore to begin this review by describing recent trends in the number of births and indicating how the situation is likely to develop in the years ahead. Table 1 shows that the annual number of births in the State has fallen substantially since the beginning of the 1980s. From a peak figure of over 74,000 reached in 1980 the annual total has declined to a current (1989) level of less than 52,000. This decline is likely to continue, mainly because of falling fertility but also due (to a lesser extent) to continuing emigration. CSO projections published in mid-1988 (also given in Table 1) indicate that the annual average number of births will fall to 49,000 over the period 1991/1996 and to 46,000 over 1996/2000. However it is now likely that these figures are somewhat too high when viewed in the light of more up-to-date information, which indicates a continuing decline in the number of births.

Clearly the projected decline in births must carry over into a significant decrease in the child population. Even with the relatively modest fertility decreases incorporated in current CSO projections, the figures indicate a substantial fall over the coming years. Official projections of the population aged between 5 and 15 years given in Appendix Table A.1 indicate that the population in this age band will decline from a level of 700,000 reached in 1986, to less than 540,000 by the year 2001.

On this basis and also taking into account more up-to-date information on demographic aspects and school enrolments, the Department of Education has compiled predictions of primary school enrolments for each year up to the year 2001. These are given in Table 2. The figures indicate that the total enrolment of primary schools is projected to fall from a level of some 560,000 pupils in 1988/89 to less than 430,000 for the school year 1999/2000.

Table 1: Number of Births 1960-1988, with Projections to the Year 2001

Year	Births
1960	60,735
1970	64,382
1975	67,508
1976	68,167
1977	68,436
1978	69,844
1979	72,352
1980	74,388
1981	72,355
1982	70,933
1983	66,815
1984	64,237
1985	62,250
1986	61,425
1987	58,864
1988	54,300
1989	51,659
1991/96	49,000 (Ann. Av.)
1996/2001	46,000 (Ann. Av.)

Sources: Economic Series (CSO), various issues.
 Annual Vital Statistics (CSO), various issues.
 Population and Labour Force Projections 1991-2021 (CSO)

Notes: The birth projections for 1991/96 and 1996/2001 are based on Fertility Assumption F2 as used in the above mentioned projections which assume that the Total Period Fertility Rate (TPFR) will decline to 2.10 by 1991 and to 1.75 by the year 2021

The TPFR is an average figure which, in effect, reflects the total number of births per woman over the reproductive age span (15 to 49 years). A value of 2.1 is normally termed the "replacement level."

Table 2. - Pupil Enrolment Projections 1988 - 2000

Year	Enrolments
1988/89	560,200
1989/90	553,900
1990/91	544,900
1991/92	534,400
1992/93	521,100
1993/94	505,300
1994/95	489,300
1995/96	473,200
1996/97	459,800
1997/98	448,100
1998/99	437,600
1999/2000	427,700

Source : Department of Education, October, 1989

II. The Determination of the Numbers of Teacher Posts

The enrolment projections presented in the preceding section show that if the current relationship between the numbers of pupils and teachers is maintained, then the number of teachers will decline significantly in the years ahead. This relationship is reflected in the pupil/teacher ratio but it should be borne in mind that in practice the numbers of primary teachers are not determined by means of a simple ratio of this kind, but on the basis of a somewhat more complex school staffing schedule. The current such schedule (which was introduced in 1988/89) is shown in Appendix A. The teacher complement for a school is determined by the range within which the enrolment falls. Thus if a school has 33 or fewer pupils then the Department of Education will sanction only a Principal Teacher; if the total enrolment is between 34 and 69 (inclusive), an additional assistant teacher can be taken on; a further assistant is sanctioned if the enrolment is between 70 and 107, and so on. In applying this schedule the date of the relevant enrolment is one year prior to the year in question. Thus for example the teacher complement in a school for the year 1988/89 was determined by the enrolment on the 30 September 1987. There is

also an "enrolment retention" schedule (also given in Appendix A) which determines the circumstances in which schools can retain teachers in a situation of declining pupil numbers. This operates in a corresponding manner to the "expansion" schedule just described. In this latter situation the date of application is one year in arrears, i.e., if the school enrolment falls below one of the specified thresholds on the 30 September of a particular school year, the additional teacher can be retained for that year, but the post is suppressed for the following year.

It will thus be noted that the staffing of primary schools is governed not only by the number of pupils in them, but more importantly by the manner in which these numbers fall within the ranges as set out in the Departmental staffing schedules. This in turn results in a pupil/teacher ratio (PTR), which it must be emphasised, *is the end result rather than the mechanism by which the teacher complement of primary schools is determined.* The application of the schedules as set out in Appendix A across the full complement of school enrolments yielded a total of 20,362 teacher posts for the year 1988/89. This, when taken with the pupil total of 562,300 for the same year gives a PTR of 27.5 (see Table 3).

**Table 3: Teacher Posts in 1988/89 with Projected Numbers
to the Year 1999/2000**

School Year (beginning) (1)	Total No of Teachers (2)	Annual Difference (3)	Overall PTR (1) (4)
1988/89	20,362	-	27.5
1989/90	20,245	-117	27.4
1990/91	20,484	+239	26.6
1991/92	20,254	-230	26.4
1992/93	19,785	-469	26.4
1993/94	19,358	-427	26.1
1994/95	18,869	-489	25.9
1995/96	18,405	-464	25.7
1996/97	17,956	-444	25.6
1997/98	17,531	-425	25.6
1998/99	17,142	-389	25.5
1999/2000	16,754	-388	25.5

Source: Department of Education.

Note: PTR = Pupil Teacher Ratio.

Table 3 also contains projection of numbers of teacher posts for future years. These figures show on the basis of enrolment trends, a fall in the number of posts in 1989/90 of nearly 120. However the figures indicate an increase of nearly 240 for 1990/91 because, under an agreement with the INTO, the Government is committed at that stage to reducing the thresholds in the School Staffing Schedule by

one unit applied in a cumulative manner. It should be noted that this rise represents a net effect involving two conflicting trends. The improvement in the school staffing schedule contributes to a significant increase in the number of teacher posts, but this is offset to some extent by the ongoing decline in enrolments.

In the years subsequent to 1990/91, on the assumption that the school staffing schedule will remain unchanged with the threshold levels set in 1990/91, the number of teacher posts will continue to decline (by as much as 450 or more in some years) because of the continuing fall in enrolments. It will have reached a level of some 16,800 by the year 1999/2000.

The projections of teacher posts have been obtained by progressively reducing individual school enrolment totals for 1988/89 on the basis of the national enrolment trends given in Table 2 and then successively applying the appropriate School Staffing Schedule to derive the number of teacher posts for each school for the year in question. Some qualifications which apply to this method of estimation are commented upon in Section IV of this Report.

III. The Supply/Demand Position for Primary Teachers 1989-2000

The scenario outlined in the preceding section raises serious questions regarding the supply/demand position for Primary teachers over the years ahead. Clearly in the context of an unchanged school staffing schedule the demand for teachers will continue to decline. This in turn raises questions as to whether it will be necessary to tailor the volume of supply in order to accommodate the expected changes in demand. Before however any attempts are made to quantify the position it is necessary to identify and describe the important factors which influence each side of the supply/demand equation.

The basic units involved in this exercise relate to stocks of individuals on the supply side and vacancies on the demand side. These stock levels are analysed for end-August of each year, i.e., just prior to the commencement of the school year. This approach is appropriate from a practical point of view as many staff changes occur or take effect at this time. Clearly hirings and lay-offs of (temporary) teachers would relate to this period. Teachers who are due to retire on reaching the statutory age limit are

allowed to remain on until the end of the school year in which they reach that age. It is true of course that some changes or flows which influence supply and demand levels occur throughout the year, but for the purposes of this assessment it is assumed that they relate to time period mentioned. This approach allows a clearer perception of the various changes which occur, and how they relate to one another.

Supply Aspects

If one views the supply position in the manner indicated the following are the main influences involved:-

- (a) the number of qualified teachers currently unemployed, never having worked
- (b) those teachers carried over on to Diocesan Redeployment Panels from the preceding year
- (c) the most recent graduates from the Teacher Training Colleges
- (d) surplus teachers arising from the suppression of posts in the current school year
- (e) teachers who were previously employed and are now seeking to re-enter teaching employment
- (f) "temporary" teachers who worked in the preceding year but are now displaced by those returning from career breaks to take up employment for the current school year.
- (g) other unemployed teachers

Item (a) is intended to cover the accumulation of previously qualified Primary teachers who never in fact found employment. Records maintained by the Department on the post-graduation experience of recent cohorts of trainee teachers indicate that there were some 900 persons at the beginning of the 1989/90

school year who had never worked as Primary Teachers (in any capacity). As these records extended retrospectively to persons who graduated since the early 1980s, not all of the persons in question would be still active in the teacher labour market. Therefore, for the purposes of this exercise, a figure of 450 has been taken for the year 1989/90.

"Redeployment Panels" (item (b)) basically arise from the need to cater for situations where schools find themselves with a teacher complement in excess of that allowed by the Departmental staffing schedule because of falling enrolments. Teachers with permanent contracts who are deemed to be "excess" in this context cannot be laid off and they are allowed to remain temporarily in situ. They are however put on Diocesan Redeployment Panels. They then have prior rights to any vacancy that may subsequently arise in the Diocese, and must normally accept these posts, subject to certain exceptions (e.g. related to geographical factors). Teachers on these panels must clearly be regarded as part of the supply element. It should be noted that this heading in the supply profile relates only to *the carry-over* on to Redeployment Panels from the previous year. At the beginning of the 1989/90 school year a total of 579 teachers were retained on these Panels.

Item (c) relates to the annual graduate outflow from Teacher Training Colleges. The numbers involved here are predetermined up to 1992/93 as the students are already in training. The number of such new graduates available for the 1989/90 school year was nearly 590. The total outflow will fall somewhat (to about 550) in 1990/91 and decline more substantially, to 260, in 1991/92; it will remain at that level in 1992/93. *As a working hypothesis the Training Colleges outflow has been maintained at this level (260) for the remainder of the projection period.*

Item (d) relates to posts suppressed arising from falling enrolments. In the absence of any changes in the Departmental staffing schedule the ongoing secular decline in enrolments

would, in current circumstances give rise to the suppression of up to 200 posts, and up to between 300 and 500 posts each year later in the decade.

If however the school staffing schedule is altered the position as described in the preceding paragraph can change significantly, depending on the nature of the changes. In 1990/91 the "improvement" to be applied to the schedule as described in Section II will have the effect of more than off-setting the decline in teacher numbers due to falling enrolments, and the total teacher stock is actually projected to rise. This gives rise to a demand (as distinct from a supply) element, and it must be considered as such in the supply/demand equation.

Item (e) is intended to cover qualified teachers who were previously in employment but who left teaching for an extended period and are now seeking to re-enter the Primary teacher work-force in the year in question. This category consists of a number of groups, but primarily involves those who were previously in permanent employment but relinquished it for family reasons. The number of former Primary teachers who re-enter employment in this manner each year (on the basis of competitive applications for vacancies) is about 290. This number is expected to remain constant at this level over the period of our assessment. It should be noted however that this figure relates to those who actually obtained employment. There are obviously many more such former teachers who seek to re-enter teaching employment each year but are unsuccessful. In this sense the above-mentioned figure (some 290) understates the actual supply position.

Category (f) covers temporary teachers who were employed in the preceding year but are now displaced by permanent teachers exercising their right to return from career breaks. Currently the number returning each year is about 350. Broadly speaking the number is expected to remain at this level

throughout the 1990s (apart from a slight rise over the next few years).

The final category (g) is intended to cover unemployed teachers other than those covered by the preceding categories (which it should be noted are primarily connected with events or circumstances which relate to the current year). Category (g) would, for example, include teachers with previous teaching experience who have been unemployed for more than a year. It is particularly difficult to compile a reliable estimate of the number involved in this group. On the basis of the Department's records of recent Training College graduates one can tentatively estimate that there were some 2,200 qualified teachers at the beginning of the 1989/90 school year who had never been in permanent employment but who had previously held temporary posts. The total number of temporary posts is currently about 1,400 (most of which relate to teachers absent on career breaks) and the difference between these two numbers suggests a total of about 800 for the unemployed group in question. However, not all of these persons would be still active in the domestic teacher labour market. Therefore, a figure of 500 has been taken as representing the number in this group for the year 1989/90.

Teacher Demand

On the demand side the following elements must be taken into account in assessing the position each year:-

- (a) Vacancies arising because of those who retire on age grounds (i.e., at age 65 years).
- (b) Vacancies arising as a result of those who retire voluntarily before reaching the age limit.
- (c) Vacancies due to the death or disability of working teachers.

(d) Vacancies arising because of teachers departing on career breaks.

(e) Vacancies due to "wastage", i.e., because some teachers, for reasons other than those referred to above, leave primary teaching employment.

The number of teachers who retire on age grounds each year [item (a)] is currently about 75. This will decline somewhat over the next few years because of recent large voluntary pre-retirement outflows* but it will rise significantly between now and the turn of the century according as the age profile of the general body of Primary teachers becomes older. By the year 2000 it is estimated that the number retiring on age grounds each year will have risen to nearly 250.

Voluntary retirement [Category (b)] gave rise on average to the departure of about 50 teachers each year throughout the 1980s. This is estimated to increase to about 70 by the year 2000.

The number of vacancies arising from the death or disability of working teachers has averaged about 40 in recent years, and this is expected to rise slightly over the coming years in parallel with the ageing of the corps of teachers.

At present the number of teachers who depart on career breaks each year is in excess of 530, but is showing a tendency to decline. It is assumed that this number will decrease further and will stabilise at a level of about 350 after the mid 1990s.

Each year about 290 teachers resign their posts for reasons other than those already mentioned. This form of wastage [Category (e)] in many instances relates to married women relinquishing their posts for family-related reasons, while others leave to

* Including, for example, the special 1988 voluntary redundancy scheme.

take up employment in areas outside of teaching. This outflow is expected to decline somewhat, to about 250 by about the year 2000, in parallel with the decrease in the total teacher stock.

The above-mentioned elements can be regarded as "standard" aspects of the demand scene in the sense that, by and large, they apply on an ongoing basis. There are, however, other significant influences which from time to time can affect the demand position. In 1989/90 for example the Department of Education sanctioned the creation of 125 additional special posts, mainly in socially disadvantaged areas. There is also the possibility of changes in the Departmental school staffing schedule. As already mentioned, the reductions in the schedule thresholds (by one unit, cumulatively) which will apply in 1990/91 will have the effect of creating nearly 240 teacher vacancies, when allowance is made for the offsetting effect of declining enrolments.

In this context it might be mentioned that a further improvement of one unit in the overall pupil/teacher ratio (PTR) would require the creation in *gross* terms of between 700 and 800 posts, or alternatively to further improve the school staffing schedule (see Section II) by one unit (cumulatively) would require in the region of 500 teachers. These figures would of course be offset by surplus posts arising from the ongoing decline in enrolments, such that the corresponding *net* job creation figures would be of the order of 400 and 200 posts respectively (or perhaps less later in the 1990s when enrolments decline more rapidly).

One can also provide new employment openings by providing additional inducements to existing teachers to leave or retire. A redundancy package for Primary teachers was placed on offer in 1988 which resulted in the creation in 1988/89 of 374 vacancies which would not have otherwise arisen. It must be borne in mind however that schemes of this kind merely bring forward in time departures that

would, in any event, occur at a later stage. Thus in assessing the demand position for subsequent years it is necessary to correspondingly reduce the outflows arising from age related and voluntary retirements and even departures due to death or disability. In other words the demand effect of such an initiative is merely temporary, and there is no impact on demand when viewed over an extended period.

Supply/Demand Balances

On the basis of the broad conceptual framework as outlined Table 4 sets out an estimated supply/demand balance for Primary teachers for 1989/90. The table shows that, on the basis of the elements covered, the total supply for 1989/90 is estimated at nearly 2,900 which exceeds total demand (1,150) by over 1,700.

The next problem to address is to how to treat this excess in relation to the succeeding year, 1990/91. Basically the surplus under consideration involves teachers who cannot be placed and if all of these reappear as applicants for the available posts in the following school year, then in terms of the supply/demand equation they should be included as part of the opening 1990/91 supply stock. However their precise categorisation in the 1990/91 supply profile is not altogether clear since one can only derive an aggregate excess figure from the preceding years' data. The persons in question may be unemployed (in the sense that they do not have a job) or they may be carried forward on to Redeployment Panels. Thus for the years subsequent to 1989/90 it is necessary to amalgamate some of the original categories if one is to compute a logical sequences of annual balances.

One must also consider whether it is appropriate to carry forward *all* of the 1989/90 excess supply to 1990/91. Given the rather unfavourable labour market situation as depicted by the figures, it would appear reasonable to assume that some of the individuals involved will have lost interest in

Table 4: Primary Teacher Supply/Demand Balance 1989/90

Supply		Demand	
Category	No.	Category	No.
Unemployed teachers who never worked	450	Creation of additional posts	125
Other Unemployed teachers	500	Retirals on Age	76
Redeployment Panels	579	Voluntary Retirals	50
Training College Outflow	583	Deaths, disability, etc.	40
Surplus Teachers arising from suppression of posts	117	Career Break departures	562
Re-entrants	290	Wastage	290
"Temps" displaced by those returning from career breaks	352		
Total Supply	2,871	Total Demand	1,143

Excess Supply over Demand = 1,728.

Source: Department of Education.

pursuing teaching employment, or have emigrated, by the time vacancies for the succeeding year are being filled. The only logical way to approach this issue is to consider a range of assumptions. The following assessments are therefore based on assumptions which involve

- (1) the *entire* excess supply for each year being carried forward to the following year;
- (2) *three-quarters* of each annual excess being carried forward; and

- (3) *one-half* of the annual excess being carried forward.

The application of the first mentioned assumption may appear somewhat unrealistic for the reasons already stated, particularly if the period involved is a prolonged one. It hardly seems plausible to expect that persons will continue to stay active in the teacher labour market if employment prospects remain poor over an extended period. Nevertheless it is of interest to present this scenario as it indicates the extent of the *potential* teacher work force, many of the members of which may be induced

to apply again for posts if conditions were to improve in a future period.

A detailed supply/demand profile for the period 1989-2000 based on Assumption (1) is given in Appendix Table A.2. The aggregate annual supply/demand balances, all of which involve substantial surpluses, are summarised in Table 5 following, which also contains estimates based on Assumptions (2) and (3).

It will be noticed that under the terms of Assumptions (1) the excess teacher supply is estimated to rise to about 4,000 by the mid - 1990s and to reach a level of almost 5,500 by the year 2000.

Assumption (1): The excess supply at the end of a particular school year is carried forward in its entirety (as an unemployment aggregate) to the following year.

Assumption (2): Three quarters of the excess supply for a particular year is carried forward (as an unemployment aggregate) to the following year.

Assumption (3): As Assumption (2) with the factor of three quarters replaced by one half.

It is of interest to observe the projections which emerge under the terms of Assumption (2) somewhat more closely as this is, perhaps, a more plausible scenario.* The details are given in Appendix Table A.3. The supply/demand balance figures (which are again summarised in Table 5) indicate a fall in the supply excess in the early years of the 1990s from its original level of about 1,700, largely because of the changes in the school Staffing Schedule in 1990/91 and the sharp decrease in the Training Colleges outflow (from 550 to about 250) in 1991/92. However this reduction in the supply/demand excess (down to 1,200 in 1991/92) is only temporary; it increases again thereafter, reaches a level of nearly 1,800 in 1995/96 and declines somewhat to about 1,600 by the year 2000.

Under the terms of Assumption (3) the excess balances are of course much reduced (for the most part less than 1,000) as a smaller proportion of the preceding year's balance is carried forward each year. The figures exhibit a somewhat more marked tendency to decrease towards the end of the period in question; with this assumption the excess supply/demand balance for the year 1999/200 is just over 700.

Short-term Substitute Teachers

Apart from the supply/demand position as described, which is based on an annual cycle, a significant number of teachers are employed within each year on a short-time or casual basis to substitute for persons on maternity leave, or for persons who may be ill, etc. The duration of these engagements can be measured in terms of weeks and in some cases may be as short as a few days. It is not appropriate therefore to include such vacancies as a demand element in the previously described calculations which, as indicated are formulated on the basis of a year-to-year cycle. Even though the substitute teachers in question may be employed for a period during the school year (and some of them perhaps more than once) the vacancies are such that at the end of that year the teachers involved are out of work and thus part of the potential supply pool when viewed in the context of the demand perspective for the succeeding year.

While such vacancies are not thus part of the intrinsic supply/demand situation as defined, they cannot be completely ignored either. The numbers involved are quite substantial. The Department of Education estimates that nearly 800 persons are employed in a substitute capacity at any one time. Thus the previously calculated supply/demand balances need to be

* This assumption is broadly consistent with recent results obtained by Morgan (1989) in "The Status and Intentions of B.Ed. Graduates 1985-1988".

Table 5. - Supply and Demand Balances for Primary Teachers for the Period 1989-2000 subject to different assumptions

Year	Assumption (1)	Assumption (2)	Assumption (3)
1989/90	1,728	1,728	1,728
1990/91	1,731	1,299	867
1991/92	1,955	1,198	658
1992/93	2,431	1,375	805
1993/94	2,880	1,480	852
1994/95	3,431	1,661	977
1995/96	3,952	1,767	1,010
1996/97	4,383	1,756	936
1997/98	4,763	1,697	848
1998/99	5,112	1,622	773
1999/2000	5,445	1,550	720

interpreted in the light of an ongoing requirement for a certain quota of substitute teachers throughout each year.

For example, the predictions formulated on the basis of Assumption (3) suggest that while schools should not have undue difficulty in attaining their annual teacher complements throughout the 1990s, the provision regarding the availability of casual substitute teachers required to fill in for short periods within a year could become rather tight since the supply excess would be just about equal to the number of such vacancies arising at any one time. Geographical mismatches could exacerbate the problem.

The above comments need perhaps to be qualified on the grounds that not all potential

substitute teachers are part of the normal supply pool. Many of them may not be interested in permanent or longer-term work and should thus be regarded as a class apart from other teachers. The fact that in 1987/88 a significant proportion of them (about one third) were not qualified lends support to this contention.

IV. Some Comments on The Assessment Procedures Used

This Report presents estimates of future supply and demand levels for Primary teachers covering the period up to the year 2000. In compiling these figures use has been made of information and estimates supplied by the Department of Education relating to various aspects of the supply and demand situation in

so far as it concerns the particular labour market in question. Basically the projections of supply and demand presented in this report, when viewed in broad terms, convey a similar picture to those previously indicated by the Department. The principal advantage of the current report is that it draws together all the relevant aspects involved - enrolments, the relationship between enrolments and teacher numbers, supply and demand elements etc. - and analyses these in a more comprehensive way in the context of a more precisely defined conceptual framework. Such an approach allows a better perception of the importance associated with each aspect, and of how the various aspects relate to one another. In regard to assessing the position for future years, the approach used involves the use of different assumptions in dealing with future supply/demand balances in which the propensity of teachers to remain active in the teacher labour market is varied.

An aspect of the compilation procedures which is worthy of note relates to the methods used to estimate future teacher numbers on the basis of enrolment projections. The method used here involves taking the enrolment totals of individual primary schools for a base year (say 1988/89) and applying to each of these an index based on projected aggregate national enrolments in order to obtain estimated future enrolments at individual school level. The relevant schools Staffing Schedule (see Section II) is then applied to the projected school enrolments in order to obtain appropriate teacher complements for each school in each year of the projection period.

The use of the index as referred to obviously involves continuous reductions over the period in question (see Table 2) which are then applied to every school. This approach clearly imposes a trend uniformity on individual projected school enrolments which will not be reflected in practice. The enrolments in some schools will decline more rapidly than the projection mechanism allows, while for others (e.g. those

in urban growth areas) there will actually be increases, despite the overall national decline in enrolments. However, these are clearly offsetting effects and there is no *a priori* reason to suggest that the national estimates obtained in this way are inaccurate, as long as the basic size structure of Primary schools does not change, e.g. by closures or amalgamations of smaller schools. Any significant structural change of this kind could, in the context of an unaltered school staffing schedule, result in the suppression of additional teacher posts which would not be reflected in the estimation procedure used.

It would appear desirable however, if resources permit, to assess this methodology in more detail, for example by observing how and to what extent increases in teacher posts are generated by schools which are actually expanding and how in turn, these are offset as a result of schools which experience declining enrolments. One could, also test the methodology by applying the estimation procedure to current or past periods, and then compare the estimates derived with the actual outcomes.

One final point which should perhaps be borne in mind in relation to this exercise is the question of assessing the supply/demand population for Primary teachers over a longer time horizon. In this regard it should be noted that the number of age and disability related retirements of teachers will rise somewhat during the first decade of the next century and increase significantly between the years 2011 and 2020. This can be seen from Appendix Table A.5 which shows the projected numbers of retirements on reaching the maximum age limit for each year from 1989 to 2021. The numbers in question rise to between 400 and 500 during the ten years after the year 2000 and attain an annual level of more than 800 in the years after 2015. The actual trend of age related retirements will not of course be precisely the same as that given in this table since early (voluntary) retirements and premature quits due to disability, illness etc., will

alter the pattern, but not significantly so.* Clearly the trend illustrated will tend to augment demand and thus diminish the supply/demand balance. Depending on its extent, it may,

therefore, be a relevant aspect to take into account now in deciding resource allocation policy.

Staffing Schedule for Primary Schools, 1988/89

	Appointment Enrolment Range	Retention Enrolment Range
Principal + 1st asst.	34 - 69	29 - 66
2nd asst.	70 - 107	67 - 102
3rd "	108 - 143	103 - 143
4th "	144 - 179	144 - 179
5th "	180 - 215	180 - 215
6th "	216 - 251	216 - 251
7th "	252 - 282	252 - 282
8th "	283 - 298	283 - 298
9th "	299 - 334	299 - 334
10th "	335 - 370	335 - 370
11th "	371 - 406	371 - 406
12th "	407 - 442	407 - 442
13th "	443 - 478	443 - 478
14th "	479 - 514	479 - 514
15th "	515 - 550	515 - 550
16th "	551 - 586	551 - 586
17th "	587 - 622	587 - 622
18th "	623 - 658	623 - 658
19th "	659 - 694	659 - 694
20th "	695 - 730	695 - 730
21st "	731 - 766	731 - 766
22nd "	767 - 802	767 - 802
23rd "	803 - 838	803 - 838
24th "	839 - 874	839 - 874
25th "	875 - 910	875 - 910
Each additional asst.	36 enrolment units	36 enrolment units

* Some of the teachers covered under any one of the years referred to in Table A.5 will have left in an earlier year for the reasons mentioned, but these will in turn be replaced by early retirees from later cohorts.

Appendix A

National Teachers are employed locally by the Board of Management of the school in which they teach, subject to the terms of the rules for National Schools and the approval of the Department of Education. The number of teachers is regulated by reference to specific ranges of enrolment set out in a schedule which governs the appointment and retention of staff. A copy of the schedule which applied to ordinary schools in 1988/89 is set out below.

With effect from 1988/89 schools were staffed by reference to the enrolment ranges set out in the schedule and the actual enrolment on the preceding 30 September. (Example: a school with an enrolment of 104 pupils on 30/9/87 was

entitled to a Principal Teacher and 2 Assistants for the 1988/89 year. However, if the school already employed a Principal and three Assistants it is entitled to retain the third Assistant until the end of the year in which the enrolment on 30 September falls below 103).

Source: Central Statistics Office (1988), Population and Labour Force Projections 1991 to 2021.

Notes: (1) These projections are based on Migration Assumption II as used in the above mentioned source. This involves a total net outflow of 25,000 per year in 1986/96, 20,000 per year 1996/2006, 10,000 per year in 2006/2016 and 5,000 per year between 2016 and 2021.

(2) The Fertility Assumption used (F2 as specified in the CSO Report) assumes that the Total Period Fertility Rate will fall to 2.10 by 1991, and will then continue to decline to reach a level of 1.75 by 2021.

Table A.1: Population Aged 5 to 15 Years in 1986 with Projections to the Year 2021

Year	Population (000)
1986	700.7
1991	669.5
1996	602.3
2001	538.6
2006	497.1
2011	470.3
2016	445.2
2021	419.1

Table A.2: Estimated Supply and Demand Balances for Primary Teachers, 1989-2000 (Assumption 1)

Year	Supply								Demand							EXCESS SUPPLY	
	Unemployed who never worked	Other unemployed	On panels	Output TTC	Surplus arising from suppression of posts in year concerned	Teachers Re-entrants (seeking to)	"Temps" displaced by returning CB's	TOTAL SUPPLY	Creation of extra posts	Improved Staffing Schedule	Age	Voluntary Retirement	Death, disability, etc.	CB Departures	Wastage		TOTAL DEMAND
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1989/90	450	500	579	583	117	290	352	2,871	125	-	76	50	40	562	290	1,143	1,728
1990/91		1,728		555	-	290	367	2,940	-	239	70	50	40	520	290	1,209	1,731
1991/92		1,731		260	230	290	364	2,875	-	-	60	50	40	480	290	920	1,955
1992/93		1,955		260	469	290	350	3,324	-	-	75	60	43	430	285	893	2,431
1993/94		2,431		260	427	290	350	3,758	-	-	105	60	43	390	280	878	2,880
1994/95		2,880		260	489	290	350	4,269	-	-	110	60	43	350	275	838	3,431
1995/96		3,431		260	464	290	350	4,795	-	-	120	60	43	350	270	843	3,952
1996/97		3,952		260	449	290	350	5,301	-	-	200	60	43	350	265	918	4,383
1997/98		4,383		260	425	290	350	5,708	-	-	220	70	45	350	260	945	4,963
1998/99		4,763		260	389	290	350	6,052	-	-	220	70	45	350	255	940	5,112
1999/2000		5,112		260	388	290	350	6,400	-	-	240	70	45	350	250	955	5,445

Assumption 1: The aggregate unemployment totals for columns (1),(2) and (3) for the years from 1990/91 on are obtained by taking the entire excess supply for the previous year.

Notes: (1) Panels (col. 3) means Redeployment Panels
 (2) CB = Career Breaks
 (3) TTC = Teacher Training Colleges

Table A.3: Estimated Supply and Demand Balances for Primary Teachers, 1989-2000 (Assumption 2)

Year	Supply								Demand							EXCESS SUPPLY	
	Unemployed who never worked	Other unemployed	On panels	Output TIC	Surplus arising from suppression of posts in year concerned	Teachers Re-entrants (seeking to)	"Temps" displaced by returning CB's	TOTAL SUPPLY	Creation of extra posts	Improved Staffing Schedule	Age	Voluntary Retirement	Death, disability, etc.	CB Departures	Wastage		TOTAL DEMAND
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		(16)
1989/90	450	500	579	583	117	290	352	2,871	125	-	76	50	40	562	290	1,143	1,728
1990/91		1,296		555	-	290	367	2,508	-	239	70	50	40	520	290	1,209	1,299
1991/92		974		260	230	290	364	2,118	-	-	60	50	40	480	290	920	1,198
1992/93		899		260	469	290	350	2,268	-	-	75	60	43	430	285	893	1,375
1993/94		1,031		260	427	290	350	2,358	-	-	105	60	43	390	280	878	1,480
1994/95		1,110		260	489	290	350	2,499	-	-	110	60	43	350	275	838	1,661
1995/96		1,246		260	464	290	350	2,610	-	-	120	60	43	350	270	843	1,767
1996/97		1,325		260	449	290	350	2,674	-	-	200	60	43	350	265	918	1,756
1997/98		1,317		260	425	290	350	2,642	-	-	220	70	45	350	260	945	1,697
1998/99		1,273		260	389	290	350	2,562	-	-	220	70	45	350	255	940	1,622
1999/2000		1,217		260	388	290	350	2,505	-	-	240	70	45	350	250	955	1,550

Assumption 1: The aggregate unemployment totals for columns (1),(2) and (3) for the years from 1990/91 on are obtained by taking three quarters of the excess supply for the previous year.

- Notes:
- (1) Panels (col. 3) means Redeployment Panels
 - (2) CB = Career Breaks
 - (3) ICC = Teacher Training Colleges

Table A.4: Estimated Supply and Demand Balances for Primary Teachers, 1989-2000 (Assumption 3)

Year	Supply								Demand							EXCESS SUPPLY	
	Unemployed who never worked	Other unemployed	On panels	Output TTC	Surplus Teachers arising from suppression of posts in year concerned	Re-entrants (seeking to)	"Temps" displaced by returning CB's	TOTAL SUPPLY	Creation of extra posts	Improved Staffing Schedule	Age	Voluntary Retirement	Death, disability, etc.	CB Departures	Wastage		TOTAL DEMAND
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		(16)
1989/90	450	500	579	583	117	290	352	2,871	125	-	76	50	40	562	290	1,143	1,728
1990/91		864		555	-	290	367	2,076	-	239	70	50	40	520	290	1,209	867
1991/92		434		260	230	290	364	1,578	-	-	60	50	40	480	290	920	658
1992/93		329		260	469	290	350	1,698	-	-	75	60	43	430	285	893	805
1993/94		403		260	427	290	350	1,730	-	-	105	60	43	390	280	878	852
1994/95		426		260	489	290	350	1,815	-	-	110	60	43	350	275	838	977
1995/96		489		260	464	290	350	1,853	-	-	120	60	43	350	270	843	1,010
1996/97		505		260	449	290	350	1,854	-	-	200	60	43	350	265	918	936
1997/98		468		260	425	290	350	1,793	-	-	220	70	45	350	260	945	848
1998/99		424		260	389	290	350	1,713	-	-	220	70	45	350	255	940	773
1999/2000		387		260	388	290	350	1,675	-	-	240	70	45	350	250	955	720

Assumption 1: The aggregate unemployment totals for columns (1), (2) and (3) for the years from 1990/91 on are obtained by taking one half of the excess supply for the previous year.

Notes: (1) Panels (col. 3) means Redeployment Panels
 (2) CB = Career Breaks
 (3) TTC = Teacher Training Colleges

Table A.5: Number of Primary Teachers Due to Retire on Age Grounds in End Year from 1989 to 2022

Year	Number due to retire	Year	Number due to retire
1989	76	2006	400
1990	72	2007	414
1991	67	2008	420
1992	87	2009	454
1993	130	2010	525
1994	141	2011	463
1995	168	2012	540
1996	249	2013	540
1997	296	2014	564
1998	295	2015	579
1999	357	2016	652
2000	372	2017	609
2001	434	2018	760
2002	437	2019	875
2003	439	2020	809
2004	492	2021	760
2005	419		

Source: Department of Education.

Note: These figures relate to the stock of teachers as recorded on 27 October 1988.