

## Current Practices in Planning the Demand for and Supply of Secondary School Teachers in Ethiopia

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### Background

The education system in a given country is destined to provide crucial service to society. Particularly formal education is the means by which a pool of educated manpower is derived from. It is the source of manpower that can be trained and qualified to support the socio-economic development efforts of a given country.

Secondary level of education, more often than not, satisfies the middle level manpower needs. It also leads to further training in some professional fields in the training institutions or colleges. That is, the academically successful students (in the Ethiopian School Leaving Certificate Examination /ESLCE) get the chance to join the different colleges and universities in the country. To sustain the human resource potential, Ethiopia is seeking to expand secondary education. It has to cope with school population growth from expansion in primary schooling, on the one hand, and to meet the demands of candidates for training institutes and colleges, on the other.

To materialize this, apart from increased government budget in recent years (from 12% to 16% in 1998), a new policy support has been effected. Accordingly several steps have been taken already. The New Education and Training policy underscores five major directions (MOE, 1994). These include:

- a) reorganization of the educational structure which has culminated in the shift from the centralized to decentralized administrative system by way of empowering the regions,
- b) making education more relevant by reforming the curriculum,

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- c) increasing school access to children by constructing new primary and secondary schools in remote areas and also improving the quality of school services by renovating old schools and providing education facilities,
- d) maintaining and increasing education finance at least to ensure the supply of teachers required in schools, and
- e) revitalizing staff development and career promotion means such as the Teachers' Career Structure.

The MOE Vice-Minister, in his article further asserts: *with Policy change introduced, the enormous problems of education that long existed are resolving fast and the future prospect of the sector is now brighter* (Teklehaimanot, 1999). Despite this, there are still manpower and other resource constraints to be tackled. The input aspects that have drawn more attention are related to the requirements in relevant curriculum, supplying qualified teaching force and the effective utilization of the available instructional materials.

### **The Problem**

Besides introducing the appropriate changes in the curriculum, the supply of teachers with the desired quality and profile remains to be the primary input factor for any education system. Besides, in order to make a secondary school a functioning system it must have an adequate and qualified manpower. In other words, teachers' supply must be ensured in all levels at all times. This is because even when a more relevant curriculum is designed, or the school management provides unreserved support, school outcomes depend to a greater extent on the availability and motivation of qualified teaching staff.

For a given teacher to become competent, at least at the initial stage, a certain level of professional training that is appropriate for the educational level is indispensable. As to the type or profile of the teaching force needed, it is clearly indicated in the policy. For primary schools a mix of college diploma and TTI certificate holders are required. For a secondary school system degree holders must be assigned for teaching. Consequent on the rapid expansion in primary schooling, there is also a corresponding change in secondary education. That is the number of schools grows much faster than the teacher outputs / supply from

the training colleges in Ethiopia. As Getachew (1997) noted, among 11,235 teachers in the secondary schools, 6726 (59.9%) lack the necessary qualification (BA/BSc.) to teach in these schools. This shows that there is a serious shortage of teachers in secondary schools.

The implication is that there is a demand for more qualified teachers in secondary schools. Other than the growth of sections and school systems in the public and/or government education system which increase the demand for teachers, the private schools also draw their manpower from the same sources. Indeed, they try to attract them with apparently higher salary scales. There is also the natural attrition (death and retirement) that diminishes staff size, a factor that should be considered.

To respond to the recurring demands for secondary school teachers, the supply side should be properly planned. It is clear that planning concerns choices for the future, and in education some of the most difficult decisions concern the proportion of current resources to be invested in securing future teacher supply. A further reason why teacher demand and supply are so central to the concerns of educational planners is the cost of employing teachers. Obviously, teachers represent a huge category of skilled manpower. Their salaries account for extremely high proportion (over 90%) of recurrent expenditure on education particularly at the primary level (MOE, 1998).

In Ethiopia, the supply of qualified secondary school teachers is planned by the MOE. In this paper, the basis for the planning, the degree of the regions' involvement in this process, and the strategy to attain demand-supply equilibrium will be explored.

Obviously, planning should consider the quality aspect of teacher supply. But due to a limited scope in its approach the issues treated here will only relate to the general problems in planning secondary school teacher demand and supply as practised in Ethiopia. Thus, the study will attempt to:

- explore the factors determining the demand for, and supply of, teachers,

- consider the policy options available to educational planners in bringing about balance between teacher demand and supply,
- examine if supply disparity exists between and among regions, identify the prevailing problems in meeting demands, and
- come up with options which help curb the situation.

## Review of Related Literature

### What Is Teacher Demand and Supply?

The demand for teachers has been a matter of continued concern among educators and policy makers responsible for ensuring the effectiveness of schools. In other words, the size, composition and distribution of the teaching force are vital to determining the demand for and supply of teachers in education.

**Teacher demand** is conceptualized as the total number of teaching positions funded by local education agencies, or it is the number a given region is able and willing to employ at a given time (Boe & Gilford, 1992:24).

The factors that determine teacher demand are:

- the number of students enrolled in schools,
- policies pertaining to curriculum and teacher-pupil ratios,
- prior commitments to employed teachers,
- local governments funding capacity, and
- the prices that must be paid for various types and qualities of teachers.

Demand also refers to the required flow of teachers, which is the rate at which teachers should be recruited. Any teacher demand is planned by taking into account the three *factors of change*. They are referred to as development demand, special replacement demand, and normal replacement demand.

*Development demand* reflect the scale of provision of teachers growth/decline resulting either from enrollment growth or structural change in education (changes in pupil-teacher ratio resulting from changes in class size, length of school work, teacher periods, etc.). *Special replacement demand* is intended for a replacement of particular category of teachers identified as poorly (un/under-)

qualified or expatriate teachers. *Normal replacement demand* is a requirement as a substitute for attrition such as death, retirement, resignation, etc. According to Williams (1979), among the determinants in the teaching force demand are basically the product of two factors:

1. the number of learners to be enrolled (and limits in teacher-pupil ratios) and
2. the teaching technology in use (a policy target resulting in classroom structures and subject period allotment).

Each is largely amenable to policy decisions with a range of alternatives or choices available to policy makers. Though policy makers are influenced by internal and external interest groups they will however much depend on economic factors like cost of educational inputs and in particular of teachers' salaries.

**Teacher supply**, in the aggregate, is the number of eligible individuals available who are willing to provide their services under prevailing conditions. It includes those qualified individuals who currently hold teaching positions, those who seek to join the profession by applying for vacant positions, and those who would apply for positions if suitable openings existed (Boe and Gilford, 1992).

The determining factors in the supply of teachers could be related to questions such as:

- Who is available to teach?
- What teacher wages are agreed relative to other professions?
- What working conditions in teaching do exist relative to conditions in other occupations?

In general, teacher supply is used loosely to refer to the composition of the actual teaching force, plus potential sources of entering teachers as recent graduates of teacher preparation programs, to teacher supply shortages in some subject matter fields. Teacher supply has, therefore, its source in training institutes and the labor market.

Some of the factors that affect demand/supply in a direction that increases demand and reduces supply are:

- high attrition from the profession partly due to low salaries and poor working conditions,
- increasing teacher retirement rates due to age, and
- continuing change (increase) in the teacher-pupil ratio.

The planning of teacher demand and supply should be undertaken mainly at national or regional level rather than at the institutional or individual level. The total /aggregate demand over a long period must be projected and specified in designing policies to ensure an adequate supply of teachers. The dis-aggregate by teaching assignment and geographic distribution of the teaching positions should be worked out to protect teacher shortages or surplus.

### **Balancing Teacher Supply and Demand**

Teacher supply and demand estimates need to include or be analyzed in conjunction with the political, social, environmental and labor conditions that exist in the target and alternative occupations.

What is more, to develop affordable /manageable policies, reliable and detailed information about *teacher supply, demand and quality* is important. Precisely, the focus is on policy issues, projection models, and databases.

In education a policy that helps keep supply and demand in balance is essential and must be developed on the basis of planning at a national level. The supply question is especially challenging. To ease the shortage some mechanisms are employed. The main ones are:

- to relax qualification requirements during hiring; or those experienced with poor performance or qualified but out of their fields of competence may be hired.
- to offer financial incentives for teachers to enter and continue in the profession; or to raise overall teacher salaries so as to make the profession more competitive with other occupations; or raise entry level

teacher salaries substantially so as to attract more novice teachers to the profession

- to decide to increase work loads of teachers, i.e., by increasing class sizes and so increase teacher-pupil ratio which actually may have an adverse effect on the quality of teaching and the morale of teachers (Boe and Gilford, 1992).

### **Teacher Quality : A Major Policy Issue**

The current issue is how to improve teacher quality while simultaneously maintaining a sufficient supply of teachers to meet the demand. Teacher quality, though difficult to define, can be indicated by its desirable aspects.

Certain dimensions of quality can be explained by few or all of the indicators. According to Boe and Gilford (1992) five components are defined.

1. teacher qualification (such as certification in degree or diploma),
2. tested ability (pass scores in the aptitude/entrance tests offered at teacher preparation institutions),
3. demographic matching of teachers and students (i.e. representative diversity in race/ ethnicity, gender and age that is relevant in classroom interaction ),
4. teacher professionalism (activities for teachers that enhance the attractiveness of the profession)--if for instance, teachers are placed in key decision making roles as in programs involving merit pay, career ladder, and /or peer evaluation, it is assumed that they typically entail enhanced professional responsibility and ultimately job satisfaction and
5. classroom teaching practice (excellence in delivery of subjects).

These factors, when combined, may result in the promotion of teacher quality.

### **The Importance of Teacher Databases in Planning**

The first prerequisite for effective planning is to set a system of collecting, recording and analyzing data on the current teaching force. It must include statistics on movements within, into and out of that teacher force. Unless there is an adequate database in respect to teacher stocks and flows, attempts to plan will be futile.

Planners should also pay attention to the collection, utilization and analysis of data before projections are made. In general, *teacher databases* are very crucial in undertaking planning. As a result, the need by education policy makers and others for factual and reliable information about the teaching force, including future estimates of supply-demand relationship generated by projections models, has led to the development of teacher databases at the state, regional and national levels.

Overall, teacher databases ought to include: subject specific course enrolment, reserve pool, teacher-pupil ratios, teacher migration, teacher support, supply-demand analysis of some fields of study with shortage of teachers, teacher mobility, and teacher retirement.

More important still, the data must be of reasonable quality, timeliness, and accessibility before it can be useful for projection models and decision making.

### **The Need for Collaboration in Planning**

It must always be remembered that planning involves liaison, information and persuasion in quite as full a measure as it requires technique and expertise. It is, therefore, imperative that some regular consultative machinery exist between those who make educational policy (e.g. the MOE) and the other groups /stakeholders. This includes those who employ and use teachers (e.g. the Civil Service Commission, regional authorities, school boards etc.), those who train teachers ( training colleges and universities) and the teachers themselves (through their association).



## **Methodology**

A descriptive survey method is used in this study. The data sources, instruments, and sampling procedures are indicated below.

### **A. Data Sources**

The sources of data are different groups of respondents that consist of educational officials at various positions or levels, i.e. MOE, REBs, ZEDs, and schools. All respondents were selected to be those who are relevant and charged with teacher demand and supply. Accordingly, the study samples include: 2 officials from the MOE, 22 officials from all the REBs, 22 officials from 11 sample ZEDs, and 22 principals (including the assistants) of senior secondary schools within the 11 sampled zones. The 4 years demand-supply data collected from MOE (aggregated from the data obtained from all regions) was also used. This helped to see whether supply is in par with demand.

### **B. Data Collection Instruments**

The instruments used to collect field data from education officials were questionnaires and structured interview. The questionnaires were designed for REB and ZED officials, and for school principals. Structured interview was conducted with officials of MOE, experts in REBs and ZEDs, and assistant principals of the sample schools.

### **C. Sampling Procedure**

In the Ethiopian Education structure there are 11 Regional Education Bureaus (REBs) all over the country. From the 11 REBs, 2 officials from the Education Programs & Supervision Department of each REB are selected. Then 2 officials of parallel position from 11 Zone Education Departments (ZEDs) are taken as sample respondents. Again, 2 principals of senior secondary schools within the 11 sampled zones are selected as sample respondents using purposive sampling technique. Moreover, 2 officials from

the Education Programs & Supervision Department of the MOE are included in the sample. Overall, the sample size consists of 68 education officials.

### **Data Analysis and Discussion**

As indicated earlier, the research sought to treat the topic by collecting field data from education officials at four levels: at Ministry, Region, Zone and school levels. A total of 66 questionnaires, i.e., 22 for REB officials, 22 for ZED officials, and 22 for secondary school principals were distributed out of which 17, 16 and 15 of the REB and ZED officials' and the school principals' questionnaires were filled in and returned. Apart from this, the responses of MOE officials (obtained through structured interview) were incorporated. After organizing the collected data, they are presented, analyzed, and discussed as follows.

As observed from the data pertaining to the personal characteristics of the respondents their educational level can be considered as adequate enough to provide the information on issues of planning teachers demand and supply and placement practices. That is, most of the REB and ZED officials, and school principals for 82.4%, 75%, and 80% respectively are bachelor degree holders. Those with diploma constitute 17.6% of the REB officials, 25% of the ZED officials, and 6.7% of the school principals. But the experience of the respondents in their current post is minimal (0 – 5 years for 2/3 of them) which reflects the existence of high turnover in the regions.

Planning the demand for secondary school teaching force needs a careful consideration of relevant factors. As in any resource planning, certain factors are considered as criteria to fix the desired additional number of staff.

Ideally, there is no universally accepted set of criteria, which applies to all countries and for all times. In this study an attempt was made to pin point the practices used in Ethiopia. Thus, to assess these conditions data were gathered which produced about seven factors that were identified as options with varying response patterns. These factors are presented in Table 1.

As can be seen from Table I, the factors that are reported by the majority of the REB officials are: number of teachers available (76.5%), number of schools and/or sections (76.5%), budget allotted for teacher employment (58.8%), and increase in enrolment size /student population (52.9%).

**Table 1: Factors Considered in Planning the Demand for Secondary School Teachers**

| Items  | Respondents            |      |                       |      |                           |      |
|--|------------------------|------|-----------------------|------|---------------------------|------|
|  | REB Officials<br>N= 17 |      | ZED Officials<br>N=16 |      | School Principals<br>N=15 |      |
|  | No.                    | %    | No.                   | %    | No                        | %    |
| a) increase in enrollment size                 | 9                      | 52.9 | 10                    | 62.5 | 8                         | 53.3 |
| b) number of (retained) teachers available     | 13                     | 76.5 | 10                    | 62.5 | 10                        | 66.7 |
| c) budget allotted for teachers employment     | 10                     | 58.8 | 9                     | 56.3 | 5                         | 33.3 |
| d) retirement or death (attrition) of teachers | 8                      | 47.1 | 8                     | 50   | 7                         | 46.7 |
| e) number of schools and / or sections         | 13                     | 76.5 | 11                    | 68.7 | 8                         | 53.3 |
| f) transfer of teachers                        | -                      | -    | 5                     | 31.3 | -                         | -    |
| g) subject – period allotment                  | 3                      | 17.6 | 6                     | 37.5 | 4                         | 26.7 |

For the majority of ZED officials factors such as number of schools and/ or sections (68.7%), increase in enrollment size(62.5%), number of teachers available (62.5%), and budget allotted for teachers employment (56.3%) are considered in planning the demand for secondary school teachers. On the other hand, the majority of the school principals identified factors such as number of teachers available (66.7%), increase in enrollment size (53.3%), and number of schools and /or sections (53.3%).

Respondents were also asked to rank these factors in their order of importance,

As it is seen in Table 2, while the ranks show some kind of uniformity for items a, b, and d, the ranks of the other items differ from group to group. However, the average ranks of the factors indicate that number of teachers available is the

**Table 2: Rank Order of the Factors Considered in Planning the Demand for Secondary School Teachers**

| Items   | REB<br>Officials | ZED<br>Officials | School<br>Principals | Average<br>Rank |
|---|------------------|------------------|----------------------|-----------------|
| a) increase in enrollment size                | 2                | 2                | 2                    | 2               |
| b) number of teachers available               | 1                | 1                | 1                    | 1               |
| c) budget allotted for teachers<br>employment | 4                | 3                | 3                    | 3               |
| d) retirement or death of teachers            | 5                | 5                | 5                    | 5               |
| e) number of schools and / or sections        | 3                | 4                | 4                    | 4               |
| f) transfer of teachers                       | 7                | 6                | 7                    | 7               |
| g) subject - period allotment                 | 6                | 7                | 6                    | 6               |

first factor considered in planning the demand for secondary school teachers. Following this, increase in enrolment size, budget allotted for teachers employment, number of schools and/ or sections, retirement or death of teachers, subject- period allotment, and transfer of teachers are considered in that order.

Data gathered to determine the important predictors of teacher supply especially at REB and ZED levels indicated in table 3.

The majority (64.7%) and (81.2%) of the REB and ZED officials respectively reported that budget for teachers employment is the major factor considered in planning the supply of secondary school teachers. Secondly, in-service training

**Table 3: Factors Considered in Planning the Supply of Secondary School Teachers**

| Items                                | Respondents              |      |                          |      |                              |      |
|--------------------------------------|--------------------------|------|--------------------------|------|------------------------------|------|
|                                      | REB<br>Officials<br>N=17 |      | ZED<br>Officials<br>N=16 |      | School<br>Principals<br>N=15 |      |
|                                      | No.                      | %    | No.                      | %    | No.                          | %    |
| a) budget for employment             | 11                       | 64.7 | 13                       | 81.2 | 5                            | 33.3 |
| b) in-service training outputs/ year | 10                       | 58.8 | 11                       | 68.7 | 3                            | 20   |
| c) labour market                     | 8                        | 47.1 | 10                       | 62.5 | 3                            | 20   |
| d) other .....                       | -                        | -    | -                        | -    | -                            | -    |

output per year is identified by 58.8% of the REB and 68.7% of the ZED officials. Labour market is also among such factors as reported by 47.1% and 62.5% of the REB and ZED officials respectively. On the other hand, most of the school principals did not respond to this question. This might be due to their low extent of involvement and lack of experience in such activity.

Why supply does not meet demand is explained by the three groups of respondents in an interesting way. As depicted in Table 4, 47.1%, 41.2%, and 35.3% of the REB officials informed some major problems as follows: teachers quit/ leave their job without a release paper, delay of information and lack of realistic data concerning the number of teachers from lower levels and difficulty in getting teachers according to the reported demand respectively.

To ZED officials, the major problems are: teachers quit their jobs without release paper (37.5%), difficulty in getting teachers according to the reported demand (37.5%), and delay of information and lack of realistic data concerning the number of teachers from lower levels (31.2%). On the other hand, the school

**Table 4: Some Problems Encountered in Planning the Supply of Secondary School Teachers**

| Items  | Respondents           |      |                       |      |                           |      |
|--|-----------------------|------|-----------------------|------|---------------------------|------|
|  | REB Officials<br>N=17 |      | ZED Officials<br>N=16 |      | School Principals<br>N=15 |      |
|  | No.                   | %    | No.                   | %    | No.                       | %    |
| a) delay of information and lack of realistic data concerning the number of teachers from lower levels | 7                     | 41.2 | 5                     | 31.2 | -                         | -    |
| b) Teachers quit / leave their job without release paper or clearance                                  | 8                     | 47.1 | 6                     | 37.5 | 1                         | 6.7  |
| c) shortage of budget for employment   | -                     | -    | 3                     | 18.7 | -                         | -    |
| d) the qualification of teachers being below expectations / unsatisfactory                             | 2                     | 11.8 | 3                     | 18.7 | 2                         | 13.3 |
| e) the assignment of teachers in their minor area/ subject   | 5                     | 29.4 | 4                     | 25   | 5                         | 33.3 |
| f) shortage of teachers in some fields of study  | 4                     | 23.5 | 3                     | 18.7 | 6                         | 40   |
| g) difficulty in getting teachers according to the reported Demand                                     | 6                     | 35.3 | 6                     | 37.5 | 4                         | 26.7 |

principals identified such problems as shortage of teachers in some fields of study (40%), the assignment of teachers in their minor subject area (33.3%), and difficulty in getting teachers according to demand (26.7%).

This question was also posed to the officials of MOE. Accordingly, they pointed out the following problems:

- inability to get accurate and reliable data from regions, i.e. regions submit an exaggerated demand
- lack of coordination, i.e., there is no opportunity for the concerned bodies in MOE, REBs, higher education institutions so as to work together (in a coordinated way)
- training colleges do not send the actual number of graduates on time (reluctance to notify their outputs)
- some REB representatives do not come on time for the committee meeting (on teacher recruitment and allocations)
- absence/ shortage of properly trained personnel in the REBs who can follow-up the activity
- variation of school structures/ levels i.e., some have grades 1-12, others have grades 7-12, and still others have grades 9-12., etc.
- the unwillingness of some newly employed teachers to go to their respective / assigned regions; instead they wait to be employed in private or mission schools and/or other sectors (e.g. Sports Commission).

These being some of the problems encountered in planning the supply of secondary school teachers, REBs, ZEDs, and schools try to alleviate the shortage of teachers in various ways. Hence, respondents were asked to indicate those means or methods, and their responses are shown in Table 5.

Several studies (Boe & Gilford, 1992) indicate that even within developed countries like the USA, the fact that teachers demand-supply is not fully met is evident. In Ethiopia, too, there is a more serious condition of dis-equilibrium. In such a situation, school principals and the officials at the REB and ZED level think of some practical and immediate solutions. Using the questionnaire, it was possible to get some propositions made by the respondents themselves.

As can be seen from Table 5, the first method of alleviating shortage of qualified secondary school teachers is assigning diploma holders in senior grades. This was the response of 58.8% of the REB officials, 50% of the ZED officials, and 40% of the school principals. Following this, employing graduates who are not trained

**Table 5 : Immediate Solutions to Alleviate the Shortage of Teachers**

| Items   | Respondents              |      |                          |      |                              |      |
|---|--------------------------|------|--------------------------|------|------------------------------|------|
|   | REB<br>Officials<br>N=17 |      | ZED<br>Officials<br>N=16 |      | School<br>Principals<br>N=15 |      |
|   | No.                      | %    | No.                      | %    | No.                          | %    |
| a) assigning diploma holders in higher grades             | 10                       | 58.8 | 8                        | 50   | 6                            | 40   |
| b) practising double shift system                         | 1                        | 5.9  | -                        | -    | 1                            | 6.7  |
| a) employing graduates who are not trained to be teachers | 6                        | 35.3 | 6                        | 37.5 | -                            | -    |
| d) upgrading the qualification of teachers                | 2                        | 11.8 | 2                        | 12.5 | -                            | -    |
| e) assigning teachers by their minor areas                | 4                        | 23.5 | 4                        | 25   | 4                            | 26.7 |
| f) assigning maximum load to teachers                     | -                        | -    | -                        | -    | 3                            | 20   |
| g) reducing the weekly period allotment of some subjects  | -                        | -    | -                        | -    | 2                            | 13.3 |

to be teachers was identified by 35.3% and 37.5% of the REB and ZED officials respectively. Moreover, 23.5% of the REB officials, 25% of the ZED officials, and 26.7% of the principals informed that assigning teachers in their minor areas / fields of study is the other option they use to minimize /alleviate shortage of teachers. It should be noted, however, that these immediate solutions can have an adverse effect on the quality of teaching. Thus, it is necessary to strike a balance between the two variables, i.e. the immediate solutions vis-a- vis the quality of teaching.

Before the introduction of the Education and Training Policy, the planning for teacher supply was exclusively made at MOE level. Today the practice has been altered. That is, MOE plays fundamentally the coordination role and regions get their share every year when quota is allocated in their presence. Hence, it was the



intention of this study to know the extent of the regions' involvement in planning the supply of teachers at national /MOE level.

**Table 6 : Extent of the Regions Involvement in Planning the Supply of Teachers at MOE Level**

| Rating Scales  | Respondents   |      |               |      |                   |      |
|----------------|---------------|------|---------------|------|-------------------|------|
|                | REB Officials |      | ZED Officials |      | School Principals |      |
|                | No.           | %    | No.           | %    | No.               | %    |
| a) Very High   | 3             | 17.6 | -             | -    | 1                 | 6.7  |
| b) High        | 3             | 17.6 | 5             | 31.3 | 2                 | 13.3 |
| c) low         | 4             | 23.5 | 5             | 31.3 | 1                 | 6.7  |
| d) very low    | 4             | 23.5 | 3             | 18.7 | 1                 | 6.7  |
| e) No Response | 3             | 17.6 | 3             | 18.7 | 10                | 66.7 |
| Total          | 17            | 100  | 16            | 100  | 15                | 100  |

Although the three groups of respondents expressed their opinion very loosely, it can be seen from Table 6 that 47% and 50% of the REB and ZED officials respectively disclosed that the regions' involvement in such an activity is *low* and *very low*. On the other hand, 35.2% of the REB officials and 31.3% of the ZED officials confirmed that the involvement of the regions is high and *very high* respectively. Since the principals are not involved in such kind of activity most of them did not respond to the question. In general, one can see from the table that low participation of the regions is indirectly shown by giving no responses. Or, the amount of involvement (if any) was not shown conclusively. If this is the case, MOE has to open its door for greater participation in the future.

This question was also put to officials of the MOE, and their responses are as follows:

- the regions send to the MOE their demand for teachers through a need assessment form which is sent to them to be filled in and returned.
- based on their request / response a tentative demand - supply ratio will be set.

- Then, one representative from each region will come to the MOE and the tentative demand - supply ratio will be discussed. Finally, some criteria will be set and the final number / quota is worked out to determine the supply allocation for each region.

**Table 7: Some Reasons for the Disparity Among Regions in the Share of Teacher supply**

| Items   | Respondents              |      |                          |      |
|---|--------------------------|------|--------------------------|------|
|   | REB<br>Officials<br>N=17 |      | ZED<br>Officials<br>N=16 |      |
|   | No.                      | %    | No.                      | %    |
| a) When school number is considered as a factor the more developed regions will be at an advantage                  | 10                       | 58.8 | 8                        | 50   |
| b) Teachers' preference to work in the capital cities /developed regions  | 11                       | 64.7 | 9                        | 52.9 |
| c) Reported demand of some regions is somewhat exaggerated with an intention of getting undue share from the supply | 6                        | 35.3 | 6                        | 37.5 |
| d) Newly opened schools get less teacher supply   | -                        | -    | 4                        | 25   |
| e) Priority is given to peripheral regions.   | 4                        | 23.5 | 3                        | 18.7 |

In Table 7, the reasons for regional disparity concerning the share of teacher supply are included. According to the response of REB officials, the reasons for the disparity are:

- teachers' insistence and preference to work in regional capitals and /or developed regions (64.7%);
- when school number is considered as a criterion, more developed regions will be at an advantage, i.e. more quota is given to these regions (58.8%) and
- exaggerated demand from some regions is submitted with the intention to get undue share from the supply (35.3%).

Similarly, 52.9%, 50%, and 37.5% of the ZED officials indicated the above three reasons respectively. It should also be emphasized that the urban-rural bias, in

addition to shortage of qualified teachers, creates some regional disparity in the distribution of supply. Hence, the concerned authorities at national and regional level ought to consider these points while planning and allocating the supply of secondary school teachers.

**Table 8: Secondary School Teachers Demand & Supply for the periods 1995-1998**

| Year         | Demand                   | Supply                      | % of Supply |
|--------------|--------------------------|-----------------------------|-------------|
| 1995         | 5270 (1st degree)        | 222(1 <sup>st</sup> degree) | 4.2         |
|              | 7094 (Diploma)           | 498(Diploma)                | 7.0         |
| 1996         | 1889(1st degree)         | 277(1st degree)             | 14.7        |
|              | 3168(Diploma)            | 538(Diploma)                | 16.9        |
| 1997         | 2392(1st degree)         | 396(1st degree)             | 16.5        |
|              | 6978(Diploma)            | 791(Diploma)                | 11.3        |
| 1998         | 2766(1st degree)         | 502(1st degree)             | 18.1        |
|              | 8419(Diploma)            | 617(Diploma)                | 7.3         |
| <b>Total</b> | <b>12317(1st degree)</b> | <b>1397(1st degree)</b>     | <b>11.3</b> |
|              | <b>25659(Diploma)</b>    | <b>2444(Diploma)</b>        | <b>9.5</b>  |

Source: Secondary Education Panel, MOE, March, 1999.

The ultimate goals and needs of governments are that schools should cater for students education of the right kind with quality teachers as the main actors. To ensure sustained quality education, therefore, adequate teachers requirements are to be met by Ethiopian schools. But this is not the case. The major reason, among others, is that supply falls short of demand. As can be observed from Table 8, there is a considerable mismatch between the demand and supply of secondary school teachers which indicates that the supply of secondary school teachers in our country is far behind the demand.

Although the data in the table show an increase in the supply of first-degree graduates in all of the four years, the supply of diploma graduates fluctuates from year to year. This might be due to the upgrading or opening of TTCs in some regions which enable them to train the required number of teachers. The record from MOE on demand-supply equilibrium rates for the 1995-1998 academic

years further indicates that the supply is only as high as 18.1% for first degree holding teachers and 16.9% for diploma graduate teachers.

In general, the aggregate figures in the last row of the table (11.3% and 9.5%) disclose the inability of the teacher training colleges in our country to produce sufficient number of degree and diploma graduates to meet the demand for secondary school teachers. If quality of teachers and subject specialty was to be maintained, the ratio would definitely go much lower than this which calls for a review of the teacher training program of our country. Of necessity, alternative routes such as distance education should be sought so as to alleviate the acute shortage of secondary school teachers.

### **Conclusion and Recommendation**

Practices in Ethiopian education system show that the demand for secondary school teachers always falls short of supply. Again, the planning of teacher demand and supply is merely mechanistic in its exercise. That is to say, the MOE secures data from regions and then allocates supply of teachers on the basis of simple demand ratio without taking the necessary precaution of checking the validity/ accuracy of the demand.

Demand requests of regions must specify whether they are development, or special replacement, or normal replacement demand of teachers. There is also the Annual Basic Statistics of MOE that shows the distribution and size of teachers and schools. If these data were used in demand-supply planning function, the alleged disparity for teacher supply among regions would perhaps be minimized.

The findings of this study further revealed that the practice of planning teacher demand and supply in our country is faced with various problems such as:

- delay of information and lack of realistic data concerning the number of teachers coming from lower levels;
- teachers quit / leave their job without a release paper or a clearance thus aggravating the attrition rate and the problem of forecasting demand and supply;

- shortage of budget for teachers employment by some regions;
- shortage of teachers in some fields of study;
- difficulty in getting teachers according to the reported demand;
- reluctance of training institutes to notify their outputs on time, and
- shortage of qualified personnel in the REBs.

Hence, to alleviate these and other related problems the following suggestions are forwarded.

- Staff development schemes through distance education and summer programs should be expanded to increase the supply of secondary school teachers.
- Incentive system has to be introduced to attract teachers assigned in under-served peripheral regions.
- The existing Teachers' Career Structure System ought to be reviewed so as to minimize the migration of teachers to other professions.
- Institutional upgrading like the TTIs to TTCs should continue.
- The intake of AAU and other TTCs need to be raised so as to train more teachers. To this effect, adequate budget should be allocated.
- Teachers need to be allowed to work in the regions of their preference.
- A strong link should be established between MOE, training institutes, and stakeholders (REBs).
- More opportunities for building the capacity of the respective personnel in the REBs along the planning function must be sought.

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