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Structural Educational Reform: Evidence from a Teacher's Displacement Program in Armenia

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January 2009

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Human Development Network
Social Protection Team
January 2009



Abstract

This paper reviews the experience of Armenia with the displacement of more than 7,000 teachers during 2003–07 as part of structural reforms in general education. In addition to supplementary severance payments, a variety of services were needed to address difficulties commonly experienced by displaced employees, including job search assistance and counseling services, provision of information on the labor market, on legal rights of job seekers, on services and service providers available, including training, relocation assistance, and so forth. The findings of the paper suggest that the staff rationalization program has resulted in significant efficiency gains: the student-teacher ratio increased from 10.8 in 2003 to 13.9 in 2006. The considerable reduction in staff positions has allowed the government to significantly increase nominal wages and salaries for teaching and non-teaching staff.

JEL Classification: H52, J31, J44, J63, J65.

Keywords: displacement of teachers, general education, social mitigation, labor redeployment, severance payment, training, salaries.

TABLE OF CONTENTS

Acronyms and Abbreviations

Introduction

- I. Policy Issues in the Education Sector
- II. Objectives of the Staff Optimization Program
- III. Labor Market and Institutional Constraints
- IV. Design of Staff Optimization Activities
- V. Implementation and Outcomes of the Program
- VI. Conclusions and Lessons Learned

References

Figures

Figure 1: Percent of Cohort Aged 7–22 Enrolled in Education at All Levels, 2001 Population Census Data

Figure 2: Population Dynamics and Forecast of Cohort Aged 5–19 in Armenia in 1990–2030, in Thousands

Tables

Table 1: The Proportion of Small Schools has Increased in Recent Years, 2001 and 2006

Table 2: Redundancies in the Armenia General Education Sector between July 15, 2003 and June 30, 2007, and Participation in the Staff Optimization and Social Assistance Program

Table 3: Key Statistics of General Secondary Education Schools, 2001–07

Table 4: Average Monthly Salaries of Teaching and Administrative Staff (AMD)

Acronyms and Abbreviations

AMD	Armenian Drams
ALMPs	Active labor market programs
EQR	Education Quality and Relevance
GDP	Gross domestic product
ICT	Information and communication technology
MoES	Ministry of Education and Science
NSS	National Statistical Service
OECD	Organisation for Economic Co-operation and Development
RECs	Regional employment centers
SES	State Employment Service
SOSAP	Staff Optimization and Social Assistance Program
VET	Vocational education and training

Introduction¹

Armenia, like other former socialist countries in Central and Eastern Europe and Central Asia, has gone through a profound transition since the start of political, economic, and social reforms in the early 1990s. Yet, one of the areas in which reforms were lagging behind was education. The Government of Armenia began implementing structural reforms in general education only in 1998. These reforms, among other goals, were directed at promoting more efficient use of public funding and reforming financing and management of educational institutions. The reforms went through a highly political and social process, and the risk of failure or success had more to do with politics and policy formulation than with the technical question of implementation.

Moreover, the demographic change (declining fertility rates and outmigration of population) has, since the late 1990s, led to a rapid decline in school-age cohorts, which will continue in the foreseeable future. The number of students at general secondary education schools declined from 561,000 in 2001 to 446,000 in 2007. This demographic change, among other factors, convinced the government to launch the reform first in general secondary education, and to improve the efficiency of the system.

A key obstacle in that reform agenda, however, was a very low and worsening pupil-teacher ratio, inherited from Soviet times, which has resulted in average salaries below the poverty line. The dialogue on rationalization with all the stakeholders was launched in the late 1990s, but ultimately the rationalization program could not be implemented.

The government began to address the issue in 2003, closing 37 schools and making approximately 2,000 teachers redundant, but this was only the beginning of a painful process. The initial target number of redundancies in the general education system was set by the Ministry of Education and Science at 15,000 teachers. This was part of a comprehensive set of reform activities in general education, including introduction of a per capita financing formula to reflect student numbers, an increase in school autonomy, and the consolidation of small schools. Other measures to reduce the demand for teachers included revisions in class size norms and in workload of teachers, and changes in the curriculum. This has contributed to substantial efficiency gains and quality improvement in the general education system.

However, at the early stage of reforms, mandatory benefits provided to redundant teachers by the government, such as regular severance payments, unemployment benefits, and access to the very limited active labor market programs, were perceived as being insufficient, and social and political tensions have run high and threatened to block further progress. Redundancies affected the livelihood of thousands of households in a situation in which unemployment was already very high. Moreover, almost 70 percent of

¹ We would like to acknowledge the valuable comments and suggestions provided by Sona Harutyunyan, Nune Davtyan, Gordon Betcherman, Rita Almeida, Caroline Mascarell, and Lars Sondergaard in the writing of this paper.

the teachers have worked in the same school during their entire career, so a teaching job is for most of them the only one for which they are qualified (MoES 2003).

Economic restructuring and privatization of enterprises, and reforms in public services, will entail major labor displacement. If the social and economic impact of this displacement is not adequately addressed, it will slow and potentially stop the reforms. This demands a carefully thought out strategy to minimize social hardship and give the redundant employees incentives to cooperate rather than block the reforms. The sooner they find new work and the higher the new wage, the greater is the return to the economy.

Governments can exercise various options to minimize the negative impact of reforms on employment, especially in the developing world, where social safety nets are absent or underfunded. They can offer severance payments, pension arrangements, retraining programs, and other active labor market programs. Specially designed social mitigation measures, while providing income support to displaced workers, can also help redundant workers cope with their new status and reintegrate into the labor market by providing information, counseling, and assisting workers to undertake self-employment, and reduce the short-term negative impact of labor restructuring on affected employees and communities.

Labor redeployment programs are designed to help displaced workers quickly reenter the labor force, increase overall productivity, and decrease use of state-financed income support payments. The goal of a comprehensive social mitigation program would be to reduce the pool of redundant workers (future unemployed) through a mix of compensation and redeployment options. In particular, cost-effective measures such as counseling or job search skills training are often provided to workers as part of a package of demand-driven pre-layoff services provided prior to dismissal. Compensation packages have also been combined with retraining to help workers reintegrate into the labor market. Targeting training to those who request it and who possess characteristics that increase the likelihood of putting the training to use improves the chance of success. Laid-off workers have also pursued active independent coping strategies, such as a job search through informal networks, accepting jobs of a different skills profile, switching to petty trade and shuttle trade, and using household assets (land plots, car, second housing) to yield extra income.

Successful employment programs for mass layoffs transfer authority to the local level and give the employer and the local community responsibility. The most effective programs for dislocated workers are those in which employers and workers are directly involved in the design and delivery of services based on direct dialogue between key stakeholders (for example, the government, enterprise management, workers, and community leaders), both before and during the restructuring program. The public information campaign is also an important factor in encouraging uptake by the unemployed and redundant workers, and raising awareness among potential employers and service providers.

These programs can have a significant positive impact if appropriately targeted and well run (for example, services are demand-driven and delivered by service providers that

have performance-based contracts). Most service provider contracts (for example, training, employment counseling, temporary employment services) should have built-in incentives to achieve lasting impact, such as negotiated levels of job placement and business start-up, with financial incentives to meet objectives, and disincentives if objectives are not met. International experience also suggests that if workers can be assisted while they are still attached to the workplace, they are less likely to join the ranks of the unemployed, and the State can save on severance payments and subsequent social welfare costs.

Experience in various countries (in Eastern Europe and in Turkey, for example) indicates that these services are normally used by about one-third to one-half of displaced workers and are relatively low cost compared with income support payments. One of the reasons for low take-up might be that, as tracer surveys of displaced workers confirm, these workers tend to be older, have longer tenures, and are specialized in blue-collar occupations with specific qualifications relevant only for a particular enterprise. Such characteristics mean that redeployment of these workers is a very difficult task—the probability of finding a job decreases with age. It also means that a significant part of them are not about to return to the labor market (because of their age characteristics) and do not require placement services (Fretwell 2004).

Voluntary departures are often considered more politically and socially acceptable, and the financial and economic returns can be high. But such programs can be quite costly in the short run and can result in adverse selection (the best, most mobile workers apply to leave) and, in the case of early retirement payments, heavy financial burdens on the social security system.

The design and use of labor redeployment and/or social mitigation programs varies considerably among countries and is greatly influenced by the economic environment, including the level of unemployment, and the type of general social support programs already in place in the country where economic restructuring is occurring. The World Bank has supported numerous enterprise restructuring and privatization programs all around the world with relevant labor redeployment measures that are designed to help displaced workers quickly reenter the labor force, increase overall productivity, and decrease use of state-financed income support payments. At the same time, in many countries the public sector is also overstaffed and in need of downsizing. Armenia's teachers' staff optimization and redundancy mitigation program was one of the first Bank-supported projects that addressed relevant challenges in public services.

As a response to the need to downsize staff in the education sector in Armenia, in 2003, the Staff Optimization and Social Assistance Program (SOSAP) was developed and made an integral part of the World Bank Armenia Education Quality and Relevance (EQR) Project to help mitigate the transition (World Bank 2003a). This task aimed to support new policies and institutional arrangements for a rationalization of school system and benefit programs targeting redundant teaching staff. The task involved the implementation of social mitigation activities and benefits that were consistent with international best practices.

From an economic standpoint, the objective of the rationalization program in the education system in Armenia is to facilitate the rapid return of teachers made redundant as a result of a reform process to productive employment, and thus reduce the duration of state-supported income-support payments such as unemployment benefits and social assistance allowances. In addition, rapid reinstatement of teachers to their jobs would generate earnings for families of former teachers, and public revenues from taxation. The savings in wages and benefits generated by retrenchment are expected to be used within the education sector.

Rationalization, or downsizing, of the education workforce, has had the greatest societal resistance and opposition, and these continue. The main objective of this policy note is to address some of the key challenges, outcomes, and achievements associated with this process, focusing in particular on social mitigation of the impact of redundancies on displaced teachers. It is based on EQR project documents, surveys conducted among redundant teachers, evaluation of the outcomes, and the data obtained from the Ministry of Education and Science (MoES) and the State Employment Service (SES) as key implementers of the teacher redundancy program in Armenia.

The main findings of the paper are as follows:

- The staff optimization program executed under the Armenia Education Quality and Relevance (EQR) Project was incremental to facilitate the reforms in the education system, but also to mitigate the impact of painful downsizing of the workforce, in which almost one-fifth of the teachers and support staff in the general education system lost their jobs.
- It is important to launch relevant mitigation measures and services before employees lose their job, for example, at the prenotification stage.
- To be effective, the measures must be carefully designed and targeted depending on the beneficiary's age, gender, place of living, or access to alternative sources of income.
- There should be continuing social monitoring of displaced employees to ensure that services are reaching the most needy employees and that the most vulnerable are identified early and provided with special assistance, as needed.
- Management of a staff optimization program requires strong political commitment, including involvement of all the key stakeholder groups in the process early on.

The paper is organized as follows. Section I provides a brief overview of policy issues in the education sector in Armenia. Section II discusses objectives of the staff optimization program in education implemented during 2003–07. Section III presents a brief overview of labor market and institutional constraints that affected the implementation and outcomes of the program. Section IV provides design characteristics of staff optimization activities. Section V describes implementation and outcomes of the program. Section VI provides conclusions and lessons learned from the staff optimization program in Armenia.

I. Policy Issues in the Education Sector

Since gaining independence from the Soviet Union in 1991, public spending on education in Armenia has fallen dramatically, because of the drop in gross domestic product (GDP) and in spending as a proportion of GDP. Armenian public spending on education was only 2.1 percent of GDP in 2002, well below the Organisation for Economic Co-operation and Development (OECD) country average of 4.7 percent, and the rate in many other transition economies.² Private spending was also low (less than 0.5 percent) as was education as a proportion of public spending (11 percent). Overall, public expenditures in general education amounted to about US\$60 per student per year (Government of the Republic of Armenia 2002a). Furthermore, despite low salaries, in schools, vocational education and training (VET) institutions, and colleges, less than 2 percent of the budget was used for quality-enhancing, non-salary expenditures (non-salary spending is overwhelmingly on utilities). Low expenditures resulted in declining quality and little room in the budget for investment.

Between 1989 and 1999, the average wage in education in Armenia fell from 70 percent of the national average wage to 50 percent. In real terms, the average wage in education fell by 64 percent in this period. According to National Statistical Service (NSS) data, in 2002, average wages in education were around AMD15,000 (Armenian Drams), or about US\$27 per month, which was close to the official poverty line (NSS 2008).³ It is not surprising, in these circumstances, that 75 percent of the applicants for places in pedagogical institutions and 84 percent of teachers are female. Teachers, consequently, often have several jobs or other sources of income, including providing private lessons, or working in their spare time on subsidiary household plots.

Because of extremely low levels of public expenditure, pedagogical staff was using outdated methodologies and lacked opportunities for professional development. In addition, curriculums had changed only marginally since independence. Linkages to the labor market were weak, learning materials and equipment were of poor quality or nonexistent, and information and communication technology (ICT) was available in only very few schools. Only 4 percent of teachers had ICT experience and only 20 percent of schools had at least one computer (but not necessarily with Internet access). In some regions, the quality of the physical infrastructure of schools is still poor.

The general secondary education system in Armenia consisted of eight years of compulsory basic education (three years of primary and five years of lower secondary) and two years of upper-secondary education. This old system is currently being extended, and in academic year 2001/02, compulsory education was extended to nine years. In academic year 2006/07, the new National Curriculum Framework, based on a 12-year general secondary education cycle, was introduced, consisting of primary education

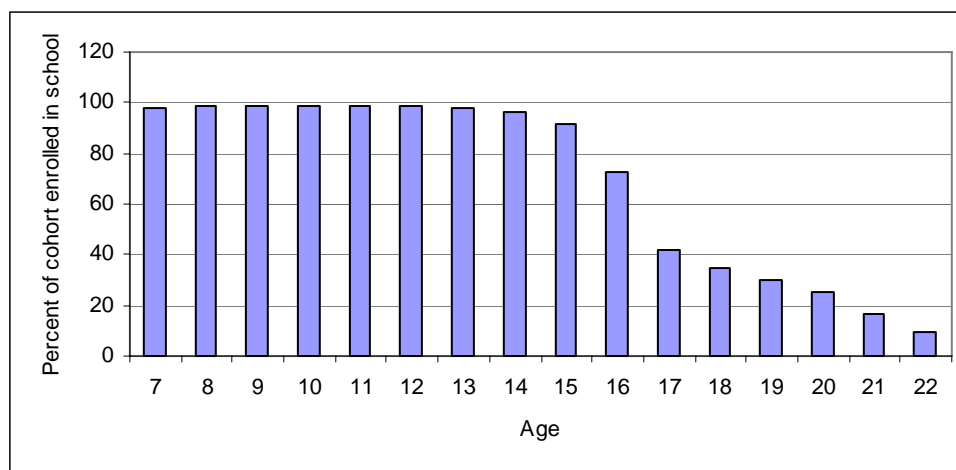
² By 2006, in Armenia, public expenditure on education had increased to 2.7 percent of GDP, which is still low compared to 6.3 percent in Ukraine, 5.5 percent in Belarus, 4.7 percent in Kyrgyzstan, and so forth. See TransMONEE 2008 database at <http://www.unicef-irc.org/databases/transmonee/>.

³ Average wages for teachers in general secondary education in 2002 equaled AMD15,400 (full-time equivalent teachers).

(grades 1–4), lower-secondary education (grades 5–9), and high-school education (grades 10–12). “Tertiary” education consists of “vocational” or “professional” education (1–4 years after lower-secondary school or high school) and university education.

Despite all of these deficiencies, Armenia has high levels of basic education enrollment—over 98 percent, according to 2001 population census data. Evidence of upper-secondary enrollments (grades 9 and 10) shows high rates compared with other low-income countries, at around 61 percent (Figure 1). In higher education, enrollment is also high, at 38 percent (World Bank 2003b).

Figure 1: Percent of Cohort Aged 7–22 Enrolled in Education at All Levels, 2001 Population Census Data



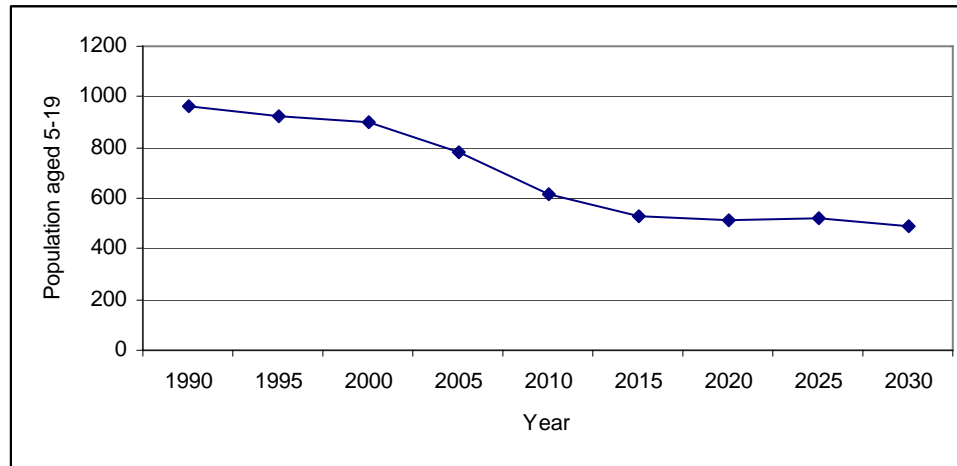
Source: NSS 2003.

During the transition, three main factors impacted the dramatic fall in the number of school-age cohorts and enrollment in education establishments. The first factor is the rapid decline in fertility rates: the total fertility rate plummeted from 2.62 in 1990 (and 2.31 in 1980) to 1.21 in 2002 but slightly recovered to 1.35 in 2006 (NSS 2007). Second, according to some estimates, during the transition years the population of Armenia declined by around 600,000 due to out-migration (negative net migration). (For factors contributing to the outflow, see World Bank 2007a.) Third, a substantial percentage of youth over age 15 neither work nor are in school. According to the 2001 census, the net enrollment rate of young people aged 15–24 in education in Armenia was 35.8 percent, while 28.7 percent of the population aged 15–24 were employed. Of those aged 15–24, 35.5 percent were neither in school nor employed.

Enrollment rates of youth in rural areas are especially low. According to 2001 population census data, while in urban areas 28 percent of youth aged 16–18 were not in school, in rural areas the rate was as high as 59 percent (NSS 2003). In upper-secondary education, overall, about 40 percent of those not attending school give lack of financial resources as the main reason. For boys, however, the main reason is that they do not want to go to school, suggesting a lack of relevance (World Bank 2003b).

As a result of demographic changes, the population age structure is significantly distorted, which contributes further to the decline in school-age cohorts. According to the United Nations population forecast, the population aged 5–19 is expected to decline from 898,000 in 2000 to 619,000 in 2010, and to 516,000 in 2020 (Figure 2).

Figure 2: Population Dynamics and Forecast of Cohort Aged 5–19 in Armenia in 1990–2030, in Thousands



Source: UN 2008, at <http://esa.un.org/unpp/p2k0data.asp>.

A dramatic fall in the school-age population since independence and only modest reductions in staffing levels have resulted in staffing ratios that are low in international terms and, more important, unsustainable in the Armenian context. There were only about 11 pupils for every full-time equivalent teacher in 2002.

Despite the substantial reduction in the number of students, there has not been a commensurate reduction in the number of schools; in 2000, there were 1,389, and in 2007, there were 1,362. Most of this decline was the result of school consolidation in urban areas during 2003–05. Of the 1,468 general secondary education schools, 604 (41 percent) were located in urban areas and 864 (59 percent) in rural areas. In terms of size, general secondary education schools enrolled 330 students on average, but with wide variation: 22 percent of schools enrolled fewer than 100 students, 33 percent enrolled 101 to 300 students, 35 percent enrolled 301 to 700 students, and only 9 percent enrolled more than 700 students (Table 1; World Bank 2007b).

Table 1: The Proportion of Small Schools has Increased in Recent Years, 2001 and 2006

Number of Students	2001		2006	
	Number of Schools	Percent of Total Schools	Number of Schools	Percent of Total Schools
Below 100	286	19.8	320	22.4
101–300	393	27.2	471	33.0
301–500	271	18.8	297	20.8
501–700	235	16.3	206	14.4
Above 700	260	18.0	133	9.3
Total	1,444	100.0	1427	100.0

Sources: World Bank (2003) for 2001; Harutyunyan and Davtyan (2006) for 2006.

There are several reasons for delays in consolidation of schools at the *marz* (district) level. First, it was a strategic decision of the government to protect small schools in remote and border areas from application of the per capita financing formula, providing them with little if any incentive to merge with schools in their neighboring settlements. Second, *marzes* have neither the incentive nor the tools to promote school consolidation, because they had no authority to reallocate budgets among schools, or budgets to construct additional classrooms and arrange transportation programs for students and teachers (World Bank 2007b). In the end, it had an impact on the scope of teacher redundancy programs, as well.

II. Objectives of the Staff Optimization Program

As part of the reform package, the Government of Armenia has tried to improve the efficiency of spending as measured, first, by the student/teacher ratio, through various policy measures. Class size norms, teacher workload, and other general education indicators needed to be optimized with the objectives of: (a) effective use of public financing, (b) efficient use of buildings and staff, (c) increase of salaries and living standard of teachers, and (d) improving school performance.

In conformation with targets established in the Mid-Term Public Expenditure Review for 2004–06, the Ministry of Education and Science established annual rationalization plans that anticipated the reduction in the number of teachers from 46,800 in 2003 to 31,100 in 2006, a decline of 34 percent; and a reduction of non-teacher staff from 24,200 in 2003 to 21,300 in 2006, a decline of 12 percent.

The following targets were established for implementation: increasing the pupil/teacher ratio to 15 to 1 by 2006, increasing the workload of teachers to 22 hours per week by 2005, increasing the density of classes, defining the optimal number of pupils in schools, and the merger of schools if necessary. A substantial increase in teachers' salaries was regarded as a necessary condition for the improvement in educational quality. These reforms taken together targeted teacher salaries to more than triple from less than AMD16,000 in 2002 to AMD55,000 in 2006, and to ensure an average increase of 12 percent per year in each of the subsequent program years.

The government began to address the issue in 2003, closing 37 schools and making approximately 2,000 teachers redundant. According to the old Labor Code, teachers made redundant were entitled to receive, from the State, three months' severance pay and up to six months' unemployment assistance (a fraction of salary, based on years of service), and had access to the limited job search and training services provided by the State Employment Service.⁴

However, these mandatory benefits were perceived as being insufficient. This led to the design and implementation of the Staff Optimization and Social Assistance Program (SOSAP) financed through the World Bank Education Quality and Relevance Project, to help rectify this problem as part of a broader reform to improve the quality and relevance of the system. The SOSAP aimed to support new policies and institutional arrangements to rationalize the school system and benefit programs targeting redundant teaching staff.

Among the program tasks to be addressed were targeting sources of resistance, facilitating reentry into the labor force of redundant teachers, and making severance and other programs attractive and cost-effective. Teaching staff that were not redundant were expected to benefit the most through: (a) more competitive salaries, (b) better conditions of public service employment, and (c) enhanced intrinsic rewards of public service employment.

More broadly, the government's reform program was designed to bring the wages of teachers closer to international norms (as a proportion of GDP per capita), to promote teaching as a full-time profession with increasing quality.

III. Labor Market and Institutional Constraints

SOSAP was implemented in a very complicated labor market situation. Typical of many Europe and Central Asia countries, workers and employees in Armenia displaced in the "old" sectors, including the public sector, have had few chances to find jobs in the "new" sectors, and the scarcity of productive job opportunities and the underuse of labor are still among the major socioeconomic problems in the country.

Armenia has one of the worst outcomes of transition reforms, as far as labor markets are concerned. Overall, according to the labor force survey data, the employment rate in Armenia is very low, at 35.5 percent in 2002, and 38.5 percent in 2006 (population aged 15 and over). The unemployment rate, in turn, is very high—35.9 percent in 2002, but with a decline to 28.1 percent in 2006. Unemployment tends to be long term in nature, and nearly two-thirds of the unemployed have been out of work for a year. In 2006, the average uncompleted unemployment spell was 14.6 months for both men and women. The long average duration of unemployment for most workers indicates a stagnant unemployment pool in Armenia.

⁴ In the 2004 Labor Code, severance pay was reduced to one monthly wage.

Institutional constraints and challenges to the provision of assistance to redundant employees in Armenia are also significant. Prior to downsizing the education sector, employment services in Armenia were already overloaded with registered job seekers. In early 2003, the State Employment Service (SES) had around 127,000 registered unemployed (with the status of unemployed), including 4,100 former teachers. By July 1, 2003, following the first wave of mass redundancies of teachers, the SES had 6,400 teachers registered as unemployed, many of them long-term unemployed. The number of registered job seekers was 153,000, or 10.6 percent of the labor force.

Most registered unemployed in the country are not entitled to unemployment benefits because they do not have a sufficient record of insurance contribution payments, or they have exhausted their entitlement. In 2003, only 5,800 unemployed received the benefit, and 7,300 individuals from families without working household members received material support. The registered job seekers-to-vacancy ratio in Armenia was and still is extremely high since the vast majority of job openings are not advertised, and most employment opportunities are hidden, including in the public sector. Only 958 vacancies were registered by the SES in January 2003, including 754 blue-collar vacancies. However, according to Ministry of Education and Science data, there were around 800 vacancies for teacher staff in rural and remote areas not registered with the SES.

The SES is the main government body implementing employment policies. It has an extensive network of regional employment centers (RECs), which covers the entire country. The structure of the SES includes 51 regional centers—41 in *marzes* and 10 in Yerevan city. Staff caseload in Armenia—the ratio of clients to employment counseling staff—is a critical constraint to SES performance. In late 2003, the SES staff had on average 280 registered job seekers per one employee. Currently, the ratio has dropped to around 150 job seekers per one SES staff (mid-2008).

More important, in Armenia, expenditures on labor market programs are limited in both absolute and relative terms. In recent years, allocations to the labor market programs by the government amounted to 0.4 to 0.5 percent of the current expenditures from the consolidated budget, and their share of GDP was less than 0.1 percent. Expenditures in Armenia are significantly lower than the averages for Central and Eastern European countries, where expenditures on labor market programs on average amount to 0.4 percent of GDP (Betcherman, Olivas, and Dar 2004).

The rate of participation of registered unemployed in active policy programs (measures) implemented by the Armenian SES is low but has shown an upward trend. In 2003, 35.5 percent of officially registered job seekers were involved in active policy programs compared to 25 percent in 2000. At the same time, individuals receiving counseling services dominate among the participants of active labor market programs (ALMPs). Other than job counseling, public works programs are the main activity of ALMPs, which might not be suitable for redundant teachers. The number of people participating in paid public works during 2001–03 varied between 5 and 7.5 percent of the total number of officially registered job seekers, while very small numbers—below 0.3 percent of the

total number of officially registered job seekers—participated in training programs. Capacity and financial resources of the SES to provide adequate support to would-be redundant teachers were very limited if not nonexistent.

Another critical “constraint” in the provision of assistance to redundant teachers was the perception among teachers themselves about their future engagements following contract termination. A teacher’s job is considered, by a vast majority of teachers, as a profession for life, and alternative job opportunities beyond the education sector were considered unacceptable by many of them.

In designing a benefit package to mitigate the impact of redundancies, a survey was conducted by the government of those teachers made redundant in 2003. According to the survey data, despite the low salaries for teachers, almost 70 percent have worked in the same school for their entire career (MoES 2003). The survey also revealed that approximately two-thirds of redundant teachers with a pedagogical background have no desire to work in a field other than teaching, and approximately half the teachers with a non-pedagogical background had the same view. This also reflects social considerations. Very few teachers are willing to step down to positions lower than the ones they held previously, or to accept jobs for which they are overqualified, given the fact that in most local communities no alternative jobs were available.

IV. Design of Staff Optimization Activities

The survey of teachers made redundant in 2003 also revealed their preferences for assistance (MoES 2003). Typical of similar programs, cash payments were overwhelmingly the most preferable form of assistance: out of the menu of options proposed, around 95 percent of teachers opted for a lump sum payment equal to six months’ average salary. This might be explained by the fact that teachers do not accept long-term assistance due to a lack of faith in the future. Of the teachers who had chosen training programs, around one-quarter expressed their wish to enhance their professional skills in teaching, indicating that they would prefer to stay in the sector, and around two-thirds wanted to obtain professional skills in other fields.

Given the interest of potentially redundant teachers in supplementary severance payments, a benefit package was designed, accordingly. Initially, only those teachers age 50 or over but who had not reached the retirement age were entitled to cash payments/benefits in the amount of his or her six monthly wages but not less than of US\$50. Only those employees in the pre-retirement age bracket that actually left the education system were considered as qualifying for Bank-financed supplementary severance payments.

Not all redundant teachers benefited from the program, which resulted in significant monetary savings. Thus, in late 2006, adjustments were made in the program to provide financial assistance to those teachers who had been registered as redundant before December 31, 2006, but who for various reasons had previously been disqualified from benefiting from the program (for example, the age 50 limit for participating was

lowered). This change in eligibility rules almost doubled the number of beneficiaries of cash payments.

Training services were also proposed for potential beneficiaries so the persons could acquire new skills that might be required by the labor market, thus making it easier for them to find new jobs and to transition to new employment. The aim of the program was to improve the professional knowledge and capabilities of the participants, and to increase their chances for new employment or small business entrepreneurship.

Small business assistance services were offered to assist redundant teachers in determining whether they have the interest, aptitude, and skills to start small businesses or become self-employed, and if so, to help them develop the necessary business plans, start-up businesses, and successfully continue to operate the businesses. New business start-ups face major difficulties in trying to secure a loan, and high interest rates are a negative factor. Therefore, in many transition countries, self-employment programs are supported or are basically micro-credit programs. Unfortunately, micro-credit facilities were not part of the program, which limited the interest of participants in this measure.

Because there were many redundant teachers that needed serious psychological counseling, provision of relevant assistance was urgent. An extensive three-week psychological counseling course was included in the program for solving potential social and family problems that occurred during mass layoffs.

Finally, the program offered the possibility of relocation, with the objective of raising the chances for successful acquisition of a new job. It was assumed that a small percentage of teachers made redundant might be rehired in other schools, predominantly in remote and rural areas. Provision of relocation (mobility) services and relocation grants reimbursed for the costs of the relocation expenses, including travel expenses of the family and transportation of personal belongings up to a maximum of US\$500 per family. However, in December 2006, this component was amended to restrict the list of teacher vacancies, and entitlement to a relocation grant was limited only to those relocating to high mountainous and border settlements.

Each redundant teacher, including those who chose to receive supplementary severance/cash payments, could receive only one form of service or participate in only one assistance program through SOSAP. Thus they could not receive payments if they decided to participate in a training program. However, they could be involved in different programs implemented by state employment services not related to SOSAP.

Overall, the specially designed and funded redundancy program provided redundant pedagogical staff with benefits beyond the statutory minimum provided by the Labor Code or available through the SES.

An important element of the program was criteria for redundancies and eligibility for additional assistance. Only teachers made redundant as a result of the government rationalization program, for example, since January 2003, and who worked at least half a

full-time position, would be eligible for additional assistance. With respect to adverse selection, the government has developed, in consultation with schools and teachers, criteria that required the least-qualified teachers and/or those within five years of retirement to be made redundant first (and in the case of those with equal qualifications, those with weaker performance). The following criteria were developed for identifying the order in which teachers would be made redundant within the target numbers established by the Ministry of Education and Science: (a) teachers with secondary education, (b) teachers with vocational education, (c) teachers with incomplete higher education, and (d) teachers of retirement age. According to the 2003 survey of redundant teachers, around half of teachers below retirement age did not have higher education.

In the following years, redundancies occurred among the “core” teachers’ staff with predominantly higher pedagogical education, which required a selection among the equally educated staff, based on their performance and recertification results. Certain categories of protected employees are excluded from redundancy by labor law, such as pregnant women or mothers with small children. The same applies to employees who have lost their functional capacity as a result of injury at work or occupational disease and who could retain their position and duties until they recover their functional capacity or are granted disability status.

The following detailed steps and procedures for teachers’ staff reduction were developed and applied:

- Jobs are classified according to the new job classification system.
- Employees currently in jobs that are being reclassified are placed on surplus lists.
- Employees who are on surplus lists are matched according to their qualifications to newly classified jobs and available vacancies in the school system.
- Employees whose qualifications match the new job requirements are given new job offers.
- Employees who do not meet the requirements or who do not accept the offer are placed on the potential redundancy lists.
- The list of names with potential redundancies is then refined according to the criteria for redundancies (employees who enjoy employment protection are excluded).
- From the remaining list of specific individuals designated for redundancy (those not subject to exclusion), an amended list of names is sent to trade union organizations for comment.
- The education department in the *marzes* (districts) prepares redundancy notification letters with assistance from the Rationalization Team.
- School managers are trained to hand out letters to people designated as redundant.
- Advance notification is according to seniority. Employees who are notified are obligated to contact the Rationalization Team twice a month.

Clearly defined criteria and procedures for handling redundancies enabled the program to be implemented smoothly.

To address SES capacity constraints, it was necessary to create an institute of consultants and intermediaries to handle the significantly growing numbers of job seekers that would apply to the regional employment centers as a result of retrenchments in education, but also in other sectors. A Labor Assistance Group of 12 private consultants was hired with the aim of assisting the SES and the Regional Departments of Education (the core of the Rationalization Team) in: (a) developing and maintaining the administrative framework for the SOSAP, including contracting the services and arranging severance and other payments through the Pension Fund to implementing agencies to reimburse them for services delivered to the redundant teachers; and (b) providing ongoing monitoring of the delivery of labor redeployment services for job counseling, retraining, small business assistance, mobility assistance, and other forms of assistance. In addition, an Inter-ministerial Committee for Rationalization Assistance to coordinate the efforts of various government agencies was formed, which held 17 meetings during 2004–07.

V. Implementation and Outcomes of the Program

In order to receive assistance, redundant teachers had to register with the SES, initially as job seekers (during the period of notification). After being made redundant, individual displaced teachers were supposed to register with the National Employment Service as unemployed and to receive temporary income support (unemployment benefits or unemployment assistance), and participate in active labor market programs proposed by the SES staff. Out of 7,251 teachers made redundant between 2003 and mid-2007 (16 percent of the teachers in general secondary education schools in 2003), 3,159 teachers registered with the SES and to start receiving unemployment benefits; slightly over 1,000 teachers made redundant were at retirement age and were not eligible for unemployment benefits. (See Table 2 for a summary of the beneficiaries of the staff optimization and social mitigation program).

Table 2: Redundancies in the Armenia General Education Sector, July 15, 2003–June 30, 2007, and Participation in the Staff Optimization and Social Assistance Program (SOSAP)

Total number of teachers made redundant (according to the data from schools)	7,251
Of which number of teachers reaching retirement age	1,031
Total number of redundant teachers receiving counseling by SES and Labor Assistance Group teams	5,036
Number of redundant teachers registering at SES offices	3,159
Number of redundant teachers placed in job	1,736
Beneficiaries of the SOSAP	
Supplementary severance payment	1,731
Training and retraining	523
Psychological counseling	69
Relocation grant and services	28
Assistance starting up a small business	-
Total	2,351

Source: SES.

Potentially redundant teachers started to receive basic information at the prenotification stage about their legal rights, and counseling about services and service providers available, labor market information including the names of local and regional firms that offer different kinds of jobs and what are the required qualifications for the jobs, and other job search assistance and placement services. Altogether, 5,036 teachers, or around 70 percent of redundant teachers, were seeking assistance and received counseling services provided by the SES staff and the Labor Assistance Group.

Potentially redundant teachers were provided broadly based counseling and job search assistance on their legal rights, vacancies available, potential employers in the region, and so forth. This assistance is relatively inexpensive, and providing job seekers with better information on jobs can help shorten unemployment spells.

The counseling services provided by the SES staff and Labor Assistance Group covered all services that deal with job counseling, including broadly based information on legal rights and programs available, provision of specific labor market information, including the local and regional labor market situation, jobs offered and the qualifications needed to apply for them, and counseling services during the actual job search, including practical guidance in drafting job applications and succeeding in job interviews.

Of the benefits and services provided through SOSAP, the most popular was the supplementary severance payment of six months' wages, received by 1,731 redundant teachers, including 815 teachers in 2007 following amendments to eligibility rules promulgated in December 2006.

Training courses were taken by 523 redundant teachers, predominantly two-month computer courses in 24 territories of Armenia (by 518 participants), but also training courses on civil service (five participants).⁵ Twenty-eight redundant teachers took an extensive three-week psychological counseling course. Due to lack of access to credit resources for beginning self-employment or for starting up small businesses, there was no interest in relevant business courses.

One of the most difficult decisions the families of redundant teachers may have to make is whether to relocate: 69 families decided to move to vacant teacher jobs in high mountainous and border settlements.

Around one-third of redundant teachers participated in a specially designed social assistance program, but 1,736 former teachers, according to SES data, found alternative jobs in the formal sector of the economy, despite the high unemployment rate in Armenia.

The reasons for relatively low demand for services were revealed in the initial 2003 demand survey (MoES 2003): (a) the majority of teachers were involved in subsistence agriculture as an alternative source of income and/or were supported by other family

⁵ Of the 16 organizations bidding to conduct computer courses, Business Consult, Ltd. was the winner.

members, so they had other means of supporting themselves and their families. The majority of redundant teachers have three to five members in their family, and another 19 percent have six to eight members, so intrafamily transfers helped traverse this critical stage of transformation, and some of them found alternative employment in their own household; (b) by assessing the current situation in the labor market negatively, they did not expect any vacancies or proposals for work, even following training courses; (c) redundant teachers considered themselves uncompetitive in the labor market, particularly those aged 40–60; and (d) as noted, many considered other work, except pedagogy, unacceptable, particularly those aged 45–60.

One of the reasons for low take-up might be the fact that a large portion of redundant teachers tend to be older, have longer tenures, and have specific qualifications relevant only for a particular job at a school. Such characteristics mean that redeployment of these workers is very difficult—the probability of finding a job decreases with age. It also means that a significant percentage is not about to return to the labor market (because of their age characteristics) and does not require placement services.

There are also psychosocial problems of take-up of existing social assistance. Many individuals refuse to take state-provided social assistance because they consider it humiliating (the so-called stigma effect).

Overall, the Armenian government has made considerable progress in rationalizing the general education system since the introduction of reforms in the education system in 1998 and implementation of SOSAP during 2003–07. About 7,300 teachers were made redundant. This is half of the teachers initially anticipated. However, the total number of teachers in general education schools was reduced during 2002–07 by over 15,000 due also to attrition, including a freeze on new hiring and retirement, which, in 2007, triggered the Ministry of Education and Science to close the redundancy program.

The cost of SOSAP was relatively modest compared to efficiency gains achieved—US\$437,000, or US\$60 per redundant teacher, or US\$180 per beneficiary of the program (excluding the costs of the SES in provision of unemployment benefits and counseling services).

As noted, despite a substantial reduction in the number of students and teachers, there has not been a commensurate reduction in the number of schools. In 2000, there were 1,389, and in 2007, there were 1,362. This low reduction was due to a decision by the government to protect many small schools, especially those in rural and remote areas, from closure. Only four schools were closed and 73 schools were merged into 36 schools. As a result, the proportion of small schools with fewer than 300 students increased from 47 percent in 2001 to 55 percent in 2006.

As the number of students, driven by demographic changes, declined during 2001–07 by over 20 percent (from 560,637 to 446,140), the number of classes were reduced by 24 percent (from 27,059 to 20,494), the number of teaching staff positions by 35 percent (from 48,666 to 31,765), and the number of non-teaching staff positions by 34 percent (from 28,870 to 19,209) (Table 3).

Table 3: Key Statistics of General Secondary Education Schools, 2001–07

	2001	2002	2003	2004	2005	2006	2007	2001–07
No. of schools	1,389	1,391	1,392	1,359	1,354	1,362	1,362	-1.9
No. of classes	27,059	25,861	24,332	22,016	21,365	20,878	20,494	-24.3
No. of students	560,63	533,39	513,62	493,43	477,01	464,06	446,14	-20.4
No. of staff positions ^a	77,536	75,680	72,247	62,316	56,218	53,880	50,974	-34.3
Teachers	48,666	47,280	47,411	37,338	34,204	33,496	31,765	-34.7
Non-teaching staff	28,870	28,401	24,836	24,978	22,015	20,384	19,209	-33.5
Administrative staff	—	—	3,913	4,476	4,355	4,358	4,297	9.8
Support staff	—	—	20,923	20,502	17,660	16,027	14,912	-28.7
Memo								
Classes per school	19.5	18.6	17.5	16.2	15.8	15.3	15.0	-22.8
Pupils per class	20.7	20.6	21.1	22.4	22.3	22.2	21.8	5.1
Pupil/teacher ratio	11.5	11.3	10.8	13.2	13.9	13.9	14.0	21.9
Pupil/non-teaching staff ratio	19.4	18.8	20.7	19.8	21.7	22.8	23.2	19.6

a. On a full-time basis.

— = Not available.

Source: World Bank 2007b.

Even though the reductions were lower than the government's original targets, the rationalization program has resulted in significant efficiency gains: the student-teacher ratio increased from 10.8 in 2003 to 13.9 in 2006 and the average teaching load increased from 18 hours to 22 hours per week.⁶ The considerable reduction in staff positions has allowed the government to increase nominal wages and salaries for teaching and non-teaching staff. However, the student-teacher ratio is still much lower in Armenia than the OECD country averages.

Table 4: Average Monthly Salaries of Teaching and Administrative Staff (in AMD)

	2001	2002	2003	2004	2005	2006	2007 Budget	Percentage Change 2001–07
Salary + Benefits								
FTE teachers ^a	12,609	15,388	18,195	30,589	50,551	58,307	73,999	487
Administrators	7,852	7,852	18,470	13,317	51,762	60,092	76,295	872
Support staff	6,932	7,979	7,718	13,517	21,181	21,185	23,131	234
Ratio of Salaries to GDP Per Capita^b								
FTE teachers ^a	0.41	0.44	0.43	0.62	0.87	0.85	0.98	
Administrators	0.26	0.22	0.44	0.27	0.89	0.87	1.01	
Support staff	0.23	0.23	0.18	0.27	0.36	0.31	0.31	
Ratio of Salaries to Avg. Salaries of Govt. Officials								
FTE teachers ^a	0.34	0.36	0.28	0.36	0.55	0.56	0.64	
Administrators	0.21	0.18	0.29	0.16	0.57	0.57	0.66	
Support staff	0.19	0.19	0.12	0.16	0.23	0.20	0.20	

⁶ When out-of-class activities such as lesson preparation, grading, and so on are taken into account, the teachers' workload may be as high as 27 hours per week (Harutyunyan and Davtyan 2006).

Per Student Budget (AMD)	29,565	32,491	37,228	51,003	73,213	87,884	106,692	261
Annual Increase in per Student Budget		9.9	14.6	37.0	43.6	20.0	21.4	

a. FTE = Full-time equivalent teachers.

b. Calculations of salaries as a percent of per capita GDP are based on an assumption that staff are paid for 12 months.

Source: World Bank 2007b.

The average monthly salary and benefits for full-time-equivalent teachers increased by 487 percent in nominal terms (381 percent in real terms, adjusted according to the Consumer Price Index) during 2001–07, and for administrative staff by 872 percent (684 percent in real terms) and support staff by 234 percent (184 percent in real terms). (Table 4). By 2007, the average salary for teachers in Armenia equaled GDP per capita (it is now close to OECD levels in relative terms), and was 64 percent of the average salary of government officials. More important, owing to the steady increase in the overall general secondary education budget but also to a drop in the number of students, government expenditure per student (excluding capital expenditure) increased from AMD29,600 (US\$53) in 2001 to AMD106,700 (US\$312) in 2007⁷ (World Bank 2007b). The growth in the budget for general secondary education has been driven primarily by significant increases in wages and salaries for teachers, to which SOSAP contributed, as well.

VI. Conclusions and Lessons Learned

Many developing and transition countries face the challenge of redeploying large numbers of workers and employees who become redundant in the process of enterprise restructuring and privatization, or staff reduction in the public sector: facilitating their reentry into the workforce or moving them into inactivity or retirement. It also will require sufficient public resources to provide a safety net that offers adequate protection against temporary and permanent reduction in income of laid-off workers and their families.

The most common method for dealing with workforce reductions is the provision of retirement and mandatory or supplementary severance benefits to encourage voluntary departures and compensate for layoffs. Such programs appear quite costly in the short run but are politically and socially acceptable, and the financial and economic returns can be high. In many countries, unemployment benefits also play an important role in smoothing consumption following layoffs, and hence represent a valuable form of insurance that generally is not available from private markets.

However, as demonstrated by the recent empirical evidence from transition economies, severance pay is a passive assistance measure that has mostly been used by newly redundant workers for their immediate consumption needs and does little to facilitate job search and alternative employment opportunities. Thus, as was the case in Armenia's

⁷ Using exchange rates at US\$1 = AMD555.1 in 2001 and US\$1 = AMD342.1 in 2007.

SOSAP for the general education sector, in addition to supplementary severance payments, a variety of services are needed to address difficulties commonly experienced by displaced employees who are trying to reenter the labor market, including but not limited to job search assistance and counseling services, provision of information on the labor market, on legal rights of job seekers, on services and service providers available, including training, relocation assistance, and so forth. This job search assistance should not be restricted to searching only for jobs similar to the individual's previous job, but should include jobs not related to his or her profession.

To be effective, the measures must be carefully designed and targeted. Furthermore, there should be continuing social monitoring of displaced employees to ensure that the services are reaching the most needy employees and that the most vulnerable are identified early and provided with special assistance, as needed. In the case of Armenia's teachers, surveys of benefits in demand, and annual surveys of redundant teachers, were conducted and, as a result, relevant corrections were made in the program design (MoES 2003; SES 2007). In particular, it was identified early on that a small group of beneficiaries need extensive psychological counseling, which was added to the program.

It is also important to launch relevant social mitigation measures and services before workers and employees lose their jobs. Pre-layoff services offered "on-site" or at the workplace before the actual layoff occurs are intended to help minimize the workers' difficulties that precede and accompany a layoff. Such services help them make a smoother transition to post-layoff services, new employment, or further training.

The SOSAP for the general education system in Armenia had the added benefit of building the capacity of the State Employment Service to handle large-scale redundancies in the public sector, the incidence of which is likely to increase as reforms in the workings of government continue, including in the health sector and in the civil service.

Management of mass layoffs requires a strong political commitment. Significant redundancies have been involved. The building of widespread public understanding, if not active support, for this intensely political process among a larger group of stakeholders is also essential. Therefore, it is critical to involve all the key stakeholder groups in the process early and to communicate the program clearly and often in a tailored manner to all the key groups.

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Summary Findings

This paper reviews the experience of Armenia with the displacement of more than 7,000 teachers during 2003–07 as part of structural reforms in general education. In addition to supplementary severance payments, a variety of services were needed to address difficulties commonly experienced by displaced employees, including job search assistance and counseling services, provision of information on the labor market, on legal rights of job seekers, on services and service providers available, including training, relocation assistance, and so forth. The findings of the paper suggest that the staff rationalization program has resulted in significant efficiency gains: the student-teacher ratio increased from 10.8 in 2003 to 13.9 in 2006. The considerable reduction in staff positions has allowed the government to significantly increase nominal wages and salaries for teaching and non-teaching staff.

HUMAN DEVELOPMENT NETWORK

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