Growth, Inequality and Poverty in Armenia

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Lead Author
Keith Griffin

Contributors:

International
Thomas Kelly
Terry McKinley
National
Bagrat Asatryan
Levon Barkhudaryan
Armen Yeghiazarian

Preface

This study of Growth, Inequality and Poverty in Armenia was sponsored by the United Nations Development Programme. The eradication of income poverty and the promotion of human development are, of course, major objectives of UNDP. These objectives have been pursued around the globe, in transition and developing economies, usually by encouraging countries to adopt policies, projects and programmes aimed at specific groups of the poor, the deprived, the vulnerable and the excluded. These interventions sometimes come under the label of social policy, sometimes under the label of anti-poverty policy and sometimes under the label of human development policy, but regardless of the label, the interventions operate essentially at the microeconomic level. I have been involved in such programmes in a number of countries.

Many of the projects are successful in their own terms, but it has become painfully obvious that microeconomic interventions often are overwhelmed by macroeconomic events. Financial crises and economic recession, and the policy response to them, often have had a greater effect on the fate of the poor than specific policies and programmes intended to improve their well being. Recognition of this has led UNDP to explore whether it is possible to design macroeconomic policies which are more friendly to the poor and whether the slogan favouring pro-poor growth can be translated into reality. This study of Armenia should be seen as part of that exploration.

Armenia is an excellent country to study because during its transition to a market economy it has experienced a precipitous fall in the average standard of living and a dramatic increase in inequality in the distribution of income and wealth. As a result of these two macroeconomic phenomena, the proportion of the population living in poverty has risen to unprecedented levels. Where once poverty was uncommon, today it is widespread. The policies that produced these outcomes were similar to those adopted in other republics of the former

Soviet Union and recommended by the Bretton Woods institutions and major bilateral donors. The questions this study addresses are why did the catastrophe occur and what can be done to improve the situation in future.

The UNDP invited me to lead a small team to prepare a study of pro-poor growth in Armenia. Terry McKinley and I visited Armenia for a week in March 2002 to lay the groundwork, meet government officials, collect documents, agree on an outline of the study and assign responsibilities among the international and local consultants. Terry McKinley returned to Armenia for an additional two weeks in June and July while Tom Kelly and I arrived in early July and stayed for a month. The report was completed in early August. Terry McKinley and I then returned to Armenia in October for a week of presentations and discussions with university faculty and students; non-governmental organizations, research institutes and civil society groups; foreign aid donors and UN agencies; and parliamentarians, government ministers and senior civil servants.

Joel Boutroue, the UNDP Resident Representative in Armenia, worked quietly behind the scenes to ensure the success of the project. I made it a point to deliver drafts of chapters to him on Friday afternoons, just in time to spoil his weekends. We are very grateful to him for the interest he took in our work and the support he gave us. Amal Medani, the Deputy Resident Representative, was very helpful in the early stages of the project, but she was shrewd enough to go on leave during the peak of our activity and thus avoided most of our unreasonable demands.

Nune Yeghiazarian was the person directly responsible for our project and we owe her a great deal. Nune looked after us extremely well despite the fact that ours was only one project in her large portfolio. She always managed to find time to satisfy our always urgent requests, and to remain cheerful while doing so. Thank you, Nune. Astghik Mirzakhanian and her small research team in UNDP were an invaluable source of information and support. Astghik invariably had the

answers to our questions or had the sources at her fingertips or knew who to telephone in government to get the answers. She and her team are impressive and the energy, enthusiasm and orderly chaos which suffuses their open-plan office are marvels to behold. In addition to Astghik, I would like to mention Nairuhi (Nara) Jrbashyan for special thanks. We would not have completed our work in the time available without their help.

Gagik Shahinyan was Mr. Fixit. Whatever the problem, from visas to air-conditioning, Gagik had a solution. He also had an endless supply of jokes which kept morale high and the world in perspective. Seldom in my experience have so many people in a busy UNDP office given so much help to a group of visitors as we received in the UNDP office in Armenia. We are very grateful indeed.

We also received a great deal of help from members of the government. I would like to thank Stepan Mnatsakanian, the President of the National Statistical Service, and members of his staff for supplying data willingly and promptly. The Ministry of Finance and Economy was very helpful on numerous occasions and I would like to thank Tigran Khachatrian, the Deputy Minister, and Sisak Sargsian, the Head of the Macroeconomics Department, for their assistance. The Poverty Monitoring and Analysis office within the Macroeconomics Department of the Ministry of Finance and Economy kept in close touch with us and provided much of the data we requested. We are very grateful to them. Finally, I would like to thank Tigran Davtsian, the Deputy Minister in the Ministry of Trade and Economic Development. Mr. Davtsian was the first government official I met in Armenia and he kindly took the time to give me a very full briefing on the state of the economy and the government's economic policies, and to answer my many questions. His courtesy is greatly appreciated.

The typescript was prepared partly in Riverside, California by my assistant, Pamella Rousseau, and mostly in Yerevan by Zaruhi (Zara) Demirtshyan. I was impressed by Zara's

competence, positive outlook on the world and high spirits and thank her very much for all her help.

Keith Griffin

Notes on the Contributors

Bagrat Asatryan is Executive Director of ArmImpexBank. He was Chairman of the Central Bank of Armenia from 1994 to 1998. He served as a Member of Parliament from 1990 to 1997 and was President of the Union of Armenian Banks in 1998-99.

Levon Barkhudaryan is Chairman of the Board of ArmImpexBank. He was Minister of Finance and Economy in 1993-97 and again in 1999-2000. In between he was Adviser to the President of Armenia (1997) and Ambassador to Canada (1997-99).

Keith Griffin is Distinguished Professor of Economics of the University of California, Riverside. He was formerly President of Magdalen College, Oxford. He has served as an adviser and consultant to many governments, international agencies and academic institutions in Asia, Africa and Latin America. He is the author of Studies in Development Strategy and Systemic Transformation and of Studies in Globalization and Economic Transitions and editor of books on China, Mongolia, Vietnam and Uzbekistan.

Thomas Kelly is a Research Professor at the US International University in Nairobi, Kenya. He is a specialist on poverty and income distribution, as well as environmental problems in developing countries. He has worked at universities in Latin America, Africa and the United States and as a consultant for the Inter-American Development Bank and UNDP. He is the author of Economic Adjustment and Poverty in Mexico and a number of articles on poverty and environmental issues, and is co-editor of Social Capital and Economic Development: Well-Being in Developing Countries.

Terry McKinley is Senior Policy Adviser on poverty and macroeconomic policies in the Bureau for Development Policy, UNDP, New York. He is the editor of UNDP's global poverty report, Overcoming Human Poverty. He is the author of The Distribution of Wealth in Rural China, co-author of Implementing a Human Development Strategy and editor of Macroeconomic Policies, Growth and Poverty Reduction. Much of his work in recent years has centered on China, Mongolia, Central Asia, Vietnam and the transition economies of the former Soviet Union and eastern and central Europe.

Armen Yeghiazarian is Associate Professor of Economics at Yerevan State University and Chairman of the Union of Banks. He has been Minister of Economy (1993-95), a Member of the National Assembly (1995-99) and Adviser to the Prime Minister (1999-2000).

Contents

Chapter 1

Investment and Growth

Keith Griffin

Armenia is a small, landlocked country located in the south Caucasus that has embarked upon a transition from a centrally planned to a market oriented economic system. The transition has not gone smoothly, not least because Armenia has received a series of blows which have seriously affected the economy. First, in December 1988, there was a massive earthquake which covered about 40 per cent of the country, destroying the town of Spitak and neighboring villages, inflicting major damage on the cities of Gyumri and Vanadzor, and disrupting production throughout the economy. It is estimated that 25,000 people died in the earthquake and 500,000 were left homeless.[1]

Next, there was the disintegration of the USSR in 1991 and the achievement of political independence. The collapse of the Soviet Union was accompanied by the dissolution of the Council for Mutual Economic Assistance (CMEA) and the consequent disruption of trade among the Soviet bloc countries, a sharp deterioration in Armenia's terms of trade (due largely to having to pay the world price for imported oil), and the sudden loss of export markets for Armenia's industrial output. This last point is important. Before the transition began, Armenia was a heavily industrialized country, with 44.5 per cent of GDP in 1990 originating in the industrial sector. Output consisted of capital and intermediate goods (machinery, synthetic rubber, chemicals, electronics); the raw materials were imported and the mostly semi-finished products were exported to other parts of the

USSR. The dissolution of CMEA destroyed this pattern of trade and with it, the viability of a large part of Armenia's industrial sector.

Then, to add to the misery, there was a war with the neighbouring country of Azerbaijan over the enclave of Nagorno-Karabakh. This erupted shortly after independence and concluded with a ceasefire in 1994. In addition to the human costs of the conflict, there was a major economic consequence, namely, the closing of the borders with Azerbaijan and Turkey. Armenia was virtually isolated. There was a small corridor in the south for exports to Iran and there was the northern border with Georgia, which itself was afflicted with civil conflict and a poor transport system. Thus Armenia began its transition as a semi-closed economy with high transaction costs and unusually high "natural" protection.

Finally, there was the transition strategy itself. Along with almost all of the former Soviet bloc countries, Armenia adopted a variant of "shock therapy" and tried to introduce a series of major economic reforms as rapidly as possible. These reforms included comprehensive price liberalization; the transfer to the private sector of state owned land, housing and productive enterprises; a reduction in public expenditures, the introduction of some tax reforms and a general shrinkage (and weakening) of the state; the introduction of tight monetary policies to control inflation; and the adoption of free trade policies, including very low tariffs, abolition of non-tariff barriers to trade, removal of controls over capital movements, currency convertibility and a floating exchange rate.

The purposes of these reforms were (i) to achieve macroeconomic stability, (ii) to accelerate the rate of economic growth and (iii) to increase efficiency in the allocation of resources through a structural change in the composition of output. Unfortunately, only the first objective was achieved. Inflation was indeed brought under control, but output

and incomes fell and the economy went into a deep depression from which it has yet to recover fully. The composition of output changed, but this occurred not by reallocating resources from socially unproductive to socially profitable activities but by contracting output in those sectors which became uncompetitive after price liberalization without a corresponding increase in output in other sectors.

Macroeconomic stabilization

At the beginning of the transition period, Armenia experienced five years of accelerating inflation and four years of sharply falling output. The basic data are presented in Table 1.1. During the socialist period, prices were relatively stable; they were administratively determined and did not reflect the forces of supply and demand. That is, the set of relative prices reflected neither the marginal costs of production nor consumer preferences. Once prices were liberalized, however, market forces came into play. Not only did relative prices change, as was intended, but the average level of prices rose dramatically.

In 1990 the rate of inflation still was modest, only 10.3 per cent a year. The following year it rose to 274 per cent. During the next three years Armenia experienced hyper-inflation, with the peak rate of inflation occurring in 1994 when it was 5273 per cent. Stringent monetary policies then brought inflation under control. By 1998 the rate of inflation was less than ten per cent, in 1999 it was less than one per cent and in 2000 prices actually fell slightly. Indeed one could argue that the Central Bank has gone too far and the economy could benefit from some relaxation of monetary policy, particularly if additional credit were used to finance public sector investment in infrastructure and accelerate growth. To an outside observer it appears that the control of inflation has become an end in itself rather than a means to achieve socially desirable objectives.

Table 1.1
Basic Macroeconomic Indicators: the Growth of Real GDP and the Change in Consumer Prices, 1990-2001.
(per cent per annum)

	Gross Domestic Product	Inflation
1990	-7.4	10.3
1991	-11.7	274.0
1992	-41.8	1 346.0
1993	-8.8	3 732.0
1994	5.4	5 273.0
1995	6.9	176.7
1996	5.9	18.8
1997	3.3	13.8
1998	7.3	8.7
1999	3.3	0.6
2000	5.0	-0.8
2001	6.5	3.4

Sources: Tacis, Economic Trends Quarterly Issue, Armenia, July-March 1998, May 1998, Table 1.9, p.13; Central Bank, The 2001 Monetary Policy Program, Yerevan 2001, Appendix Table 2.1, p.31; UNDP, 10 Years of Independence and Transition in Armenia, National Human Development Report 2001, Armenia 2001, p.23 and Table 2.1, p.58.

Be that as it may, price stabilization has been achieved. The growth rate, in contrast, has been disappointing. It should be recognized, however, that growth of net material product (the Soviet national accounting concept) had been falling in Armenia since the mid-1960s. During the decade of the 1970s, net material product grew about 7.7 per cent a year whereas in the 1980s it grew only about 3 per cent a year.[2]

The growth process was thrown into reverse by the series of shocks mentioned earlier. Gross domestic product fell more than seven per cent in 1990, nearly 12 per cent in 1991, by a catastrophic 41.8 per cent in 1992 and by nearly nine per cent in 1993. By then more than half the population had been thrown into poverty and more than a quarter of the population had an income so low that they were unable to satisfy the minimum need

for food.[3] Economic recovery began in 1994 and growth rates have remained positive ever since. The depression (sometimes euphemistically called a transition recession) was so deep, however, that even after eight years of growth, output and incomes remain far below the levels enjoyed in 1989.

The cumulative loss of income

One way of visualizing what has happened in Armenia is to estimate the cumulative loss of income during the transition period. These estimates are reported in Table 1.2. As can be seen in column 1 of the table, at its lowest point in 1993, output was only 40.7 per cent as high as it had been in 1989. Even by 2000, after seven years of growth, output was only 57.6 per cent of the 1989 level. Assume, rather optimistically, that from 2001 onwards the rate of growth rises to 10 per cent a year. It still would take another six years, i.e., until 2006, for Armenia to regain the level of output of 1989. If the growth rate were 7 per cent a year, still very rapid, it would take eight more years for the country to get back to where it was in 1989. That is, after 19 years of transition, Armenia would at last be back to square one.

The annual loss of output compared to 1989 is reported in column 2 and in column 3 these losses are cumulated. As can be seen, by 2000 the Armenian people had suffered a cumulative loss of income equivalent to 4.9 times the income of 1989. This loss can never be recovered; it is gone forever. This cumulative loss is one measure of the sacrifice the people have made to effect a transition from socialism to capitalism. No doubt there are offsetting benefits, today and in the future, but the heavy cost should not be forgotten.

The cumulative loss of income reported in the previous paragraph measures the actual fall in the standard of living of the population. There is another loss, however, that arises from the fact that had the economic system remained in place after 1989, it is

probable that output and incomes would have continued to grow. It is impossible to know what the rate of growth would have been, but for purposes of calculation I have assumed an annual growth rate of three per cent, equivalent to the rate of growth in Armenia in the decade before the transition began.

Column 4 of Table 1.2 contains our estimates of this "potential income" and column 5 contains estimates of the loss of potential income, i.e., the difference between the potential income of any given year and the actual income of 1989. In 1996, for example, the loss of potential income was equal to 23 per cent of the income of 1989. The cumulative loss of potential income between 1989 and 2000 can be seen in column 6, and is equivalent to 2.2 times the income of 1989. Again, this loss of potential income can never be recovered.

The difference between potential income and actual income for every year can be seen in column 7. This is called the "income gap". This income gap contains two components, the fall in living standards due to the fall in output and the loss of potential income due to the failure of the economy to grow along its potential output path. In 1994, for example, the income gap was 73 per cent of the 1989 level of income. The total cumulative loss of income can be seen in column 8. By 2000 the cumulative losses from both sources was equivalent to 7.1 times the income of 1989.

Table 1.2
Actual and Potential GDP in Armenia, 1989-2000

	Real GDP (index: 1989=100)	Loss of Output (100-col.1)	Cumulative Loss of Output	Potential GDP[1] (index: 1989=100)
	1	2	3	4
1989	100.0	0.0	0.0	100.0
1990	92.6	7.4	7.4	103.0
1991	76.8	23.0	30.4	106.1
1992	44.7	55.3	85.7	109.3
1993	40.7	59.3	145.0	112.6
1994	42.9	57.1	202.1	115.9
1995	45.9	54.1	256.2	119.4
1996	48.6	51.4	307.6	123.0
1997	50.2	49.8	357.4	126.7
1998	53.8	46.2	403.6	130.5
1999	55.6	44.4	448.0	134.4
2000	57.6	42.4	490.4	138.4

	Loss of Potential GDP (col.4-100)	Cumulative Loss of Potential GDP	Income Gap[2] (col.4 - col.1)	Total Cumulative Loss of GDP (col. 2 + col.6)
	5	6	7	8
1989	0.0	0.0	0.0	0.0
1990	3.0	3.0	10.4	10.4
1991	6.1	9.1	29.3	39.5
1992	9.3	18.4	64.6	104.1
1993	12.6	31.0	71.9	176.0
1994	15.9	46.9	73.0	249.0
1995	19.4	66.3	73.5	322.5
1996	23.0	89.3	74.4	396.9
1997	26.7	116.0	76.5	473.4
1998	30.5	146.5	76.7	550.1
1999	34.4	180.9	78.8	628.9
2000	38.4	219.3	80.8	709.7

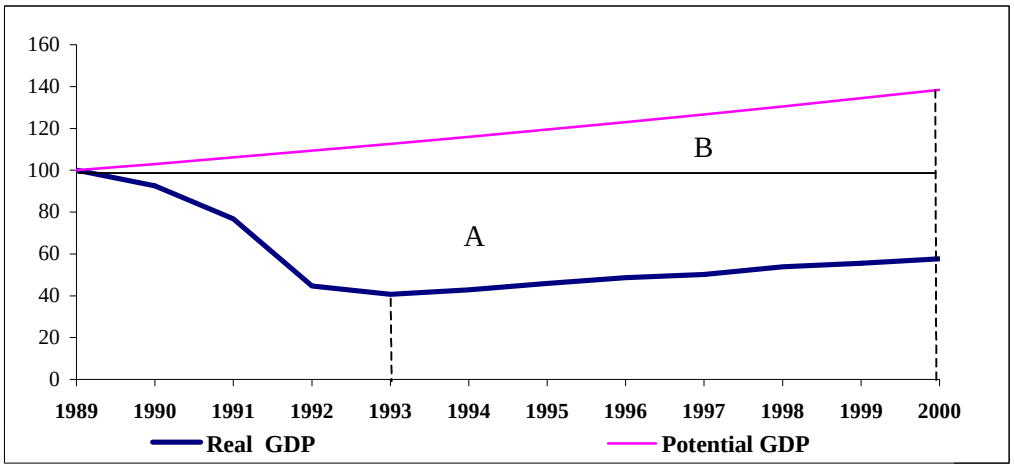
Notes: [1]In calculating potential GDP (col.4) it is assumed that the economy is capable of growing over the long run at three per cent a year.

[2]The income gap can also be calculated as col. 2 plus col. 5.

Source: **Col. 1**: UNICEF, A Decade of Transition, Innocenti Research Centre, Regional Monitoring Report No. 8, 2001.

The two types of lost income can easily be seen in Figure 1.1. Area A in the Figure represents the cumulative loss of output (column 3 of Table 1.2) while area B represents the cumulative loss of potential GDP (column 6). Areas A and B combined represent the total cumulative loss of GDP (column 8 of Table 1.2). Potential GDP is of course a moving target, which is assumed to be growing three per cent a year. Hence even after Armenia regains the level of output and income enjoyed in 1989 it will still be substantially below its potential GDP.

Figure 1.1: Real and Potential GDP



In 2000 actual GDP was only 57.6 per cent of GDP in 1989 whereas potential GDP was 38.4 per cent above the 1989 GDP. The income gap was thus 80.8 per cent of the 1989 GDP. Let us assume that actual output grows 10 per cent a year after 2000 and potential output continues to grow 3 per cent a year. This implies that the income gap between actual and potential income would not be eliminated until sometime in 2014. By this measure the transition would take exactly a quarter of a century, and if the actual rate of growth is significantly less rapid than has been assumed, the transition could take much longer.

Investment and savings

Thus the key to a successful transition is rapid growth. This, in turn, raises the question as to why growth rates were hugely negative in the early years of the transition and why the recovery to 1989 levels of output has been so painfully slow. The answer has much to do with investment.

The rate of growth of an economy is strongly influenced by the share of output devoted to investment and particularly by net additions to the stock of physical capital in the form of plant and equipment. Equally important is the rate of return on investment and here the price mechanism plays a crucial role in directing investment to those activities with the highest rate of return. Thus efficient markets and buoyant investment go hand-in-hand. There is however an asymmetry. High rates of investment even in the absence of efficient markets can produce rapid growth, as experience in the Soviet Union indicates, but efficient markets in the absence of investment are unlikely to produce rapid growth. Hence investment is a sine qua non and it is for this reason that investment will occupy the centre stage of the analysis.

The first column in Table 1.3 contains estimates of the gross investment ratio for the period 1990–2000. Notice that in the first two years the investment ratio was extraordinarily high, but in 1992 and 1993 investment collapsed to less than ten per cent of GDP. There was then a recovery in the investment ratio and between 1994 and 2000 gross investment on average accounted for about 19.7 per cent of GDP. This was still less than half the ratio of 1990 and 1991. Moreover, gross investment was a smaller proportion of a much smaller GDP. The consequences of this can be seen in column 2 where the level of investment in each year can be compared to the level of investment in 1990.

At its lowest point in 1992, gross investment was 98.4 per cent below the level of 1990. By the year 2000, GDP had begun to recover partially and the investment ratio had risen substantially, but even so, the level of investment in 2000 was only a quarter of the level of investment in 1990.

Consider next the net investment ratio. In calculating net investment I have used a conservative assumption that capital depreciation is constant over the entire period and equivalent to five per cent of the GDP of 1989, the last year before the transition began.[4] The estimates based on this assumption are presented in column 3 of Table 1.3. Net investment in 1990-1991 was on average more than 37 per cent of GDP. During the next two years net investment was negative, i.e., the stock of physical capital in Armenia actually declined. Net investment then recovered slightly and during the period 1994-2000, net investment accounted on average for 9.7 per cent of GDP.

In column 4 of the table, estimates of the level of net investment are presented. Once again, the low levels of net investment reflect a combination of a decline in GDP compared to the base year of 1990 and a lower net investment ratio compared to 1990. Even as late as 2000, net investment was only 15.5 per cent of the level of 1990. It is this low level of net investment which accounts, first, for the collapse of output in the early years of the transition and, second, for the long length of time it will take to regain the 1989 level of output, let alone to catch up with the potential level of output.

Table 1.3
Investment and Domestic Savings in Armenia, 1990-2000

	Gross Investment Ratio (% of GDP)	Level of Gross Investment (Index: 1990=100)	Net Investment Ratio[1] (% of GDP)	Level of Net Investment (Index: 1990=100)	Gross Savings Ratio[2] (% of GDP)
	1	**2**	**3**	**4**	**5**
1990	47.1	100.0	41.7	100.0	35.8
1991	39.7	70.0	33.2	66.1	20.4
1992	1.6	1.6	-2.9	-3.4	-19.7
1993	9.8	9.2	-2.5	-2.6	-14.9
1994	23.5	23.2	11.8	13.1	-10.4
1995	18.4	19.3	7.5	8.9	-19.9
1996	20.0	22.2	9.7	12.2	-12.7
1997	19.1	22.0	9.4	12.2	-18.9
1998	19.1	23.6	9.8	13.7	-14.7
1999	18.4	23.4	9.4	13.5	-10.6
2000	19.1	25.2	10.4	15.5	-8.3

Notes: [1] In calculating net investment it is assumed that capital depreciation is equal each year to five per cent of the GDP of 1989, i.e., that on average capital has a productive life of 20 years.

[2] Gross domestic savings are calculated as gross investment minus net exports.

Sources: **Col. 1**: 1990-92: Tacis, Economic Trends Quarterly Issue, Armenia, January-March1998, Table 1.3, p.9, May 1998. 1993-2000: op. cit., April-June 2001, Table 1.4, p.24, September 2001.

Col .5: 1990-93: Calculated from data in Tacis, op. cit., January-March 1998, Table 1.3, p.9, May 1998. 1994-2000: Calculated from data in Tacis, op. cit., April-June 2001, Annex Table 1.6, p.129, September 2001.

Equally worrying is the low savings ratio. As can be seen in column 5, savings in 1990 and 1991 were quite high, accounting on average for 28 per cent of GDP. After 1991, however, the savings rate became negative and for the next nine years averaged a remarkable minus 14.5 per cent of GDP. In other words, all of the investment in Armenia after 1991 was financed by foreign resources and some of the consumption expenditure as well. This, clearly, is not a sustainable situation. If foreign resources were to diminish, either current consumption would have to be reduced to create sufficient savings at least to cover the depreciation of the stock of physical capital or the stock of capital would rapidly depreciate and the foundations of the economy would erode.

It is understandable that in an emergency people would try to sustain consumption (by selling assets, by borrowing, by seeking a livelihood abroad, and by postponing maintenance, repair and replacement of plant and equipment), but neither a country nor an individual can dis-save indefinitely. At some point one would consume all of one's capital and negative savings would necessarily come to a halt. I am not suggesting that Armenia has reached that point, but I am suggesting that the combination of a very low level of net investment and a highly negative savings rate is exceedingly dangerous.

There is an abundance of casual evidence that the stock of physical capital has been allowed to depreciate: poorly maintained roads, unrepaired houses and apartment buildings, derelict factories. There is also evidence that the stock of human capital has been allowed to depreciate. For example, public expenditure on education fell from 7.7 per cent of GDP in 1990-93 to 2.4 per cent in 1994-2000. If this continues, the younger generation will be less well educated than their parents. Finally, even parts of the "natural" stock of capital have been allowed to decline. As can be seen in Table 1.4, between 1988

and 2000, the stock of cattle declined by a third, the stock of pigs by almost four-fifths and the stock of sheep and goats by nearly two-thirds. This is not intended to imply that the stock of physical, human and natural capital taken as a whole is declining. The evidence does not support such a strong conclusion, but there are warning signs that net investment is remarkably low and once the recovery absorbs much of the slack in the economy, it may be difficult to sustain rapid growth without continued heavy dependence on foreign resources.

Table 1.4 The Number of Livestock, 1988-2000
(index: 1988=100)

	Cattle	**Pigs**	**Sheep and Goats**
1988	100.0	100.0	100.0
1989	N/A	N/A	N/A
1990	86.3	97.5	81.8
1991	76.3	70.3	70.6
1992	67.2	26.4	60.2
1993	67.6	25.5	50.8
1994	67.9	25.8	43.9
1995	68.4	25.0	41.6
1996	68.7	17.0	39.9
1997	62.8	17.8	35.9
1998	63.2	27.0	37.7
1999	64.5	22.1	37.8
2000	67.0	21.6	37.2

Source: Tacis, Economic Trends Quarterly Issue, Armenia, April-June 2001, September 2001, Annex Table 1.16, p.136.

Conclusions

Armenia, after ten years of independence, still is well below its long run growth potential. The income that has been lost in the prolonged depression never can be recovered, but it is possible to regain the country's long run potential growth path. This will require an acceleration of the actual rate of growth and then sustaining that faster growth rate for a number of years. Faster growth, in turn, will require more investment in physical, human and natural capital. In this chapter investment in physical capital has been emphasized and the very low rate of net investment has been underlined.

While there is still debate in the literature on growth theory about the causes of economic growth, there is considerable empirical evidence that roughly 70 per cent of growth can be attributed to the accumulation of physical and human capital.[5] The rest is due to an increase in total factor productivity, which presumably arises from the introduction of new technology, complementarities between physical and human capital, and various types of externalities.

The clear policy implication for Armenia is that strenuous efforts must be made to allocate additional resources to public and private investment in physical infrastructure, plant and equipment. A second policy implication is that additional efforts should be make to sustain and increase spending on education and to improve the quality of public education. There is an abundance of microeconomic evidence that investment in education, particularly at the primary and secondary levels, yields high rates of return.[6] There is also macroeconomic evidence that investment in education, measured as the average number of years of schooling received, is positively correlated with growth.[7] Thus investment in physical and human capital should be at the core of the transition strategy.

Until now macroeconomic policy has been conducted as if the primary objective of the transition strategy were to control inflation. As we have seen, inflation has indeed been brought under control and Armenia now enjoys a high degree of price stability. In fact at times the aggregate level of prices actually has declined. The difficulty with this strategy is that there is no empirical evidence that moderate rates of inflation hinder growth.[8] Very high rates of inflation, such as those Armenia experienced in the first few years of the transition, do indeed harm economic growth, but once the rate of inflation falls below 40 per cent a year, there seems to be no adverse impact. The danger in Armenia today is not inflation but deflation and a risk that tight monetary policies will hamper investment and thereby reduce the rate of growth.

This is especially important because during the transition to a market economy a primary objective of policy should be to encourage new private sector enterprises to emerge and prosper. One way of doing this is to make certain that the supply of bank credit is adequate and that much of the credit is channeled to the private sector, as opposed to financing the deficits of public sector enterprises. That is, a well functioning capital market can "oil the wheels of commerce" and stimulate investment, and this is a more important objective of policy than merely preventing inflation. Again, there is some evidence, not strong but none the less persuasive, that the higher is the share in GDP of financial intermediary credit to the private sector, the faster is the rate of economic growth.[9]

In a very small country like Armenia, foreign trade inevitably plays a large role. Self-sufficiency is not an option; small countries must exploit fully their comparative advantages if they are to grow rapidly. Indeed the empirical evidence suggests that the higher is the ratio of exports plus imports to GDP, the faster is the rate of economic

growth.[10] The problem in Armenia today is that two of its neighbours, namely, Turkey and Azerbaijan, have closed their borders to trade and hence, no matter what it does, Armenia's economy will remain partially closed. From a policy point of view, the economy has a high degree of "natural" protection and it is important not to aggravate the situation by imposing additional barriers to international trade.

The government's current policy is to maintain very low or zero tariffs and to eschew non-tariff barriers to trade. These policies make good sense under the circumstances. Similarly, it makes good sense to have a unified exchange rate and to allow the exchange rate to respond to market forces. A fixed exchange rate is prone to misalignment and when that happens a black market in foreign exchange is certain to arise. The evidence suggests that the greater is the difference between the black market and official rates of exchange, the slower is the rate of growth.[11] Hence the government is wise to adopt a unified and flexible exchange rate.[12]

Finally, given the urgency of increasing investment, foreign capital inflows are potentially attractive. Foreign direct investment in particular has several advantages--it is less volatile than portfolio investment and less burdensome than foreign loans with fixed interest and capital repayments--and hence openness to direct investment is desirable. It would be a mistake, however, to assume that private foreign capital is likely to play a significant role in raising investment and accelerating growth in Armenia. The reason for this is that foreign direct investment is most often attracted to those developing countries that have rich mineral deposits (especially oil, as in Azerbaijan) or to countries that have succeeded in achieving rapid growth of exports (particularly manufacturing exports), rather than to semi-closed economies like Armenia.[13] More generally, foreign investment is attracted to countries which already are enjoying a rapid and sustained rate of growth of

total output and income.[14] That is foreign investment is more likely to be a consequence of growth rather than a cause of growth. The implication for policy is that Armenia will have to rely on itself in the first instance to raise domestic savings, the level of investment and the rate of growth of output and income.

Notes

1. Hegine Manasyan and Tigran Jrbashyan, "Explaining Growth in Armenia: Pivotal Role of Human Capital," final draft, processed, Yerevan, 15 November 2001, p.19.
2. Ibid., Graph 1, p.7.
3. The official "food line" on which poverty estimates are based contains a basket of foods yielding 2100 kilocalories a day, of which 1191 calories are obtained from wheat bread and flour.
4. One publication covering the period 1990-96 estimates that "consumption of fixed capital" accounted for a low of 14.3 per cent of GDP in 1995 and a high of 16.7 per cent of GDP in 1992. (See Tacis, Economic Trends Quarterly Issue, Armenia, January-March 1998, Table 1.5, p.12, May 1998.)
5. See, for example, Peter J. Klenow and Andres Rodriguez-Clare, "The Neoclassical Revival in Growth Economics: Has It Gone Too Far?", Macroeconomics Annual 1, Cambridge, Massachusetts, National Bureau of Economic Research, 1997.
6. For a summary of this literature see George Psacharopoulos, "Returns to Investment in Education: A Global Update," Policy Research Paper 1067, Washington, D.C.: World Bank, 1993.

7. See, for example, William Easterly and Ross Levine, "It's Not Factor Accumulation: Stylized Facts and Growth Models," World Bank Economic Review, Vol. 15, No.2, 2001. For a contrary view see Lant Pritchett, "Where Has All The Education Gone?", World Bank Economic Review, Vol. 15, No. 3, 2001.

8. See Michael Bruno and William Easterly, "Inflation Crises and Long-Run Growth," Journal of Monetary Economics, No. 41, 1998.

9. William Easterly and Ross Levine, op. cit.

10. Ibid.

11. Ibid.

12. Between March and October 2002 the exchange rate fluctuated between 550 and 570 drams per US dollar.

13. See, for example, H. Singh and K.W. Jun, Some New Evidence on Determinants of Foreign Direct Investment in Developing Countries, Policy Research Working Paper No. 1531, Washington, D.C.: World Bank, 1995.

14. See, for example, A. Bhattacharya, P. J. Montiel and S. Sharma, "Private Capital Flows to Sub-Saharan Africa: Overview of Trends and Determinants," unpublished paper, World Bank, Washington, D.C., 1996.

Chapter 2

Investment and Structural Change

Keith Griffin

Compared to advanced capitalist economies, the centrally planned socialist economies were characterized by a high rate of accumulation of physical (and human) capital and by a pattern of production biased in favour of the industrial sector. Within industry, there was a bias in favour of capital and intermediate goods and a relative neglect of manufactured consumer goods. The socialist economies also were characterized by a relative neglect of agriculture and a strong bias against the services sector, particularly consumer services.

Price liberalization and the creation of market institutions were expected to generate a set of incentives in the transition economies that would lead to structural change and in particular to a change in the composition of output. The shares of industry and construction in GDP were expected to fall and the shares of agriculture and services were expected to rise. There would also be shifts in the intra-sectoral composition of output, but our focus in this chapter will be on the major inter-sectoral structural changes. There is broad agreement that structural change is desirable and ultimately will result in a more efficient use of resources, but there is considerable disagreement as to precisely how structural change should occur. We begin with a discussion of this issue.

Stocks, flows and contraction

The conventional view is that market economies change the composition of output in response to changes in relative prices. Capital assets, labour and land are transferred out of those activities which have suffered a fall in relative prices and into those activities which enjoy an increase in relative prices and profitability. It is assumed that this reallocation of

resources normally occurs smoothly and that physical capital and land remain fully utilized and labour fully employed. Of course there may be a "transitional recession", but the decline in employment, capacity utilization and aggregate output is expected to be brief and after the completion of the necessary structural changes, output should expand at a faster pace than previously.

The mechanism can be illustrated on a simple diagram.[1] (See Figure 2.1.) An index of the industrial and construction sectors (IC) is measured along the vertical axis and an index of agricultural and services output (AS) is measured along the horizontal axis. The production possibility curve AB describes all the combinations of IC and AS the economy is capable of producing given the resources of land, labour and capital available to it and the state of technical knowledge.

Assume initially, prior to the transition, that the economy is at point A on the production possibility curve and is following an expansion path 0A with a bias in favour of IC. The initial level of production consists of output IC_o in the industry and construction sectors and AS_o in the agricultural and services sectors. Next assume that price liberalization and the accompanying market reforms during the transition period create a set of relative prices that induces the economy to move to point B on the production possibility curve. What is supposed to happen?

The answer is that production in the industrial and construction sectors falls to IC_1. This fall in output releases resources of land, labour and capital that are promptly absorbed in agriculture and services. The economy moves smoothly along the production possibility curve from A to B and output in agriculture and services rises to AS_1. Structural change occurs and the economy then begins to move on a new expansion path 0B, starting at point B.

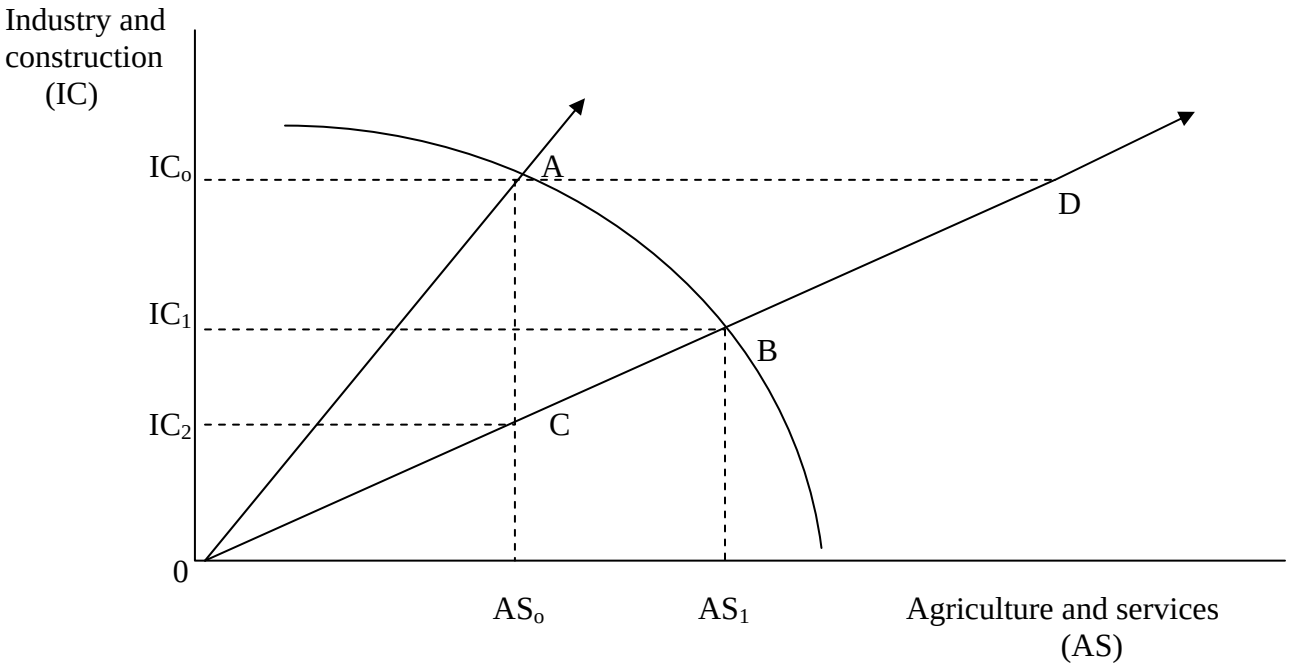


Figure 2.1: Three Ways to Reallocate Resources

Note that the conventional view assumes that the stock of resources previously employed to produce IC_o of industrial output can be re-employed to produce AS_1 of services and agricultural goods. This is a very strong assumption. In many economic activities plant and equipment are specific to a particular industry and can be used only to produce the type of goods for which they were designed. A machine tool factory cannot be converted into a textile mill. A nuclear power plant cannot be transformed into an orchard of peach trees. A synthetic rubber plant cannot be converted into a hotel for tourists. Even the stock of labour may be specific to a relatively narrow range of occupations. A skilled machinist cannot be converted overnight into a computer software programmer. Some training, perhaps considerable training, may be necessary.

Under these circumstances price liberalization will result in a very different outcome. The decline in the relative profitability of industry and construction will lead to a fall in output

in those activities, as before, but because of the specificity of the resources used in the IC sector, there will be no reallocation of resources to agriculture and services and hence the AS sector will not expand. Production in the AS sector will remain roughly constant. All that will have happened is that labour that was formerly employed in IC will become unemployed, factory buildings will become empty, machinery will become idle and in extreme cases, as in Armenia, the machinery will be exported and sold for its scrap value, and capacity utilization in industry will fall sharply.

In terms of Figure 2.1, instead of moving along the production possibility curve from A to B, the economy will contract and move from A to C. Production in industry and construction will fall to IC_2 while output in agriculture and services will remain at AS_o. Instead of structural change through resource reallocation, there will be structural change through contraction.

Note that at point C the percentage composition of output is the same as at point B and the economy is on the same expansion path 0B. Price liberalization and shock therapy do result in structural change but at the cost of a much lower level of GDP, greater inefficiency and a less advantageous starting point for a resumption of growth. The alternative to structural change through contraction is structural change through investment. The thrust of policy under this transition strategy is to maintain high levels of net investment and to use the price mechanism to guide net investment into the most profitable economic activities. Structural change occurs not by attempting the impossible task of reallocating the stock of resources from one sector to another but by allocating the flow of new investment and new entrants into the labour force into sectors which enjoy a comparative advantage under the new price regime.

In terms of Figure 2.1, this implies moving along a transition path such as AD, where production in the IC sector remains constant and expansion occurs by channeling all the new

investment into the AS sector. The trajectory from A to D implies more gradual structural change, but it ensures that aggregate output expands throughout the transition period, incomes rise instead of fall and labour remains fully employed. When the economy reaches point D, the composition of output will be the same as at points C and B, and further expansion can then take place along the expansion path 0B.

Structural change through investment requires a different set of policies than those associated with shock therapy. First, the government should maintain a high level of aggregate demand to provide an incentive to invest. Second, public sector investment in infrastructure, education and training should be maintained so that private sector investment is not inhibited by lack of power, transport and communications facilities and an inadequate supply of well trained labour. In other words, rather than cut public expenditure during the transition, the emphasis should be on changing the composition of public expenditure to support the transition to a market economy. Third, price liberalization should be seen as a tool to provide incentives to allocate investment efficiently, not as a massive, once-for-all effort to "get prices right". Efforts should be concentrated on certain key markets—credit markets, the markets for labour, energy, foreign exchange—to ensure that they function efficiently while postponing price reforms in lower priority activities. Indeed there may be advantages to introducing "dual prices' in the IC sector in order to sustain the level of activity there.

Fourth, emphasis should be placed on creating incentives for new private sector enterprises to emerge and grow. Privatization of existing state enterprises is a secondary priority and should be undertaken on a case-by-case basis. The key to a successful transition is not a reform of property rights but a high level of net investment. Finally, even under an investment-led transition strategy, some enterprises in the IC sector will have to contract and some labour will have to be dismissed. Not all of this labour will be reabsorbed in the

expanding private sector; some workers are likely to become unemployed. Under these conditions it may be desirable to organize a special public works programme to accelerate investment in infrastructure, to repair irrigation facilities, to maintain roads, schools, medical clinics and other public buildings and to provide jobs and incomes to those who would otherwise be unemployed. Such a public works programme should be conceptualized as part of an investment strategy which simultaneously reduces pressure on public expenditure to provide welfare relief.

Structural change in Armenia

There have been dramatic changes in the composition of output in Armenia during the transition period. That is, structural change has occurred and the direction of change has been as one would expect given the strategy of growth that was followed during the socialist period. In this limited sense shock therapy has been a success.

The composition of GDP during the period 1990-2000 is reported in Table 2.1. One would anticipate that price liberalization and the other economic reforms that were introduced during this period would lead to an increase in the relative importance of the agriculture and forestry sector and in the services sector. Similarly, one would expect a relative decline in industry and, in the absence of an investment-led transition strategy, a decline in the construction sector. In broad terms this is indeed what has happened, although the shifts in the composition of GDP from one year to another have sometimes been startling.

Table 2.1
The Sectoral Composition of GDP, 1990-2000.
(percentages)

	Agriculture and Forestry	Industry	Construction	Services
1990	12.6	44.5	18.0	24.9
1991	20.2	48.6	10.4	20.8
1992	28.7	43.5	5.6	22.2
1993	46.3	30.7	4.1	18.8
1994	41.7	34.8	6.0	17.4
1995	38.5	27.8	6.5	27.2
1996	33.5	27.7	7.7	31.1
1997	29.4	22.5	16.3	31.8
1998	30.8	19.9	17.5	31.8
1999	27.2	21.2	16.7	34.9
2000	23.1	22.1	19.6	35.2

Sources: Tacis, Economic Trends Quarterly Issue, Armenia, January-March 1998, May 1998, Table 2.1, p. 18; UNDP, 10 Years of Independence and Transition In Armenia, National Human Development Report 2001, Armenia 2001, Statistical Table 22, p. 135.

Let us examine the sectors one by one, starting with industry. At the beginning of the transition period in 1990, Armenia was a highly industrialized country. Industrial output in that year accounted for 44.5 per cent of GDP. The share of industry actually rose the following year (largely because of the fall in the share of construction and services), but after 1991 the share of industry in GDP fell unrelentingly until 1998, when it accounted for less than a fifth of GDP. That is, throughout most of the 1990s Armenia went through a wrenching process of de-industrialization. There was a slight recovery in 1999 and 2000, but despite this recovery, the share of industry in 2000 was half what it was in 1990. Structural change had occurred on a massive scale.

The picture is somewhat different in the construction sector. In 1990, construction accounted for 18 per cent of GDP. It then collapsed, reaching a low point of 4.1 per cent in 1993, in response to the collapse in aggregate investment described in Chapter 1. The share of

the construction sector rose slowly to 7.7 per cent of GDP in 1996 and then took a great leap forward to 16.3 per cent in 1997. That is, its share more than doubled in just one year. How did this occur? It was not because of an acceleration of growth, because the rate of growth actually fell slightly in 1997.[2] Nor was it due to a rise in the investment ratio or in the level of gross investment, since both actually declined slightly.[3] The rise in the share of construction was merely the mirror image of falling shares in agriculture and industry. None the less, from 1997 onwards the share of construction remained relatively high and showed some tendency to rise. Indeed by 2000 construction accounted for 19.6 per cent of GDP, a slightly higher share than in 1990.

Next, consider agriculture and forestry. In 1990 agriculture was the smallest sector in the economy, accounting for only 12.6 per cent of GDP. The share then rose dramatically in just three years, namely, to 46.3 per cent in 1993. This represents nearly a four-fold increase in the relative importance of agriculture during the severe economic crisis of the early 1990s. Thereafter the share of agriculture and forestry began a steady decline, but even so, in 2000 agriculture's share of GDP was nearly twice as large as it had been in 1990. Moreover, in 2000 agriculture was larger than the industrial sector, as it had been since 1993, although the gap between the two sectors was very small.

Finally, there is the services sector. In 1990 services accounted for a quarter of GDP. During the crisis period the share of services fell, reaching a low point of 17.4 per cent in 1994, but from that point onwards the share of services rose steadily and by 2000 services accounted for 35.2 per cent of GDP. Once again, as in the case of agriculture, this is the type of structural change one would expect in a country in transition from socialism to capitalism.

Comparing the end of the period (2000) with the beginning (1990), Armenia experienced profound structural change. The share of industry in GDP fell by 50.3 per cent.

The share of construction rose by 8.9 per cent, the share of services by 41.4 per cent and the share of agriculture and forestry by 83.3 per cent. The Armenian economy at the turn of the century was very different from what it was a decade earlier. The question is how did this structural change come about, through reallocation of the stock of productive resources, through the allocation of net investment to newly profitable activities or through contraction?

The composition of output and economic decline in Armenia

The answer, in general terms, is obvious. Shock therapy did not lead to a reallocation of the stock of productive resources. All of the predictions of the conventional view of the way structural change occurs turned out to be wrong. Incomes fell rather than rose. Growth rates became negative rather than accelerating. Overall efficiency in the use of resources diminished rather than increased. Employment of the stock of capital and the labour force declined rather than remained constant. Given that the transition strategy in Armenia has been based on the conventional view of resource allocation, it must be said that the intellectual foundations of economic policy during the transition have been weak. It is consequently hardly surprising that the results have been so disappointing.

The time has come to reconceptualize the transition strategy. The clear alternative is an investment-led strategy in which priority is given to achieving high levels of investment and using the price mechanism to ensure that investment is allocated efficiently. Under this strategy an economy grows out of inefficiency by channeling the additions to the stock of capital to sectors of high profitability. Those sectors destined to decline in importance, e.g., parts of industry, are encouraged to maintain existing levels of production, insofar as this is feasible, so that their share of aggregate output falls while their level of output remains unchanged.

This approach has at least two advantages.[4] First, output and incomes never fall during the transition process. Second, as the relative share in GDP of the inefficient sectors declines, the rate of growth actually accelerates. The economy avoids the vicious circle of industrial collapse leading to a decline in investment which, in turn, leads to slower growth and even greater stress on the industrial sector. Instead the economy enters a virtuous circle of cumulative causation in which high levels of investment lead to faster economic growth and greater overall efficiency which, in turn, lead to more investment, etc.

In Armenia, unfortunately, structural change was an outcome of economic decline rather than the consequences of participation in a virtuous circle. As can be seen in Table 2.2, comparing 1990 with 2000, the level of output fell precipitously in the industrial sector (namely, by 69.2 per cent) and very sharply in the construction sector (namely, by 32.3 per cent). Even services, whose relative importance increased, experienced a decline in the level of output of 12.1 per cent. Only in agriculture and forestry was the level of output higher in 2000 than in 1990 and even here the increase was very modest (namely, a rise of 13.7 per cent).

Table 2.2
Sectoral Changes in the Level of Output
Between 1990 and 2000
(percentage change over the period)

Industry	-69.2
Construction	-32.3
Services	-12.1
Agriculture and Forestry	+13.7

Source: Author's calculations based on official data.

Summary and conclusions

Structural change, quite rightly, is a primary objective of price liberalization and the transition strategy in general. The composition of output during the socialist era reflected the needs of central planning within the context of the entire USSR whereas the composition of output in future should reflect the incentives created in a market economy within the context of an independent country participating in a global economic system. The issue, hence, is not whether structural change should occur but how it can best be achieved.

Three ways were identified that can in principle bring about structural change, namely, (i) by a reallocation of the stock of productive resources, i.e., land, labour, plant and machinery; (ii) by contraction of output in those sectors which are no longer profitable and (iii) by allocation of the flow of new investment to those sectors which have become more profitable. We argue that method (i) is in practice impossible, method (ii) is highly undesirable and that method (iii) should therefore be the preferred alternative.

An examination of the data indicates that the composition of output in Armenia did indeed change radically between 1990 and 2000. Industry and construction declined relative to agriculture and services. In fact the share of agriculture in GDP nearly doubled over the decade while the share of industry fell by half. This is broadly what one might expect. The great difficulty, however, is that structural change occurred as a result of contraction rather than as a result of an investment-led strategy. The level of output in industry and construction declined dramatically while the level of output in agriculture and services combined remained roughly stagnant. The path not taken, the alternative approach of an investment-led strategy of structural change, would have been much more successful in maintaining employment and accelerating the rate of growth.

Although valuable time has been lost, it is not too late to switch to an alternative strategy. Several policy changes should be considered. First, it is important to maintain a high level of aggregate demand in order to create an economic climate favourable to a high level of investment. This implies giving a lower priority to combating inflation. Second, high priority should be given to public sector investment in those activities which are complementary to private sector investment. This would include investment in transport, power, communications and irrigation. Third, the price mechanism should be used as a tool to increase the efficiency of investment, i.e., to ensure that the rate of return on investment is as high as possible. This can be done by focusing reform efforts on certain "key markets" to ensure that they function well. In the Armenian context this would include the credit market, the market for foreign exchange, the energy market and the market for labour. If these markets fail to function properly, the entire transition process will be severely hampered.

Fourth, in encouraging the development of a large, resilient and rapidly growing private sector, emphasis should be placed on designing policies that stimulate the creation of new enterprises, rather than the privatization of existing state owned enterprises. Finally, in order to reduce the hardships suffered by the unemployed and to increase further the level of investment, public works programmes should be expanded and used to repair and maintain existing productive assets and to create new ones. The thrust of the transition strategy, in other words, should have a strong bias in favour of increasing the level of investment and allocating investment efficiently.

Notes

1. For a more extensive analysis see Keith Griffin, "Macroeconomic Reform and Employment: An Investment-Led Strategy of Structural Adjustment in Sub-Saharan Africa," in Terry McKinley, ed., Macroeconomic Policies, Growth and Poverty Reduction, London: Palgrave, 2001.
2. See Table 1.1, p. 4.
3. See Table 1.3, p. 11.
4. This approach was followed in China. Priority was given initially to maintaining industrial production in state owned enterprises and increasing agricultural production. The share of investment in GDP actually rose and the rate of growth accelerated. At no point in the transition did average income fall. In industry, privatization of state owned enterprises played almost no role. Instead opportunities were created for new private firms to grow. State owned industry also continued to expand but at a slower rate than non-state industry and consequently the share of state owned industry in total industrial production and GDP declined.

Chapter 3

Banking System Reforms

Bagrat Asatryan

The disintegration of the Soviet Union and the transition from a planned command economy to a liberal system created a need for a banking system consistent with liberal conditions. Effectively, this was a new phenomenon for newly independent states and their economies, since the Soviet system precluded the existence and activities of "banks" in our current understanding of the term. In a broad sense, of course, banks did perform the function of financial intermediation even in the planned economy, as they mobilized deposits and made loans to enterprises. However, they were an appendix to the full machinery of the state which imposed its will on resource mobilization and distribution. Hence the banks were subject to the general operational rules of this machinery, and therefore their normal functions lost their meaning. In any event, lending was definitely a planned segment of government funding, and was not accessible to either citizens or non-governmental businesses until the late 1980s.

In the Soviet period, mobilization of resources from households and the general public was rather developed: until the 1980s, this function was the monopoly of a specialized institution, the SavingsBank, and VneshTorgBank for foreign currency. In the Soviet period, bank credit was available to collective farms and housing cooperatives, which were only conditionally and not fully government-owned and controlled. There was also the United State Bank, in addition to the other two institutions; in the 1980s, the State Bank was divided into several specialized banks, the activities of which were regulated by sub-legislation. Being government-owned, the banks were predominantly

engaged in payment and settlement functions, and did not bear any risks; consequently, there were no regulatory requirements, not even conditions on capital adequacy. In other words, the institutions could hardly be called banks. The first initiatives at banking sector reform were taken in the second half of the 1980s, when opportunities were provided for the founding and operation of non-state banks (cooperative banks). Specifically in Armenia, the first cooperative bank was founded at the end of 1988; by 1989 two banks were operational, and in 1990, the number of non-state cooperative and commercial banks reached ten, despite the fact that their role and the volume of operations were negligible.

Banking sector reforms can effectively be broken down into several stages. The first stage was from 1988 to 1993, at the threshold of the break-up of the Soviet Union, and during the first years of the post-Soviet period: at first, the Soviet Union liberalized the banking system to a certain extent, and later, the newly independent states initiated the development and implementation of their sovereign economic policies.

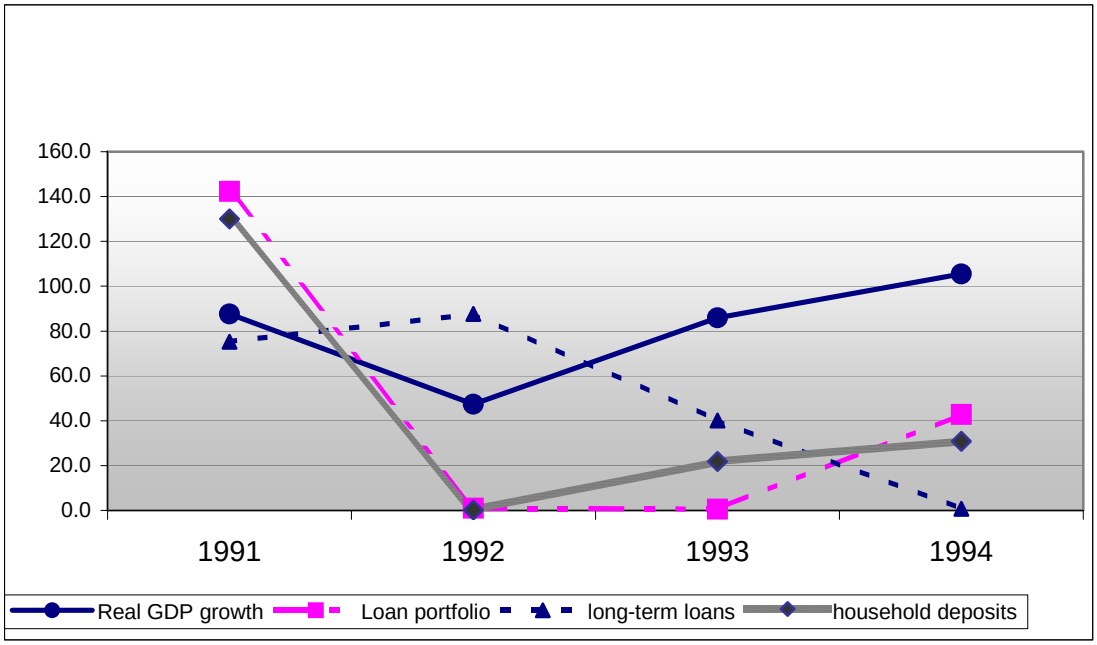
In this first stage, the development of the banking system was chaotic and irregular, while banking activity was regulated by sub-legislation. The banks were effectively functioning under new and liberalized economic circumstances; privatization and structural reforms were intensively underway in the country; meanwhile, the banking system lacked legal regulation, there was an acute need for experts, and there was no banking supervision as such. This period is noteworthy in that economic conditions sharply deteriorated. In particular, 1990-1994 was a period in which real GDP fell by about 65 per cent; in Armenia, this pattern emerged following the destructive earthquake of 1988, which was however either not reported by official statistics of the USSR or was concealed by investment in the Earthquake Zone, even though the restoration effort was never completed.

During the economic decline, and due to the liberalization of prices and foreign trade, prices in Armenia increased sharply. In 1990-1991, inflation was officially not acknowledged and was hidden; therefore the circulating ruble was not priced. However, in 1992 the annual consumer price index rose more than 8-fold, followed by a 38-fold increase in 1993. At the end of 1992 the exchange rate for the ruble circulating in Armenia was 414.9 rubles per USD, i.e. a 700-fold depreciation compared to the pricing in the Soviet period (which, of course, was extremely formal, as foreign currency trading in the USSR was a crime, and occurred in a limited number of cases only). When the foundations for a foreign currency market emerged in Armenia, the ruble inflation (after the national currency, the dram, was introduced in late 1993) was 3623 per cent. In this situation, it was apparent that the public would not save funds or deposit them in financial institutions. (see Figure 3.1.) Because of the widespread impoverishment, only a small part of the population possessed financial resources. However, even this minority had virtually no desire to deal with financial institutions (banks); meanwhile, the privatization of state owned assets that was underway effectively absorbed the cash held by the better off part of the population.

As a consequence, the banking system not only did not engage in financial intermediation, it also lost its capacity as a system to make payments and settlements. During the second stage, which coincided with the introduction of the national currency, fundamental laws regulating the banking sector were introduced, a Central Bank was created and the appropriate legislation was passed. All this occurred between 1994 and 1996, and was the most active stage of banking system reform.

Figure 3.1

Average Rates of Growth in 1990-1994



The special feature of the second stage of banking system reform was that with bank performance sharply deteriorating, new laws were enforced, and the reliability of banks and consequently the confidence of the public in the system sharply increased. System reforms peaked in 1996 when, based on previous experience, and taking into account the patterns of bank development, the laws regulating the Central Bank, commercial banks and banking activity were modified and polished; new laws were adopted, such as the Law on Bank Bankruptcy, the Law on Banking Secrecy and the Law on Wire Transfers. In other words, the legislation regulating banking activity qualitatively expanded. The basis of legislative development was, on the one hand, the eradication of discrepancies and flaws in existing laws, and on the other, the clarification and streamlining of Central Bank powers and general regulation of banking activity.

Overall, as a result of banking legislation adopted in 1996, the extent of regulation of banking activity grew significantly, in contrast to regulation in other sectors of the economy. Legal guarantees were put in place, the rights and tools of the Central Bank

and other public agencies were identified and regulated, and the rights and responsibilities of commercial banks were streamlined. The Acts regulating the relationship of the Central Bank to commercial banks were completely reviewed, and specific regulatory codes were adopted and published. Legal reforms in this sector coincided with positive changes in the economy, namely, enhanced macroeconomic stability and the resumption of economic growth.

The third stage of reforms in the banking sector (1997 to 2000) was specific in that the economic situation was stabilized and positive changes took place. The Civil Code was adopted as well as a number of laws regulating the financial sector. Positive changes took place in the relationship between banks and the real sector of the economy, the functioning of the banking system improved, and there was some progress in the development of a securities market. Thus, in 1997-2000, with average annual GDP growth of 5-6 per cent and inflation of 8-9 per cent, the capital of the banking system increased 2.7-fold, and household deposits grew 3.4-fold. The lending capacity of the banking system also grew tangibly. In the same period, the loan portfolio of banks increased 2.5-fold and a number of small and medium-sized business promotion projects became operational in the country, with the support of international and other financial institutions. Moreover, projects were initiated to lend to needy groups, including refugees, inhabitants of the Earthquake Zone, and the unemployed. These measures enhanced the accessibility to credit for the public at large. Some of the projects were carried out through specialized institutions, and were not reflected in the banking sector balance sheet.

At present the banking system is experiencing a sharp decline in the pace of growth of the basic performance indicators, namely an acute slowdown in the pace of growth in total bank assets (10% during the last two years). The size of the loan portfolio

has declined as well as yields. The banking system, which became profitable after 1995, suffered a loss of 4.1 billion drams in 2000 and 21.5 billion drams in 2001. These large losses, caused by provisioning for bad debts and write-offs, resulted in a large decline in the capital of the banking system. The crisis was reflected in the fact that of the 28 banks that were functioning as of 1st April 2002, seven were under Central Bank administration.

Naturally, this had an impact on how the general public perceives the banking system. Household deposits increased about 30 per cent in 2000 and 17.5 per cent in 2001, but starting at the end of 2001, when shocks to the banking system occurred, and problems emerged in the ability of the larger banks to mobilize deposits, the trend reversed, and deposits flowed out of the system.

Banking system capital

In 1994, in order to enhance the reliability of bank operations, the average capital requirement was set at US $100,000, with a minimum capital requirement for start-up banks of only about US $2,000. A timetable for increasing the minimum capital was established and this was set to rise to US $1 million by the end of 1999. During 1994, bank capital in Armenia increased 32-fold; in 1995, with the enhancement of macroeconomic stability, the growth was 5.5-fold. The legislation and the regulatory regimes were rather liberal, as was the currency regulation regime. Consequently there was a notable inflow of foreign capital into the banking system: as a result, by the end of 1995, 46.9 per cent of the statutory funds of Armenian banks belonged to foreign sources. This was important in determining the future development of the banking system. The issue here was that by the end of 1993, the capital of the banking system in Armenia was about US $600,000, and the capacity of domestic investors was very limited. This was also reflected in the fact that banks in Armenia normally were incorporated as either closed joint-stock companies or limited liability companies; the number of open joint-

stock companies did not exceed 20 per cent of the total. In addition to the difficult social situation in the country and the inability of the people to undertake long-term investments, there was no culture of partnership in investing in joint-stock companies, and there was a dire need for legal guarantees for such transactions. This affected not only the economy as a whole, but also the financial and banking systems. The Law on Securities Circulation, which had been adopted in 1993, was of a declarative and merely theoretical nature; until quite recently, the institutional, administrative, and legal constraints imposed by the application of this Law had not been overcome, which had a harsh impact on the development of the securities market and the emergence of potential investors.

Because of these conditions, the share of large investors in the capital of Armenian banks is high, in addition to the high volume of foreign capital. Moreover, in the last three years, thanks to additional investment, the capital of the banking system has increased mostly because of foreign investment. In Armenia, small investors are those with a share of up to US $5,000. These shareholders usually hold a small share of the capital, and in many cases they are persons related to the banks, e.g., as employees, depositors, or persons who have agreed to convert their deposits into equity. This phenomenon was apparent especially when new shares of former state-owned commercial banks were issued in 1994-96: the relative size of capital ownership increased, as did the number of those with 10 per cent or more of the equity, and they now control the bulk of capital.

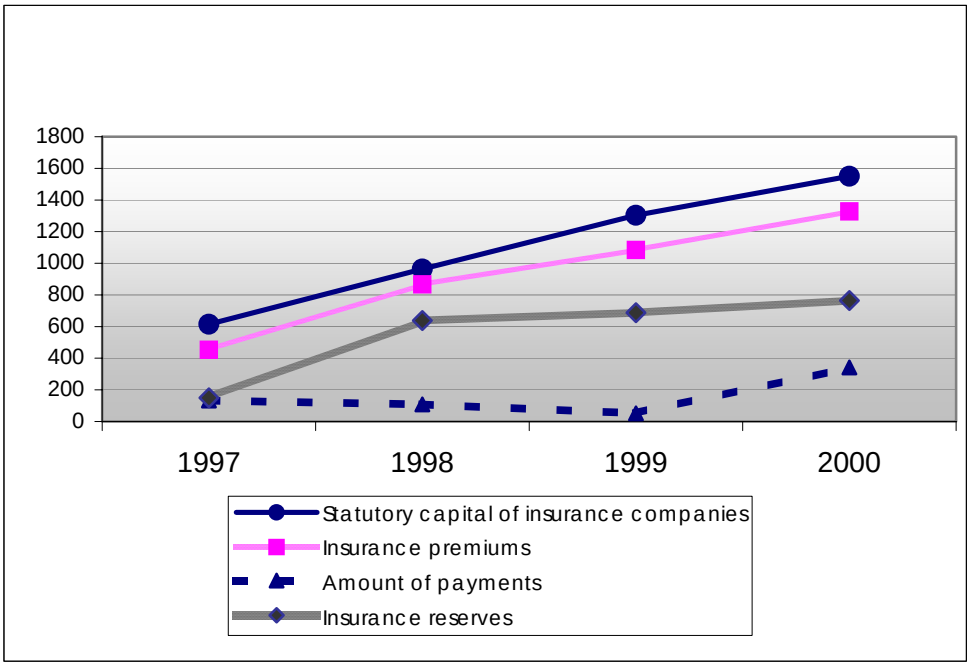
Activities of non-bank financial institutions

The volume of activities of non-bank financial institutions has remained insignificant. Some measures have been taken to enhance the creation and operation of non-bank financial intermediaries, but their actual ability to mobilize funds is very

limited and their participation in the financial market remains negligible. In particular, the newly-created pension, social, and employment funds of the state have not become independent, due to the nature of their activities, and this has kept them from impacting the market. The activities of insurance companies are more or less regulated; and a new law on credit companies is in the process of adoption. Insurance companies are the most noteworthy of non-bank financial institutions, in terms of their volume of activity and performance. Thus, in 1997-2000, the capital of insurance companies increased more than 2.5-fold, with their reserves increasing about 5-fold, but overall, their role and place in the economy remains insignificant (e.g. in 2000, insurance premiums were 0.2% of GDP). The details can be seen in Figure 3.2.

Figure 3.2

Activities of Insurance Companies in 1997-2000



The volume of activities of most of the other non-bank financial institutions, such as investment and credit companies, remains negligible. However, a number of foundations have been active, which are funded by foreign sources, and are

mostly concerned with providing micro-credit. These organizations, of which there are 15, only partially work through commercial banks. The rest of their activities are unregulated, and there is no system of reporting. Therefore, no information is available about their activities.

Impact of the banking system on investment

There are two issues. First, the banks are an investment institution, and are able in this way to influence the economy. From this perspective, the banking system in Armenia looked rather pale on the eve of reforms. Rapid depreciation of the currency not only eroded bank capital, but it also effectively depleted the meaning of a bank. Thus, in the beginning of 1994, the amount of money necessary to establish a bank and to commence operations was the equivalent of the price of a used car. Banking system reforms focused on the minimum capital requirement, and a relevant timetable was adopted to increase the minimum requirement of bank capital to US $50,000 before 1995, then to US $1 million before 2001, and to US $5 million by 2005. In the framework of reforms in the system, this implies a significant increase in the capital of the banking system. Thus, during the period 1995-2001, banking capital increased about 7.7-fold (or by US $60 million).

The second issue has to do with the ability of the banking system to facilitate investment activity using long-term household deposits.

In fact, long-term lending was only a small component (1%) of the loan portfolio prior to 1997, and only later did it increase substantially. Thus, in 1998, the share of long-term lending in the total loan portfolio reached 35.2 per cent, growing further to 45.5 per cent in 1999, and to 59.2 per cent in 2000. At first sight, one might characterize the investment activity of the banks as rather impressive. However, the reality is that a large part of the long-term lending actually consists of on-lending of internationally

funded projects. For example, in 2000, about 40 per cent of total long-term lending was of this type. The banks provided co-financing of these projects from their resources, as a contribution to the projects. A large percentage of the long-term investment consisted of lending to strategically important sectors of the country under government guarantees. For instance, energy sector enterprises accounted for up to 30 per cent of total long-term lending, using the resources mostly to purchase imported fuel.

In addition, the banks also provided finance for large investment projects and, alas, incurred major financial losses. In other words, in a general sense, the links between banks and the economy have been rather weak. Under the impact of unresolved systemic problems, the banks have become less interested in performing their role of financial intermediaries, knowing that repayment often is very uncertain. For example, in 2001, the total volume of bad debts (loans), receivables, and accrued interest written-off the balance sheets of banks was virtually the same as the total loan portfolio of the system. Under these circumstances, it is clear why the banks do not have much influence over the volume of investment. The problem is aggravated by the high rate of interest that is charged, namely, 30-40 per cent in 1998-2000.

Monetary policy and its impact

Monetary policy began to be implemented in Armenia at the end of 1993, when the national currency was introduced and the Central Bank was created as an independent body.

The structural reforms in the economy, parallel to the introduction of the national currency, raised an acute need to control inflation and ensure convertibility and stability of the national currency. Results at the macroeconomic level became apparent in 1996, when real economic growth was 5.9 per cent and inflation for the year was only 18.8 per cent. The foundation for macroeconomic stability lies in structural reforms, especially

the formation of an independent central bank and its efficient operation, the creation of pre-conditions for the activities of a sound and stable banking system, and the development and implementation of a monetary policy programme.

One of the first steps taken by the Central Bank was to establish positive real rates of interest. In the early stage, the Central Bank set a minimum interest rate for bank lending, which later became decisive in regulating money demand and supply. After the initial success of monetary policy, international financial institutions agreed to provide financial assistance, and the Central Bank received the first tranche of an IMF facility, which was used to create international reserves. The next step, begun in 1995, was to ensure financial stability and to reduce inflation, as well as to secure an increase in gross foreign reserves of up to one per cent per month, parallel to the introduction of a "floating exchange rate" policy.

The programme was based on a comprehensive set of measures, which included not only measures to ensure the effective implementation of monetary policy, but also goals to stabilize the banking system, to increase its reliability, and to ensure its sound performance. The outcome in 1995 was rather impressive: the national currency (the dram) was stabilized, real economic growth occurred and prices were stabilized. The most important achievement in 1995, however, was a positive change in the social situation of the people, i.e., an increase in real wages and the prevention of a further increase in the unemployment rate. Combined with the rapid progress in the banking system, these features helped increase public confidence in the banking system.

In subsequent years, monetary policy was further strengthened, in part due to the adoption of a new Central Bank Law (in 1996), which set the main objective of the Central Bank, and in part due to an increase in the independence of the Central Bank.

Starting in 1996, monetary policy was mostly aimed at maintaining price stability. This was seen as a vital pre-condition for economic growth, social improvement and the reliable operation and development of the banking system. However, the proximate objective of monetary policy was a reduction in the money supply and, from the end of 1997, regulating money supply and money demand in order to manipulate interest rates. In Armenia, however, it is not easy to apply an interest rate policy, whereas regulation of the money supply by restricting reserve money can be rather effective. Changes in the money supply are described in Figure 3.3 and data on interest rates are presented in Figure 3.4.

Figure 3.3

Inflation, Reserve Money, and Broad Money in 1995-2001

(percentage change over the previous year)

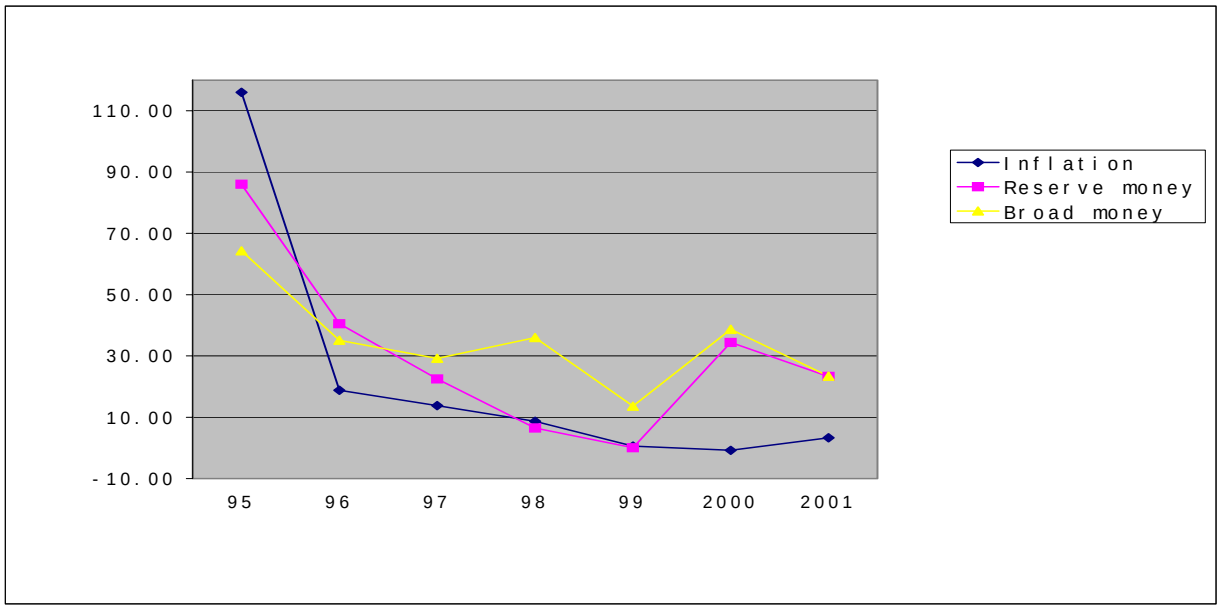
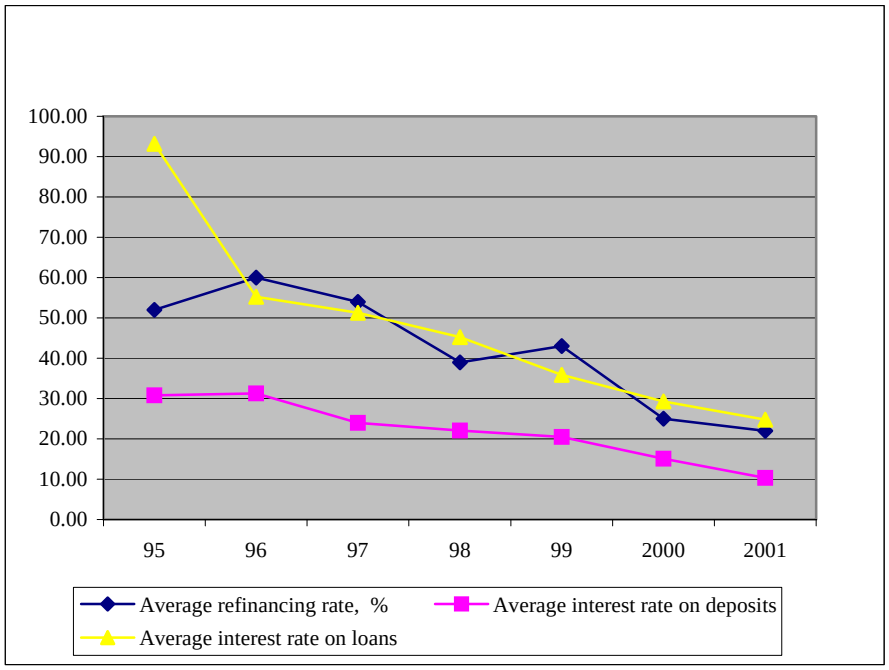


Figure 3.4

Interest Rate Dynamics in 1995-2001



Some of the problems the monetary authorities face are the large size of the "shadow economy" and the high rate of dollarization, as a result of which the Central Bank does not control a decisive share of the quantity of money in circulation. In particular, the high rate of dollarization can be seen in the low share of money in circulation over GDP or household expenditure. This is not fully reflected in official statistics, but the real situation can be understood with the help of data on the structure of household deposits in the banking system. Thus, at the beginning of 2002, dram deposits were about 11.5 per cent of total deposits, which indicates that people prefer to keep their savings in the form of foreign currency. As a result, the ability of the Central Bank to influence economic growth is substantially limited, while the relationship of reserve money to the rate of inflation is weak. In fact since 1996, reserve money and broad money growth have been much higher than the rate of inflation, which indicates that the dram is circulating more broadly and becoming more widely accepted. Hence the impact

of monetary policy on social processes is more visible in terms of general economic development and changes in the dram exchange rate. The depreciation of the dram may have a negative impact on the current social situation in the short run, but its long run impact is more favourable because it leads to greater exports, faster economic growth and further social development.

Table 3.1

Bank Lending and Household Deposits (per cent of GDP)

	1997	1998	1999	2000
Armenia				
Lending	5.8	6.2	7.5	9.4
Household deposits	2.1	3.0	4.3	6.1
Azerbaijan				
Lending	13.5	13.7	14.3	n.a.
Household deposits	n.a.	n.a.	n.a.	n.a.
Georgia				
Lending	3.7	4.7	5.8	6.6
Household deposits	1.0	0.8	1.2	1.8
Kyrgyzstan				
Lending	2.0	5.0	3.0	2.0
Household deposits	n.a.	n.a.	n.a.	n.a.
Moldova				
Lending	n.a.	n.a.	13.0	17.0
Household deposits	n.a.	n.a.	5.0	6.0

As a result of structural reforms, the banking system has been the most dynamic sector of the Armenian economy. However, many of the changes have been specific to the sector, and as a result the role of the banking system in the economy remains insignificant. In 2001, the ratio of banking system assets to GDP was 20 per cent, the loan portfolio to GDP ratio was nine per cent, and the ratio of household deposits to GDP

was five per cent. In this sense, Armenia not only is far behind developed countries, but it is also behind some other countries in a comparable stage of transition. (See Table 3.1.)

This underlines the importance of reviewing the development of the banking system in a comprehensive way, especially since the basic performance indicators of the system have deteriorated since the end of 2001. Judging from recent development trends in the banking system, it is likely that in the medium term the banking system in Armenia will become stagnant. A number of further measures are required to invigorate the financial system, and this will have some impact on poverty, but it is unrealistic to assume that the banking system is likely to play a leading role in reducing inequality, creating employment or eradicating poverty.[1]

Notes

1. After analyzing the experience of 12 countries from eastern and central Europe and the former Soviet Union, Erik Berglof and Patrick Bolton conclude that "the experience of financial transition in the most successful group of countries provides weak evidence at best of a link between financial development (as measured by the domestic credit to GDP ratio) and growth." (See their paper on "The Great Divide and Beyond: Financial Architecture in Transition, " Journal of Economic Perspectives, Vol. 16, No. 1, Winter 2002, p. 81.)

Chapter 4

Poverty and the Character of Growth

Terry McKinley

In order to reduce Armenia's widespread poverty, a development strategy and supporting public policies are needed to generate growth with equity. Given the high incidence of poverty, what is needed is a strategy for growth that is effective above all in raising the material living standards of the poorer half of the population. In other words, Armenia should seek a pattern of growth that is more "pro-poor." But how is such a pattern of growth to be achieved?

For growth to be effective in reducing poverty, the additional income that it generates should flow disproportionately to the sectors in which the poor work (such as small-scale agriculture) , to the areas in which they live (such as mountainous regions) or to the factors of production that they possess (such as land or low-skilled labour). Alternatively, the character of growth should pull the poor into higher-income sectors (such as rural non-farm enterprises) or into more rapidly growing regions (such as central Armenia) or investment in human capital should be allocated to the poor to enable them to migrate to more skilled jobs at home and abroad.

A combination of both approaches—"bottom-up" growth as well as "top-down" growth—is often necessary. Excessive reliance on "bottom-up" growth could deprive the more efficient sectors of the economy of resources while excessive reliance on "top-down" growth could fail to direct resources to the poor. In both approaches, the state must play an active role in directly channeling resources to priority sectors (such as through investment in agriculture)

or indirectly influencing the flow of resources (such as through pricing or exchange rate policies).

If the right combination of public policies is implemented, there need be no conflict between growth and greater equity. Bringing the poorer half of the Armenian labour force into productive employment would greatly stimulate growth as well as help to reduce poverty dramatically. Under current conditions, Armenia has achieved moderate growth but has not succeeded in lowering inequality. Hence, widespread poverty persists.

Inequality rose sharply in the early years of the transition and has remained high. This implies that very little of the additional income generated by growth has gone to the poor since they lack access to productive resources and employment. This helps to explain the so-called "mystery" of growth without poverty reduction.

In this chapter, we examine more closely the character of growth by investigating trends in its sectoral composition among agriculture, industry and services. In the next chapter, we examine trends in the relationship between growth and employment. We start with agriculture, which has played a crucial role in mitigating poverty during the transition.

The impact of agriculture on poverty

Before the transition, Armenia was a relatively industrialized country. Agriculture played a minor role in the economy. In 1990, for example, it accounted for only about 13 per cent of national output (see Table 2.1). However, as we saw in Chapter 2, by 1993—within three short years—this share skyrocketed to over 46 per cent because the Armenian industrial sector collapsed during the early years of the transition.

This resulted in a rapid and wrenching process of de-industrialization in which agriculture played the role of a "shock absorber", cushioning the impact on people's living standards of the drastic fall in industrial output. But the agricultural sector was also simultaneously undergoing sweeping structural changes. In 1991-92, in the midst of the industrial collapse, the large collective and state farms that had dominated the sector were disbanded and 70 per cent of the arable land was privatized and parceled out to individual farmers.[1] The complete privatization of livestock followed soon afterwards. As a result, most farms have become mixed cropping and livestock production units. These changes helped to soften the potentially devastating impact of "shock therapy" on people's livelihoods. The early policies of the government in equitably distributing the country's agricultural wealth had a pro-poor impact.

Land privatisation

The distribution of land was remarkably equitable, being allocated to each family according to its size. Where possible, the distribution tried to give each family a share of various types of land, e.g., arable irrigated land (for vegetables), arable unirrigated land (for field crops), land for orchards, and hay meadows. Pastures remained under state ownership, as did the quarter of all arable land held in reserve. The location of each type of land plot that a family received was determined by lottery. Farmers had to pay for their newly acquired land but the standard payment, namely, the equivalent of 70 per cent of net farm profit for two years, was negligible.[2]

The result of land privatization was the creation of a small peasant farming system comprising about 335,000 family owned farms with tiny, fragmented plots of land. This outcome is similar to what occurred in the better known example of land reform in the

People's Republic of China. The difference is that in China land reforms occurred in the context of a growing economy whereas in Armenia rural reforms occurred against the backdrop of shock therapy and depression.

After land reforms in Armenia, the median size of a family farm was between one and two hectares—constituted by an average of three parcels, of which one was irrigated and two unirrigated. Fifty-eight per cent of all farms ranged between 0.5 ha and 2.5 ha. Ten per cent exceeded five ha, but the maximum size was 12-13 ha. The larger family farms tended to have poorer quality land and to be concentrated in mountainous regions. Thus they were less productive. So in Armenia the distribution of land by value might well be even more equal than its distribution by size. This is the case, for instance, in China, where similar principles of distribution were followed.

Land reforms led to the dominance of private sector production in rural areas. While in 1990 the private sector accounted for 35 per cent of agricultural output, after land privatization it accounted for over 98 per cent. Only a few state farms were left, specializing mainly in livestock. While Armenia had previously concentrated on exporting fruits and vegetables, and importing grains, crop production in the 1990s shifted decisively to cereals. This met much of the demand from domestic consumption and helped lower the country's import bill. These limited policies of import substitution helped maintain people's basic living standards, but the change in the composition of farm output represented a shift from high value crops to low value crops and from high labour intensity of output to low labour intensity. These shifts helped to intensify rural poverty.

One of the striking features of Armenia's transition has been the ability of its agricultural sector to sustain and even increase output in the face of severely depressed

conditions in the rest of the economy. For example, physical crop production increased by about 50 per cent between 1990 and 1996. This increase occurred despite a decline in cropped area. Part of the reason was that within the cereals sector, farmers switched to higher value-added crops, such as wheat, barley and potatoes, and away from lower priced animal feed crops. The latter, in turn, reflected the decline in livestock production (see Table 4.1).

Table 4.1

Agricultural Output and Livestock Numbers, 1988-2000
(millions of dram and thousands)

	Gross Agriculture Output at 1995 prices	Cattle	Pigs	Sheep & Goats
1988	n.a.	742.0	319.0	1450.0
1989	n.a.	n.a.	n.a.	n.a.
1990	314	640.1	310.9	1186.3
1991	368	566.5	224.4	1023.0
1992	324	498.9	84.3	873.1
1993	308	501.6	81.5	736.0
1994	318	503.7	82.3	636.0
1995	333	507.5	79.6	603.7
1996	339	509.6	54.3	578.8
1997	319	465.8	56.9	521.1
1998	361	496.1	86.2	546.3
1999	364.5	478.7	70.6	548.6
2000	356.5	497.3	68.9	540.0

Source: Tacis, Economic Trends Quarterly Issue, Armenia, April-June 2001, Annex Table 1.14, p.135 (for output value) and Annex Table 1.16, p. 136 (for livestock number).

The growth in crop production was all the more remarkable since the sector had suffered major setbacks in the late 1980s, due in part to the earthquake of 1988 and in part to the decline in farming area as a result of the Karabakh conflict. The disruption of input supplies, which were fairly stable during the Soviet period, compounded agriculture's

problems in the 1990s. As a result, yields of major crops have remained at 50-60 per cent of potential. Although about 60 per cent of farmers have access to irrigation (covering on average about 0.7 ha of their holdings), water is in short supply and the losses from deteriorating irrigation systems are substantial. Also, because of small farm size, most of the machinery from the Soviet period is unsuitable; it is also now very old. Hence, Armenian agriculture entered the 1990s with multiple disadvantages.

Such gains in crop production as occurred in the 1990s were due, in part, to the influx of workers laid off in industry, which boosted total production but lowered output per worker. Armenian agriculture began to mirror the conditions common to agriculture in many poorer developing countries—a sector that retains surplus labour unable to find employment in the rest of the economy. This is a recipe for underemployment, low productivity and low income.

In recent years, the terms of trade have also turned against agriculture. While during 1996-99 the consumer price index increased by about 10 per cent and the industrial price index by 14 per cent, the agricultural price index increased by less than two per cent. Hence, although physical output has been growing, there has not been a commensurate increase in farmer incomes because of low farm-gate prices.[3] This has been due partly to the unequal distribution of income, which skews consumption towards imported luxury food products and non-food items. The decline in agriculture's terms of trade underscores the importance of supporting the rise of small-scale food processing, which can increase the value added retained in rural areas.

The positive side of this trend—and an additional factor explaining increases in production—was the enhanced work incentives created by land privatization since rewards are now much more closely tied to effort. In addition, the equitable distribution of land ensured

that incomes generated in agriculture were broadly distributed. The small plots of land that each family owned and cultivated acted as a very effective social safety net, especially during a time when the state had few resources to finance transfer payments to poor households.

Land privatization prevented, no doubt, a much wider prevalence of poverty. It partly explains why the incidence of poverty is lower in rural areas than in urban areas and why extreme poverty has been contained in rural areas. Destitute rural families have tended to be those without land.[4]

Since the wave of land privatization in 1991-92, the main channel for farmers to increase their farm size has been the leasing of state-owned pastures or hay meadows from the village council. About 15 per cent of farmers have taken advantage of this option. The average amount of leased land has been 1.2 ha, with most leases being 1-3 years long. The average lease payment per hectare in 1998 was $US 16. There has been virtually no buying or selling of land. Farmers are understandably reluctant to give up their plots of land since they guarantee at least a subsistence standard of living. The great majority of farmers are also opposed to privatizing state-owned pastures. The use of local pastures controlled by communities is free, for example.

Hence at present there are limited opportunities to consolidate fragmented holdings of land. Under current conditions, if land were consolidated under private ownership, poverty would probably increase dramatically. The rest of the economy is still unable to create enough jobs to absorb the workers that would be displaced. Since 1999, the government increased the average size of household farms by selling the state lands that it had held in reserve, raising the average size of farm to 1.38 ha in 2000 from 1.27 ha in 1991-95.[5]

Within two years, the government plans to auction off all land that is not needed for public purposes. This might disadvantage poorer farmers, particularly if communal pastures are privatized. An alternative worth considering is to lease pastures to groups of farmers. In general, Armenian farmers are poorly organized. One reason is their dislike of collectives, based on their experience during the Soviet period. But organized groups of farmers could play a vital role in strengthening the position of farmers in input and output markets. Groups could market their output together, for example, or lease farm machinery in common. Granting tax exemption to such farmer groups could facilitate their growth.[6] Farmers are wary of giving up their tax-exempt status as individual producers.

The non-agricultural sector

Farm households have few options outside agriculture to improve their livelihoods. Opportunities in the rural non-farm sector are scarce. This is in stark contrast to the experience of China, for example, where a booming agricultural sector in the early 1980s propelled the growth of a thriving, employment-intensive non-farm sector of township and village enterprises. In Armenia, about four-fifths of rural employment is still in agriculture.[7] This is a high percentage for a transition economy. Rural households have not been able to diversify their economic activities and sources of income. For example, only about one-fifth of farmers report engaging in any non-agricultural business activities, and most of this consists of processing farm products. Such non-farm activities as exist are mostly part of a defensive coping strategy, in order to diversify meager sources of income and stave off poverty; farmers do not have the means to generate prosperity.

Although agriculture has been growing slowly, it is not specialized or commercially oriented, and does not have strong forward and backward linkages that would stimulate growth

in the rest of the rural economy. Farming is, in many cases, a part-time occupation: only a little over a third of the labour force work year round. This is a reflection of widespread underemployment in rural areas. But few jobs exist in non-agricultural activities in the rural economy to absorb the excess labour. Women do much of the work on household plots. Most of the income that men generate comes from employment in the public sector or from working abroad. Income from non-farm self-employment or small private businesses is marginal.

Forty per cent of non-agricultural income comes from salaries. Thirteen per cent comes from remittances from abroad. Another 23 per cent is accounted for by pensions. So, despite the low share of social assistance and allowances (around five per cent of total income), the public sector looms large in rural areas through public-sector employment and pensions. Development could be more rapidly promoted if more emphasis were given to rural public works, which would increase public sector employment and income. Development could also be advanced if a rural banking system were created to facilitate the return of remittances.

Cash income, savings and investment

Farming produces only 18 per cent of net cash income for rural households.[13] Of course, if the imputed value of self-consumed output were included, then total farm income would account for about three-quarters of all rural income. Armenian farming is not purely a subsistence activity: about four-fifths of farms report selling some products. But in 1997 only about one-fourth of all output was sold. The average farm generated only about US$ 140 per year in gross revenue (before the land tax, water charges or other such operating expenses are taken into account). Some more recent estimates, such as from the FAO, report a higher share of marketed output. Nevertheless, cash income among farming households remains low.

Ironically, one of the primary uses of cash income by farming households is to purchase food in stores. Because of the shortage of cash, families frequently have to barter for food and consumer goods. Also, because of the lack of cash, many farmers have been in arrears on land taxes or water fees, or both.

Because cash income from farm and non-farm activities is limited, Armenian farmers do not contribute as much as they could to national savings and investment. In 1997, less than half of farmers paid their land tax in full although this was only about US$ 14 on average. Also, less than half of farmers paid their water fees in full. This has a detrimental impact on national savings by lowering government revenue. Farm families reported a savings rate of only six per cent, a very low rate by international standards. And none of the households surveyed reported any savings in banks. This situation highlights the need for creating a rural financial system that can mobilize domestic savings.

In 1997, only eight per cent of farmers reported investing in their farm. Over 60 per cent of this investment went into purchasing livestock and building or repairing a house. Part of the reason for the lack of investment is that farming is geared primarily to satisfy household food needs, that is, it is a defensive mechanism against malnutrition and poverty. The lack of investment is also due to the lack of credit in rural areas. Only about 5-6 per cent of credit from commercial banks has been directed to agriculture. The great majority of farmers borrow from relatives, friends or neighbours, not from banks. Only one per cent of farmers belong to credit unions or cooperative banks.

Policy recommendations

Lack of credit is cited as a major impediment to the growth of the non-agricultural sector in a survey in 2001 of small-scale non-farm enterprises. About 40 per cent of these

enterprises specialized in trade and another 20 per cent in processing. Over 10 per cent were bakeries.[14] Most of these businesses were micro-enterprises, which had started in the period 1997-2000. About half of all the enterprises were directly linked to agriculture, either through food processing, trade in food or by providing inputs to production. It is logical to expect that non-agricultural activities will continue in the foreseeable future to be heavily reliant on agricultural commercialization and prosperity. For the medium term, growth in rural areas is likely to be agriculture-led.

In order to stimulate growth and have a substantial impact on poverty, the allocation of public resources should be targeted to strengthen this linkage. But support should be focused on the enabling conditions for pro-poor growth instead of trying to "second-guess the market" and artificially steer development towards certain industries. Public resources are scarce: they should be allocated strategically, focusing on public investment that is most likely to augment productivity, particularly among the poor. Strengthening the conditions for prosperity will involve concentrating resources on rural infrastructure, education, training and information, and the provision of credit.

One of the most common complaints from entrepreneurs of micro-enterprises in rural areas is their inability to secure access to start-up and working capital. The government no longer commands the resources to direct credit to agriculture. Commercial banks are oriented mainly to larger enterprises and have no experience in providing credit to small farmers. The one promising exception is the Agricultural Cooperative Bank of Armenia (ACBA), but its outreach in rural areas remains limited. Thus, there is an obvious market for micro credit and small-scale finance in rural areas. A priority of government policy should be to focus on

expanding the outreach of ACBA and creating micro-finance institutions offering a range of services, such as savings and insurance as well as credit.

Establishing a viable rural banking system is a high priority since it would greatly facilitate the rise of local savings and investment, which remain at pitifully low levels. Such a system could contribute substantially to rural resource mobilization, which is a pre-condition for fostering development. At present, credit is not readily available to rural families. Moreover, the real interest rates charged by banks have been very high. This has choked off any real prospects for investment.

The lack of rural infrastructure, particularly in road, rail and telecommunications, is also a major constraint cited by entrepreneurs. A concerted programme of labour-intensive public works, directed particularly at the poorer rural areas of Armenia, could have a powerful impact on reducing poverty, through both the short-run effect of increasing employment and incomes and the long-run effect of rehabilitating or creating public assets.

Lack of information about market conditions, and about employment opportunities, is also a common complaint. Rural workers should be encouraged to move, for example, to centers of growth. Increasing the mobility of labour can be a key ingredient in Armenia's poverty reduction efforts. Workers are already moving spontaneously, through informal contacts (even for employment abroad). More formal and reliable sources of information would improve their chances to obtain decent employment. There is also a need to establish "small business assistance centers" in rural areas, which could help to provide small-scale entrepreneurs with market information and training.[9]

A third problem often mentioned by entrepreneurs is the lack of a qualified workforce. Armenian workers are well educated but often do not have the specific skills needed for

employment in the growing sectors of the economy. Vocational training for employment in such areas as computing, services and tourism would thus be helpful. Since Armenia is in danger of losing its comparative advantages based on a well-educated workforce, emphasis should be placed on maintaining educational standards in rural areas at the secondary school and primary school levels. Public allocations to the education sector remain a top priority.

The impact of industry on poverty

Before the Soviet period, the main economic activities in Armenia were agriculture and trade. Armenia benefited from being situated at the crossroads of commerce between West and East, as well as between North and South. Its industrial development started with the production of copper, vodka and wines during the Czarist Empire in the late 19th century.[10]

Following the Soviet model after 1920, Armenia concentrated on building up heavy industry, notably the energy, machine building, chemical and metallurgy sectors. The growth of industry was phenomenal: its share in national output increased from about 23 per cent in 1923 to 78 per cent in 1940.

During this period, Armenia concentrated on producing non-ferrous metals and chemicals, and added a machine-building concentration during the period 1940-1950. These industries were closely integrated into the industrial-military complex of the Soviet Union. One of the advantages created as a by-product by Armenia's concentration on military goods was a specialization in computer production, which brought with it a strong skill base. This foundation has helped in recent years to launch Armenia's relatively successful computer software business.

After 1950, the country's industrial base became more diversified, and a range of light industries, such as textiles, garments and footwear, was added which produced consumer

goods for the internal market. Food processing also became an important sector, accounting for one quarter of industrial production in 1985. However, the 1988 earthquake heavily damaged light industry because 40 per cent of its production was concentrated in the disaster zone. Meanwhile, the sub-sectors of jewelry and precious metals rose in importance because of their steady rates of growth throughout the late 1980s and early 1990s. They have been important generators of growth of exports but not necessarily of value added and employment.

As other sectors of the economy grew, the share of industry in national output gradually declined, and by 1990, on the eve of independence, the share of industry in GDP was about 45 per cent. Still, compared to other countries in what was to become the Commonwealth of Independent States, Armenia was relatively industrialized. However, much of its industrial production remained capital-intensive, and highly concentrated economically and geographically. Three-quarters of industrial production was accounted for by monopolistic groups and two-thirds was located in the Ararat region in the center of the country. Production was dominated by large state-owned enterprises (although co-operatives had risen to account for about seven per cent of output by 1990).

Much of industrial production was heavily dependent on capital and skilled labour. Armenian industry was also very import-intensive, especially reliant on imported energy and intermediate goods. This was the legacy of the Soviet period that confronted advocates of economic reform in the 1990s. Armenia's specialization in heavy industry and close integration into the rest of the Soviet Union help explain, at least in terms of initial conditions, why the transition to a market economy started with such a precipitous drop in output.

Industrial development during the transition

As indicated in Chapter 2, drastic changes in the sectoral composition of output have occurred in Armenia during the transition. While Armenia became an industrialized country during the Soviet period, it has become progressively de-industrialized during the period of transition. Industry's share of GDP dropped from about 45 per cent in 1990 to less than 20 per cent in 1998 and has since recovered only slightly. In 2000, its share stood at a little over 22 per cent (see Table 2.1).

Both heavy and light industry experienced dramatic declines in production. Machine building, the main sector of heavy industry on the eve of the transition, saw its share in total industrial production plummet from 31.6 per cent in 1988 to only 3.3 per cent in 1999. The share of textiles, garments and footwear sank from over 24.4 per cent to a miniscule 1.4 per cent of industrial output during the same period.[11] In other words, major branches of industry disappeared almost entirely in little more than a decade. The decline of these industries has hampered Armenia's ability to initiate a process of labour-intensive growth.

A combination of factors was responsible for these drastic declines. The collapse of domestic and external demand was obviously a major factor. Trade liberalization, especially with regard to consumer goods, also took its toll. And price liberalization, e.g., the removal of energy subsidies, contributed.

The impact on poverty has been devastating, driving huge swathes of industrial workers into unemployment, low-paid work in the urban informal sector and survival-level subsistence farming in the agricultural sector. We believe, as explained in Chapter 1, that the severity of the industrial collapse could have been moderated if a strategy of investment-led structural change had been implemented instead of "shock therapy". But that is not the relevant issue

now, since a strategy of "shock therapy" was indeed followed. The issue today is what policies should now be implemented to accelerate growth and reduce poverty nearly 12 years after the beginning of the transition to a market economy. These years have been characterized initially by a sharp, deep depression followed by a recovery with moderately high rates of growth but with little employment generation and even less poverty reduction.

Since 1994, Armenia has enjoyed an average annual growth rate of gross domestic product of about five per cent. Yet the evidence offered by two household income-expenditures surveys, in 1996 and 1998/99, suggests that income poverty continues to afflict about half of the population and shows little sign of abating. Why has growth not produced a substantial reduction in poverty?

The simple answer is that the character of growth has not been sufficiently broad to generate rising employment and incomes among the poorer half of the population. Growth in the late 1990s was still trying to pull the economy out of the "shock therapy" trough into which it had fallen in the early 1990s. As shown in Chapter 1 (Table 1.2), by 2000 real GDP had still only risen to about 58 per cent of its 1989 level. Moreover, growth was not employment-intensive, as we shall see in Chapter 5.

The impact of privatization

The process of privatisation has neutralized some of the effects of growth on poverty. In the early 1990s, the government of Armenia concentrated on the privatisation of land, a reform that has already been discussed. The impact of privatization was very equitable and has helped prevent much more extensive and severe poverty in rural areas than would otherwise have occurred. From the point of view of the economy as a whole, privatization of land has served a useful function as a social safety net during the period of the collapse of industry.

Further reforms in agriculture, however, are needed to raise productivity. These reforms should encourage greater specialization and commercialization of agricultural production in order to produce a large marketable surplus. Eventually land will have to be consolidated but this should be done gradually, on the basis of rising rural prosperity. Otherwise, there is a danger that poverty will increase as farmers displaced from the land are unable to find other employment opportunities.

Housing privatization has also had a very equitable impact on Armenian living standards. As can be seen in Table 4.2, the privatisation of housing units, principally apartments in urban areas, began in earnest in 1994 and covered over 96 per cent of all units by the first quarter of 1999. This represents a significant transfer of national wealth from state ownership to individual private ownership. If the imputed rental value of housing were included in calculations of the distribution of income, the Gini coefficient would surely be lower than the official estimates.

Table 4.2

Privatization of the Housing Sector

	Number of Units	**Cumulative percentage**
1990	6,768	1.7
1991	7,402	3.8
1992	11,411	6.5
1993	20,615	11.7
1994	115,253	40.7
1995	86,195	62.5
1996	17,844	67.0
1997	47,901	79.1
1998	63,956	95.2
1 Q 1999	4,439	96.3

Source: National Statistical Service.

There was a similar intention to distribute wealth equitably when it was decided to privatize small, medium and large state enterprises. In term of numbers of enterprises privatized, the process began with the smaller firms, mostly retail shops, grocery stores and service enterprises. As can be seen in Table 4.3, by 1995, 1833 small enterprises had already been privatized. In 1996, the peak year for privatization, another 2130 small firms were privatized. Thereafter, the rate of privatization declined rapidly, but by 2001, nearly 7000 small firms had been converted to private ownership.

A major effort to privatize medium and large scale state owned enterprises began in 1995, when 240 such enterprises were converted to private ownership. This was followed by 613 privatizations in 1996 and by another 397 in 1997, the two peak years. Thereafter, once again, the pace declined rapidly, but by 2001, a total of 1643 medium and large enterprises had been privatized. The state, in effect, no longer played a major role in managing industrial enterprises.

Table 4.3

Privatization of Small, Medium and Large Enterprises
(number of enterprises)

	Small Enterprises		Medium and Large Enterprises	
	Annual number	**Cumulative number**	**Annual number**	**Cumulative number**
1995	n.a.	1833	240	240
1996	2130	3963	613	853
1997	2058	6021	397	1250
1998	599	6620	210	1460
1999	186	6806	54	1514
2000	43	6849	40	1554
2001	78	6927	89	1643

Source: National Statistical Service.

In the early stages of privatization, 20 per cent of the value of state owned enterprises was distributed as vouchers, without charge, to the employees of the enterprises who had worked in them for at least one year.[12] As a result, about 127,000 employees gained ownership of their enterprises. Each certificate of ownership had a nominal value of 20,000 drams (less than US$ 35 in current value). However, without investment funds or operating stock exchanges, citizens saw no point in holding onto the certificates. They converted them into cash by selling them on the secondary market at about 30-40 per cent of their nominal value. The buyers were the wealthy and well connected. Thereafter, enterprises were offered for public sale, abandoning any attempt by the government to distribute industrial wealth equitably among ordinary citizens.

What had begun as an attempt to equalize the distribution of wealth ended with a concentration of wealth in a few hands, and this created the foundation for rising income inequality. If the overriding objective had been to generate employment and reduce poverty, then public policy should have concentrated not on redistributing existing property rights but on supporting entrepreneurs who were eager to start new, small labour intensive private enterprises.

Industry has not rebounded as a result of privatization. Its share of GDP declined from 27.8 per cent in 1995 to 22.1 per cent in 2000. In 1998, it reached a low point of 19.9 per cent and edged up in 1999 and 2000 before falling again in 2001. During this time the share of agriculture was also declining while that of services was rising.

Medium and large-scale industrial enterprises responded to privatization with lowered output and employment.[13] Meanwhile new small-scale private enterprises have been slow in taking up the slack.[14] In 1998, new private industrial enterprises accounted for only about 6.7

per cent of all new private sector GDP; new enterprises in other sectors, such as services, accounted for 15 per cent. Family farms predominated, accounting for about 42 per cent.

The lack of private-sector response to economy-wide restructuring of property rights is one of the main reasons for the lack of growth in industry and the persistence of poverty. The service sector did grow in the late 1990s but its growth has not compensated for the continuing decline of industry.

Some industrial sectors, such as power generation and food processing, have been growing in the wake of restructuring. Smaller, export-oriented sub-sectors, such as jewelry and computer software, have also been doing well. However, none of these activities are large enough to have a broad impact on growth and poverty reduction.

Targeting of public support makes most sense in food processing, particularly because of its links to agriculture. This sector was built up during the Soviet period, with much of its output intended for export. Substantial industrial capacity still exists in the major agricultural production areas although the sector's capital and technology have become outdated[15] The whole sector is now privatized. Primarily because of the collapse of other industrial sectors, food processing now accounts for about 40 per cent of all industrial output. It is also a sector in which productivity is relatively high. There is a high concentration of new private sector firms and traditional enterprises that have successfully been restructured. So prosperity in this sector can contribute significantly to overall growth of the industrial sector.

Food processing is a sector that is more labour-intensive than many of the other traditional sectors, such as machine building, metallurgy and energy, which are part of the legacy of Soviet-era capital-intensive heavy industry. Thus, growth in food processing has the potential to generate considerable employment. Also, because of its close links to agriculture,

the value that its processing adds to agricultural production will significantly augment income in rural areas. This is bound to have a substantial impact on poverty.

To be successful, however, the food processing sector should concentrate on investment in smaller, more efficient firms that are closer to agricultural sites and have a capacity that is more aligned with current reduced levels of output. Public support should extend beyond the big agricultural areas (such as Ararat Valley) and their large enterprises to more distant areas where smaller firms are more suitable. The sector can attract foreign direct investment but this is more likely to be from small investors among the diaspora or returned emigrants. Public investment should concentrate on providing essential infrastructure and services, such as roads and energy.

The impact of services on poverty

The service sector began to grow in the mid-1990s. From 1990 to 1994, its share of GDP dropped from about 25 per cent to 17.4 per cent (see Chapter 2, Table 2.1). Both services and industry were in decline during the early 1990s when agriculture was still growing and absorbing labour from other sectors. Industry has been in continuous decline during the entire period of transition. When the role of agriculture started to diminish in the mid-1990s, the services sector increased its role in the economy, jumping to over 27 per cent of GDP in 1995 and emerging in 1997 as the sector with the highest share. By 2000 services accounted for over 35 per cent of GDP, while agriculture and industry accounted for only 22-23 per cent each.

The share of services in GDP virtually doubled between 1994 and 2000. This is a reflection of the sector's importance for poverty reduction in the late 1990s and beyond. Growth in services will have to be one of the principal motors for making inroads against

poverty, particularly in urban areas. Without such growth, the urban informal sector is not likely to decline.

Not all sub-sectors of services shared in the growth of the sector as a whole. In 2001, real levels of value added were higher than they were in 1990 only in trade, housing services, education and state administration. Housing services had practically doubled the 1990 level. State administration had increased by over 76 per cent and education by about 27 per cent. Trade was only about five per cent above its 1990 level.

Table 4.4

The Composition of Output in the Services Sector
(per cent of output in services)

	1990	1995	1996	2001
Transportation and communications	30.8	18.6	21.9	22.6
Trade and catering	19.9	40.7	34.2	29.8
Housing services	9.2	9.4	11.3	9.6
Personal services	4.8	6.9	8.7	13.2
Health care, sports and social insurance	2.6	4.9	4.9	3.6
Education	20.0	8.8	8.3	9.7
Culture		1.6	1.2	1.1
Science	3.2	1.6	1.3	1.0
State administration	9.5	7.5	8.2	9.4
Total	100.0	100.0	100.0	100.0

Source: National Statistical Service.

As can be seen in Table 4.4, in 1990 transportation and communications represented the largest sub-sector of services, accounting for about 31 per cent of the value added of the whole sector. But by 2001 its share had dropped to 22.6 per cent. However, this drop was due to the dramatic fall in the real value added in the sub-sector from 1990 to 1994; after 1995 the sub-sector's output increased continuously, along with its share of all services. Transportation and

communications are a priority area for public investment, particularly labour-intensive public works in rural areas. Such investment will also stimulate the construction industry, which has been growing noticeably since the mid 1990s.

The value added in trading activities declined substantially in the early years of transition but has rebounded healthily since then. Consequently, the share of trading in total services value added had risen to almost 30 per cent in 2001, about 50 per cent higher than its 1990 share of almost 20 per cent. The recovery of trade, much of it small in scale, has had a significant effect on mitigating poverty. Until Armenia is able to break through its physical isolation, however, and resume normal trade with Turkey and Azerbaijan, the growth of this sub-sector is likely to be hampered.

Education and state administration have been the two public sub-sectors of services that have remained relatively constant during the transition. The real level of value added of educational services has remained fairly stable despite the precipitous drop in the output of the whole economy, including in much of the service sector**.** It is a priority for Armenia to maintain expenditures in the education sector if it hopes to maintain a competitive advantage in activities that rely heavily on skilled labour.

The real value added of public administration has increased almost continuously throughout the 1990s. This is not necessarily an adverse development if the size and capability of the state is being maintained in order to provide essential public infrastructure and services. Structural adjustment policies often aim to reduce expenditure on public administration very considerably, but this can weaken the ability of the state to implement reforms. Moreover, the real value of public sector salaries has been so low in Armenia that they have provided little safeguard against poverty for public sector employees.

Concluding remarks

Throughout the discussion of agriculture, industry and services, we have attempted to identify public policies that could stimulate more pro-poor growth in Armenia. This is critical in view of the country's very high inequality, which impedes efforts at poverty reduction. Such inequality even tends to slow economic growth by excluding large segments of the population from productive employment.

Public resources are limited in Armenia and the room for maneuver is limited. However, we believe that much can be done with a more strategic focus of resources and a better design of public policies. Changing policies to be more pro-poor need not always involve the allocation of more public resources, unless the emphasis continues to be placed on public transfers and public sector employment. The state can no longer guarantee public employment and extensive social assistance. But it can be pro-active in implementing policies that trigger more rapid growth and it can place a greater emphasis on reducing poverty.

We have limited our policy recommendations to those we consider feasible and most important. Focusing policies is critical. In agriculture, we have emphasized the allocation of resources to rural infrastructure; human capital investments in education, training and information; and building up a rural banking system. In industry, we have stressed the need for public support to new, small private enterprises in general and to the food processing industry in particular because of the latter's potential for both growth and poverty reduction. In services, we have underlined the importance of public investment in transportation and communications, especially through labour-intensive public works in rural areas, and continued allocation of resources to public education, particularly to maintain Armenia's competitive advantage in activities that rely on skilled labour.

Notes

1. See Zvi Lerman and Astghik Mirzakhanian, Private Agriculture in Armenia, Lexington Books: Lanham, USA, 2001, p. 7. The discussion of agriculture in this chapter relies heavily on this publication.
2. See Astghik Mirzakhanian, "Individual Farming in Transition Economies," draft, August 2001,Yerevan. pp. 5-6.
3. See Ministry of Agriculture of the Republic of Armenia and the Food and Agriculture Organization of the United Nations, "A Strategy for Sustainable Agricultural Development," draft, June 2002, Yerevan, p. 19.
4. See World Bank, Improving Social Assistance in Armenia, Report No. 19385-AM, World Bank: Washington D.C., June 8, 1999, Annex 5, p. 4.
5. Astghik Mirzakhanian, op. cit., p. 10.
6. Ministry of Agriculture of the Republic of Armenia and the Food and Agriculture Organization of the United Nations, op. cit., p. 54.
7. See R. Davis, Junior with Paruryr Asatrian and Hranusch Kharatyan, "Constraints and Potential to the Development of Rural Non-Farm Activities in Armenia," Natural Resources Institute, University of Greenwich, Report for EC-FAO/SEUR, draft, 2002, p. 6.
8. The other sources of cash income are non-farm business income (10% of the total) and pensions, remittances, transfer payments, etc. (72 % of the total). These data are based on a sample of 1500 households conducted in 1997. (See Zvi Lerman and Astghik Mirzakhanian, op. cit., Table 7.5, p. 58).

9. Ibid., p. 68.

10. Ministry of Agriculture of the Republic of Armenia and the Food and Agriculture Organization of the United Nations, op. cit., p. 107.

11. See USAID (Barents Group/KPMG), "Armenia: Industry Sector and Industry Policy," Project on Economic Restructuring and Fiscal Reform Activities of the NIS, draft, September, 1995 pp. 20-21.

12. See World Bank, Armenia: Growth Challenges and Government Policies, Vol.II: Main Report, November 2001, p.32. The section in this chapter on industrial development during the transition draws extensively on this publication.

13. For a survey of the effects of privatization on enterprise behaviour see Simeon Djankov and Peter Murrell, "Enterprise Restructuring in Transition: A Quantitative Survey," Journal of Economic Literature, Vol. XL, No. 3, September 2002.

14. For a discussion of the importance of encouraging new private sector enterprises see John McMillan and Christopher Woodruff, "The Central Role of Entrepreneurs in Transition Economies," Journal of Economic Perspectives, Vol. 16, No. 3, Summer 2002.

15. Ministry of Agriculture of the Republic of Armenia and the Food and Agriculture Organization of the United Nations, op. cit., pp. 57-59.

Chapter 5

Employment-Intensive Growth and Poverty Reduction

Terry McKinley

The role of employment in reducing poverty has not been emphasized enough in national poverty reduction strategies, particularly in the Poverty Reduction Strategy Papers now being prepared in many countries. This is surprising given the obvious importance of employment. Much has been written on the relationship between growth and employment, and in particular on the need for employment-intensive growth. Less has been written, however, on the relationship between employment and poverty reduction.

The challenge for national policy makers is not only to link growth to productive employment, or "decent work" as the International Labour Office calls it, but also to ensure that the growth in employment is concentrated among poorer workers. Many of the poor in Armenia work, but they work in low-productivity, low-income sectors of the economy, such as small-scale agriculture, rural non-farm trade and urban informal-sector services. Much of this work is only part-time.

Thus many of the poor are not unemployed, but are "working poor". Officially they might be registered as unemployed but unofficially they cannot afford to remain without a job. Those who are registered as officially unemployed are usually workers, such as women who normally work in the household economy or youths who lack experience, who have the greatest difficulty in obtaining a paid job, even in the informal sector.

Employment-intensive growth alone usually is not sufficient to reach the poor, both employed and unemployed, although it is necessary. Policy makers must also be concerned about whether the poor have the necessary capabilities and skills and the access to assets, resources and services for them to take part in whatever growth in employment may occur.

Broadly based growth can provide opportunities for employment but in the absence of other direct job-related public interventions, the poor might not be able to take advantage of these opportunities. These interventions could include training for the newly created paid jobs and access to credit for those who wish to establish micro-enterprises. These forms of support often are components of a national poverty reduction strategy and are complementary to more general economic and social policies , such as land reforms and universal secondary education.

In Armenia growth has not been employment-intensive; certainly it has not generated widespread productive, full-time employment. And poor workers have had little opportunity to secure access to whatever productive employment has been generated. Hence policies will have to be designed to alter the structural characteristics of the economy that exclude the poor from employment. This should be central to the success of Armenia's national poverty reduction strategy.

The illusion of productive employment

During the early stages of the transition to a market economy, when gross domestic product went into a precipitous decline, employment declined more moderately. In other words, the elasticity of employment with respect to output was low. This created an illusion that productive employment could be sustained in the midst of economic depression. One reason is that medium and large-scale enterprises, which accounted for

most of the country's production, continued to "hoard" labour, i.e., to keep workers on their books even when they were not actually employed and earning wages. Hence, employment figures did not reflect the real misery that industrial workers faced. A more accurate picture of the employment situation is reflected in the precipitous decline of real wages and incomes, which paralleled the drop in industrial output.

Many workers remained nominally attached to medium and large-scale enterprises even when they had little work to do. The 1996 Labour Force Survey revealed, for instance, that almost one-third of the employees still registered as employed in industry were not working or were on extended administrative leave. These workers in practice were forced to seek a livelihood in the informal sector and peasant agriculture. They had already entered the ranks of the "working poor" well before the late 1990s.

After the privatization of medium and large-scale enterprises in the middle and late 1990s, the underemployment hidden by labour hoarding in the early 1990s became more obvious.[1] Industry formally laid off about 100,000 workers between 1995 and 1998. However, conditions had not worsened. The real situation of these workers now made formally redundant by privatization had already worsened in the early 1990s as a result of the industrial collapse triggered by shock therapy and the breakdown of trading relations that followed the collapse of the Council for Mutual Economic Assistance (CMEA). If the extent of employment in the early 1990s had been computed on the basis of hours worked (the intensity of labour), it undoubtedly would have shown an early and dramatic decline.

There is an ambiguity at the heart of the conventional explanation for "growth-resistant" poverty in the late 1990s, when different household surveys came roughly to the same conclusion, namely, that about half of the population remained poor. The

implication of the standard explanation is that the current pace and character of growth will eventually reduce poverty because the delayed shedding of labour as a result of privatization and restructuring has nullified the employment generating and poverty reducing potential of an expansion of output. This view tends to breed complacency about the need to make growth more equitable, and ignores the fact that since 1993 output has increased while employment actually has steadily declined, however employment is measured. In other words, the output elasticity of employment has been negative for nearly a decade and this has contributed to the persistence of poverty.

In fact, industrial enterprises began to shed labour very early. Otherwise poverty would not have become so widespread. This "shedding" took various forms. Not only was a substantial proportion of the industrial workforce driven into survival-level activities in the urban informal sector, a sizeable proportion also swelled the ranks of the agricultural workers. In addition, many left the country for good (especially those with education and skills) and many others left their families behind and emigrated abroad in order to earn income to send home. There was thus a huge displacement of industrial labour to other sectors within the Armenian economy and abroad. Hence, the negative elasticity of employment with respect to output from 1993 onwards --when the economy was growing and employment should have been created -- is really not due to the delayed shedding of labour by state-owned enterprises. It is primarily due to the feeble growth of employment in the new small-scale private sector. The growth of this sector, in turn, has been impeded to a great extent by factors under the government's control, in particular by a lack of credit, training and public investment in infrastructure.

It is noteworthy that during the transition to a market economy, unemployment has risen to unprecedented levels. Most credible but unofficial estimates place the percentage

of unemployed people above 20 per cent. They are concentrated in urban areas and most of the unemployment is long-term. Armenia's level of unemployment is very high compared to other transition economics. At first glance, this is puzzling since unemployment benefits are low and difficult to obtain. Only about 15 per cent of the unemployed who officially register receive any benefits. In 1996, almost three-quarters of the officially unemployed were women, who indicated that they were normally employed in "home gardens and households". As the economy declined in the 1990s, many women delayed marriage and pregnancy and actively participated in the labour force again in order to help arrest the decline of household incomes. About another 20 per cent of those officially classified as unemployed were youths, who as first-time entrants into the labour force, also had problems finding employment. In urban areas unemployment among youths of 17 to 25 years of age has been about 60 per cent. Many of these young people have to continue to live with their parents well into their 20s.

In contrast, many adult males have not registered as unemployed. They know that benefits are low (less than US$ 5 a month in 1997) and the chances of finding another job are slim. It is estimated that only one-fourth of all unemployed persons bother to register. The other three-quarters tend to find employment in marginal or informal activities, e.g., in urban petty trade or rural barter transactions. Moreover, about one-third of the officially unemployed are reported to find work, mostly temporary or casual employment. So, while unemployment rates are high, even more important is the extensive underemployment problem in Armenia.

A further problem that complicates the interpretation of official data is the decline in the labour force participation rate of the working age population. This reflects the growing number of discouraged workers who have ceased to search for formal sector

employment. If both registered unemployment and the withdrawal of people from the labour force are taken into account, about half of all working age adults of 25-49 years of age were without employment in 1998. Two-thirds of female workers in this age group lacked employment.[2]

Trends in employment

Employment had already started to decline in Armenia in the aftermath of the 1988 earthquake and the Karabakh conflict. Later in the 1990s, a "shock-therapy" strategy for the transition intensified the impact of these early external shocks.

Agricultural employment accounted for much of the decline in employment in the late 1980s, dropping by almost eight per cent between 1985 and 1990. However, in the 1990s, industry was responsible for most of the decline in employment, a decline induced by the collapse of CMEA and the introduction of shock therapy. By 1997 industrial employment stood at 44 per cent of its 1990 level.[3] Between 1990 and 2000, employment in industry dropped by about 315,000 workers, as can be seen in Table 5.1. The same declining trend characterized the construction sector. Employment in services also declined in the early 1990s but less dramatically than in industry, falling by more than 116,000 workers between 1990 and 1995.

Uncharacteristically, the tertiary sector did not absorb most of the industrial workers who lost their jobs; instead it was the agricultural sector that proved to be the residual source of employment. Employment in agriculture mushroomed by 200,000 workers during 1991-92, the years of land privatization, and continued to increase, albeit at slower rates, until 1996. Between 1990 and 2000, agriculture absorbed over 280,000 new workers. Many of the laid-off industrial workers who had their origins in rural areas returned to their villages early in the 1990s to establish a claim to the privatized land.

As agriculture gained workers released by industry, the average level of labour productivity in the economy declined, since more workers were concentrated in lower value-added activities. Development was thrown into reverse and Armenia became an increasingly agrarian economy.

Table 5.1

Employment by Sector of Economic Activity (thousands)

	Total	Industry	Agriculture	Services
1990	1630.1	494.8	283.8	662.1
1993	1543.3	362.5	519.7	541.2
1995	1476.4	302.9	551.9	545.6
1998	1337.3	209.4	567.8	503.4
2000	1277.7	179.7	566.7	484.8
Percentage change, 1990-2000	-21.6	-63.7	+ 99.7	-26.8

Source: National Statistical Service.

Thus between 1990 and 2000, industrial employment fell by nearly 64 per cent and employment in services declined by nearly 27 per cent; employment in agriculture partially offset these falls by nearly doubling. Total employment declined by 21.6 per cent. These changes in levels of employment led to major changes in the composition of the labour force across the three major sectors of economic activity plus construction.

Table 5.2

The Sectoral Composition of Employment (percentages)

	1990	1995	2000
Agriculture	17.4	37.4	44.4
Services	40.6	37.0	37.9
Industry	30.4	20.5	14.1
Construction	11.6	5.1	3.6

Source: National Statistical Service.

As can be seen in Table 5.2, between 1990 and 2000 the share of agriculture in total employment rose dramatically from 17.4 per cent to 44.4 per cent. The share of services fell slightly, namely, by 2.7 percentage points to 37.9 per cent of total employment in 2000. The share of industry, in contrast, fell by more than half, from 30.4 per cent of total employment in 1990 to only 14.1 per cent in 2000. Equally remarkable was the fall in employment in construction from 11.6 per cent of the total in 1990 to only 3.6 per cent a decade later. This reflects the collapse of investment that was emphasized in Chapters 1 and 2.

Rough estimates of changes in the productivity of labour in the three sectors of economic activity are illuminating. The data are presented in index number form in Table 5.3. In the industrial sector the productivity of labour declined by 46 per cent between 1990 and 1995 and then rose almost as rapidly, so that by 2000 it was 7.3 per cent lower than it had been a decade earlier. This pattern may reflect the dismissal of labour in the privatized state enterprises that occurred in the middle years of the 1990s. In agriculture there was a steady decline in the productivity of labour throughout the period 1990-2000. This reflects the inability of agriculture to absorb productively the large inflow of

displaced workers that occurred throughout the transition period. By 2000, the productivity of labour in agriculture was little more than half of what it had been in 1990. The pattern in the services sector was similar to that in industry. Productivity at first fell and then rose sharply. By 2000, the productivity of labour in services was actually 31.1 per cent higher than it had been in 1990. The average productivity of labour in the economy as a whole at first fell by nearby 62 per cent and then recovered, so that by 2000 it was only 13.3 per cent below the level of 1990.

Table 5.3

Value Added Per Worker, 1990-2000
(index: 1990=100)

	1990	**1995**	**2000**
Industry	100	54.0	92.6
Agriculture	100	69.6	52.4
Services	100	70.1	131.1
Entire economy	100	58.3	86.6

Source: Author's calculations based on data from the National Statistical Service.

The ranking of sectors by labour productivity also changed. This is shown in Table 5.4 , where each sector's share in gross domestic product is divided by its share in employment. Thus the data in the table indicate the relative position of each sector at a given moment in time, but they tell us nothing about changes in productivity over time. In 1990, the productivity of labour in industry was roughly 46 per cent above the national average, twice that in agriculture and nearly 2.4 times that in services. In 2000, industry was still at the top and in fact the productivity of labour in industry was 56 per cent above the national average. This indicates that during the transition to a market economy productivity differentials actually widened, the opposite of what one would expect to find

in a well integrated economy. The differential between industry and services, however, narrowed considerably: the productivity of labour in industry was now only 1.7 times that in services. The most striking change occurred in agriculture. Having achieved nearly the national average in 1995, by 2000 the productivity of labour in agriculture was only 52 per cent of the national average and it had been overtaken by services. Indeed the productivity of labour in agriculture was only a third of that in industry.

Table 5.4

Labour Productivity Across Sectors, 1990-2000
(index: entire economy=100)

	1990	1995	2000
Industry	146	135	156
Agriculture	72	97	52
Services	61	74	93
Entire economy	100	100	100

Source: Author's calculations based on data from the National Statistical Service.

These movements over time and across sectors do not take account of the informal sector, which obviously is an important part of the service sector. If we take the employment figures at face value, industry and services combined lost about 492,400 workers whereas agriculture absorbed only 282,900. This is a net loss of about 210,000 jobs in the formal economy. Construction did not absorb these workers since the level of employment in construction was declining sharply. There are thus 210,000 workers that are missing. These "missing" workers undoubtedly joined the informal sector, where many other "missing" workers were already engaged in low-income insecure economic activities.

Some of these “missing” workers have probably left the country. Migration to other countries has played a very important role as a safety net for many households with unemployed workers. The 1996 Household Budget survey revealed that about 110,000 people lived temporarily outside Armenia. They came from about 10 per cent of Armenian households. The great majority of the temporary emigrants were of prime working age and three-quarters were men. Most went to other CIS countries, principally the Russian Federation. Many were skilled workers or professionals.

Their economic contribution to Armenia is substantial: official statistics report that in 1996 remittances accounted for 13.2 per cent of current income. Surprisingly, this share rivaled that of wages, which accounted for 13.1 per cent. This comparison underlines the critical importance of the external labour market for Armenia’s development. Without the outlet of emigration, the extent of poverty would have been even more pervasive than it is.

In many developing and transition economies, remittances have a much larger impact on poverty than capital inflows. This could also be true in Armenia, but remittances also appear to contribute to overall inequality in the distribution of income. Because of the financial cost involved in leaving the country, emigrants tend to come from higher-income households. The Gini coefficient for the distribution of income is very high, namely, about 0.59. An examination of the sources of inequality in income in Armenia suggests that while a marginal increase in domestic wages would reduce the country’s high inequality, i.e., lower the Gini coefficient, a marginal increase in remittances probably would increase it. In technical terms, the concentration ratio for wages is 0.36 (i.e. less than the Gini coefficient) whereas the concentration ratio for remittances is 0.78 (i.e. higher than the Gini coefficient) .[4]

The employment trends described above, including work abroad, give an indication of the problems that still plague the Armenian economy. There are few motors of employment-intensive growth. New private small-scale industrial enterprises are few; they are certainly incapable of offsetting the lay-offs resulting from the privatization of the Soviet-era medium and large-scale enterprises. Agriculture has had to absorb redundant workers but can offer only subsistence incomes. The formal service sector has also been losing workers. A substantial informal sector, whose employment is largely unrecorded, specializes in services, but the low income and productivity in the informal sector are unable to stimulate growth in other sectors.

Some new activities, such as computer software and diamonds, have grown rapidly but these activities are limited in number, small in size, and benefit mainly higher-paid workers. The real problem for broadly based growth and poverty reduction lies at the shadowy intersection between the large number of informal sector micro-enterprises and the small number of new small-scale private enterprises, primarily in urban areas but also in rural areas. Successful development will depend on transforming these enterprises into a major source of dynamism.

The current policies of government are poorly designed to facilitate movement ("speed up the traffic") across this intersection, from the informal to the formal sector. In Armenia (as in many other countries) policy makers regard the informal sector as a brake on development, a haven for unlicensed, untaxed, illegal activities. But most of the workers in this sector did not enter it by choice: given the collapse and ensuing stagnation of the formal economy, they had few other options. Informal sector workers are engaged primarily in survival activities, at low incomes and with insecure employment. Efforts to

reduce poverty will have to focus on the informal sector. Indeed the informal sector should be seen not as a problem for development but as a starting-point for development.

Disequalizing growth

While growth did resume from 1993 onwards, the gains from growth have been unequally distributed. This is reflected in the trends of employment and real wages. The total labour force increased during the late 1990s, but employment continued to decline. For example, the percentage of the working age population that is "non-employed" (either unemployed or not participating in the labour force) grew by over 50 per cent during the period 1995-98. This is an ominous trend for a period of sustained growth.[5] While employment continued to increase marginally in agriculture, it fell in all other sectors, even in most sub-sectors of services.

Although there was a general decline in employment, the level of real wages rose for many workers who managed to keep their jobs. This happened, for example, in construction, transport and communications, public administration, and health and education. Good indicators of the general trend are what happened to incomes in the well-paying sectors of construction and transport and communications: although they shed labour during 1995-98, the level of real wages in these activities increased significantly. Unfortunately, however, only a small group of workers gained from this. The financial sector, which is one of the highest-paying sectors, cut its workforce by half but raised the already high real wages of those employees who remained. This paradoxical trend helps to explain the continuing high level of income and earnings inequality in Armenia.

Real wages also rose in branches of the public sector, such as in public administration and health and education, but even so these sectors remained relatively

low-paying compared to the urban private sector. The effect of the wage increases in the public sector on reducing overall inequality was not significant.

While employment continued to increase in agriculture during this period, real incomes declined. This was partly due to the declining terms of trade for agriculture, and reflects the fact that prices for agricultural products rose more slowly than the general price level. This is one sign among many that at the bottom of the distribution, incomes were stagnating, and even falling. Combined with rising real wages of small groups of relatively highly paid urban workers, the flattening out of incomes among poorer workers helps to explain why the distribution of income is likely to remain polarized.

The role of the private sector

Growth of output since 1993 has been accompanied by an increase in the share of employment originating in the private sector. From 1996 to 1998, in the aftermath of privatization of large-scale public enterprises, the share of the private sector in employment ballooned from 57 per cent of the total to 76 per cent. This occurred largely as a result of privatization rather than because of a rapid expansion of new small private firms. Instead of an expansion of paid employment in private sector firms, there was an increase in the number of self-employed workers and unpaid family members who work with the self-employed.

In 1998, there were about 50,000 self-employed workers in urban areas, drawing upon a much larger pool of family members (perhaps as many as 200,000 workers) to help with their micro-activities. There were also about 5,000 entrepreneurs who ran firms that hired another 20,000 workers, mostly on a casual basis. The average size of these firms was 4 workers. In aggregate, these workers accounted for only five per cent of total wage employment.[6] A larger pool of casual workers (perhaps as many as 100,000)

rotated in and out of these small private firms. The very small size of these firms and the precarious nature of the employment that they offer illustrate the primitive level of development of much of the urban private sector in Armenia.

The levels in urban paid employment in small private firms and urban self-employment are low by the standards of other transition economies. The main spurt in the number of registered private firms occurred in 1995-97, when the privatization of small-scale public enterprises occurred. Thereafter, the number of registrations increased more slowly and many new companies soon went out of business. A survey of small businesses by the National Statistical Service in 1997-98 revealed that over half of the registered businesses were no longer operating. As a result of the rapid creation and extinction of small firms, the number of private firms in 1999 was not much larger than the number operating in 1995. While "the new private sector" (excluding the large traditional enterprises) produces about 60 per cent of gross domestic product, family farms and unregistered businesses account for over two-thirds of this total. The output attributable to new small private firms is still marginal.

The unavoidable conclusion is that the private sector still plays a very weak role in generating employment. Unless this role is strengthened, employment will continue to lag behind growth, inequality will remain high and widespread poverty will persist. A priority of government policy should be to stimulate the growth of small-scale private firms. Because their operations tend to be labour-intensive, these firms can be an engine of employment generation as well as growth and the main beneficiaries of their growth will be poorer workers.

Concluding remarks

In order to achieve pro-poor employment-intensive growth, government policies should concentrate on supporting the expansion of small-scale private firms in services and manufacturing. Many of these firms are likely to be more labour-intensive than the large traditional enterprises. Some are also likely to exploit Armenia's comparative advantage in some skill-intensive sectors, such as computers and jewelry. Market forces, both domestically and globally, should be allowed to determine the mix of industries.

This new emphasis will require a re-organization of the banking sector so that more credit is allocated to the small-scale private sector. In addition, special training programs in business skills for small entrepreneurs will be necessary. Instead of restrictions against the creation and growth of informal-sector micro-enterprises, there should be positive incentives to attract entrepreneurs to the formal sector. Higher taxes and tighter regulations are not the answer. Tax revenue will increase automatically but gradually as the private sector grows and generates more employment and income.

It is difficult for government to "pick winners" in particular economic sectors. It is easier for government to create a supportive environment in which the self-employed and small entrepreneurs can take advantage of whatever opportunities exist in Armenia's growing economy. The government already has tried to ensure that the population has equitable access to productive assets. This was evident in the privatization of land in rural areas and in the privatization of housing, which benefited mainly the urban population. But the privatization of state owned enterprises has been less successful.

What is needed now is a spontaneous process of "privatization from below", nurturing the emergence of a vibrant small-scale private sector, which is better able than the large traditional enterprises to adapt to the rapidly changing economic conditions that

Armenia faces. This will spark more “bottom-up growth,” which is likely to be more intensive in the employment of poorer workers. A national poverty reduction strategy can contribute to such a process by ensuring that the working poor and the unemployed have the necessary skills and access to credit, resources and infrastructure that they need to become integrated into higher productivity and rapidly growing sectors.

Notes

1. See World Bank, Armenia: Growth Challenges and Government Policies, Vol. II: Main Report, Washington D.C.: November 2001, Ch.2.
2. See World Bank, "Armenian Labor Market: Adjustments and Misalignments," Improving Social Assistance in Armenia, Report No. 19385-AM, June 8, 1999, World Bank: Washington D.C., Annex 3, p.4. The section on unemployment in this chapter draws extensively on this publication.
3. See Astghik Mirzakhanian, The Labour Market in Armenia: Analysis and Policy, publication of the United Nations Office, Yerevan, 1999, p. 8.
4. See World Bank, Improving Social Assistance in Armenia, loc. cit., p. 14.
5. See World Bank, Armenia: Growth Challenges and Government Policies, loc. cit., Ch.2.
6. Ibid., p. 28

Chapter 6

The Nature of Poverty

Thomas Kelly

In the early stages of transition, the Armenian economy experienced a sharp contraction. Between 1991 and 1994 national income fell by over 50 per cent.[1] Since 1994 a gradual recovery has been under way and national output has increased at roughly five per cent a year. The impact on poverty of this extraordinarily deep recession and accompanying rise in inequality must have been severe; and a priori it is reasonable to expect the subsequent recovery to have mitigated this effect. In this chapter we examine these issues with a review of the poverty situation in Armenia based on the most recent household survey data available and offer some recommendations for strategies to alleviate poverty in future.

The data and methodology used for measuring poverty

With the assistance of the World Bank, the Government of Armenia carried out nationally representative household income and expenditure surveys in 1996, 1998/99, and 2001. Ideally the results derived from these surveys should allow a detailed examination of how human development has progressed during the last six years. Unfortunately, at the time of writing, only very limited preliminary and incomplete results from the 2001 survey were available. In addition, a number of methodological differences between the first two surveys limits the extent to which welfare comparisons based on these data can be made. However, when the methodological differences are accounted for, some limited inferences regarding the key trends can be made and these are summarized below.

The surveys provide detailed household level information and are representative at the regional level.[2] The only substantive methodological concern with the surveys is with the sample frame, which was based on the population census carried out in the late 1980s. Some doubts have been raised about the precision of this census and there have been significant population movements – primarily emigration and refugee flows – since the census. However, it does not appear that any discrepancies that might have arisen due to the lack of an updated sample frame are large: comparisons of private consumption estimates derived from the 1998/99 survey with the national accounts show that the former explain 60-73 per cent of the latter, a figure that is comparable to other countries.[3]

In order to assess the level of income poverty three standard measures of poverty have been estimated based on the household survey data. The incidence of poverty is measured by the proportion of the poor in the total population, i.e., the head count measure. The depth of poverty is measured by the poverty gap, which measures the average amount of income by which the poor fall short of the poverty line. The severity of poverty is measured by the Foster-Greer-Thorbecke index, which gives some sense of the inequality among the poor by simply giving a larger weight to households that are far below the poverty line.

Expenditure per capita was used as the welfare measure in the 1996 survey. In the two most recent surveys, household consumption – including imputed values for the consumption of household production, for the consumption of gifts and items received as in-kind payment of salary, and for the rental value of owner occupied dwellings – was used. Instead of dividing household consumption among all members of the household equally, allowances were made for the economies of scale that may exist in large families and for the smaller consumption

requirements of children; this adult equivalency scale was estimated from the data for the actual consumption patterns of Armenian households.

The poverty lines for each of the survey years were based on the actual consumption patterns of Armenian households.[4] The food consumption pattern of these households was used to determine the cost of a 2,100 calorie diet, i.e., the minimum food basket. The value of this minimum food basket is used as the extreme poverty line: households whose consumption falls short of the value of the minimum food basket are considered to be extremely poor. To determine the value of the complete poverty line an allowance for essential non-food consumption items was added to the minimum food basket; this amount varied over the survey years because it was based on actual consumption patterns, but on average accounted for about 30 per cent of the value of the total poverty line. Households whose consumption did not meet this poverty line are considered to be poor.[5]

Overview of income poverty in Armenia

Poverty in Armenia is widespread, deep, and severe. Over one half the population is poor and about a third of those are extremely poor, failing to meet their minimum food consumption needs (see Table 6.1). There is also a great deal of inequality, with the consumption level of most of the poor falling well below the poverty line.

Unlike most developing and transitional economies, poverty in Armenia is much worse for urban households than rural. The poverty estimates in Table 6.1 indicate that poverty is not only much more prevalent in urban areas, but also deeper and more severe. There is some suggestion from preliminary analysis of the most recent data that the rural-urban poverty rates are more equal, but in 1998/99 – the last year for which definitive results are available – the

urban population still faced a 35 per cent higher risk of being poor and was 76 per cent more likely to fall into extreme poverty than the rural population.

Table 6.1

Poverty Estimates in Armenia: 1996, 1998/99, 2001
(percentages)

	Incidence of Extreme Poverty (Head Count)	Incidence of Poverty (Head Count)	Depth of Poverty (Poverty Gap)	Severity of Poverty (FGT)
1996				
Total	27.7	54.7	21.5	11.0
Urban	29.6	58.8	23.0	11.5
Rural	24.4	48.0	18.9	10.3
1998/99				
Total	25.4	53.7	15.5	6.1
Urban	31.2	60.4	18.4	7.6
Rural	17.7	44.8	11.6	4.2
2001				
Total	15.9	50.9	15.0	6.1
Urban	18.2	51.3	--	--
Rural	11.2	50.1	--	--

Note: The poverty estimates presented here are not comparable over time. There are methodological differences between the first two surveys and the results from the 2001 survey are preliminary and incomplete.

Sources: National Statistical Service, Social Snapshot and Poverty in the Republic of Armenia, Yerevan, 2001; World Bank, Armenia Poverty Update, June, 2002; A. Kakosyan and A. Mirzakhanyan, Specifics of Poverty in Armenia and Poverty Reduction Targets, July 2002.

The differences between rural and urban areas are due largely to differences in the structure of household income (see Table 6.2). The largest source of household income in urban areas is wages, while farm income is the most important in rural areas. The industrial sector declined at a staggering rate during the transition, and average urban wages fell accordingly. The agricultural sector performed much better than the industrial sector throughout the 1990s with the relatively egalitarian land reform providing widespread access to land, which allowed rural households, if not to prosper, at least to provide much of their own food. The privatization of industrial assets did not leave urban households with such a coping mechanism.

The plight of the urban poor is even more striking when the share of their income from productive activities is examined. Poor urban households – those in the bottom two quintiles – enjoyed so few economic opportunities that less than one half of their income came from wages, self-employment, and farming. The majority of their income came from remittances, transfers, and selling off household assets. In contrast, poor households in rural areas were able to generate much more income from productive activities. Poor rural households received over 85 per cent of their income from farming and wage labor, but importantly, earned only a relatively trivial amount from self-employment in non-farm entrepreneurial activities.

Indeed, in both rural and urban areas, the opportunities for self-employment are very limited, especially for the poor. Self-employment provided just five per cent of total household income in Armenia, and the majority of this was captured by the wealthy. Households in the poorest quintiles generated less than two per cent of their income from their own entrepreneurial activities.

Table 6.2

Household Income Sources in Armenia by Quintiles in 1989/99 (percentages)

	Poorest	2	3	4	Richest	Total
			All Households			
Labour earnings	50.3	39.0	47.0	49.0	45.5	46.2
Self-employment	1.4	2.9	4.3	3.2	9.7	5.2
Farm Income	12.4	22.1	29.8	27.1	27.6	24.9
Remittances	19.9	16.4	5.8	10.1	7.2	10.7
Transfers	13.3	15.3	11.8	6.9	3.7	8.9
Assets sold	2.7	4.3	1.3	3.7	6.3	4.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
			Urban Households			
Labour earnings	44.7	42.0	63.2	53.8	56.9	53.0
Self-employment	2.2	4.0	6.5	4.9	15.6	8.0
Farm Income	1.5	2.1	4.2	5.5	2.8	3.2
Remittances	30.8	25.5	7.8	18.5	8.6	16.7
Transfers	16.6	19.6	16.4	10.7	4.6	12.2
Assets sold	4.3	6.8	1.8	6.6	11.5	7.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
			Rural Households			
Labour earnings	39.0	33.3	31.4	32.6	30.1	32.1
Self-employment	0.1	1.1	1.2	2.2	3.2	2.1
Farm Income	46.3	52.8	58.6	55.1	57.7	55.6
Remittances	3.4	3.4	2.9	4.1	5.9	4.4
Transfers	11.0	9.1	5.3	4.8	2.9	5.3
Assets sold	0.1	0.2	0.6	1.3	0.2	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank, Armenia Poverty Update, June 2002.

Geographic structure of poverty

The structure of poverty varies markedly across the country (see Table 6.3). There is a wide range not only in the incidence, but also the depth of poverty across regions: in the Shirak marz over three quarters of the population is poor and over 40 per cent is extremely poor, while in Tavush only about a quarter of the population is poor and just 16 per cent are extremely poor.

Table 6.3

Geographic Distribution of Poverty, 1998/99
(percentages)

	Incidence of Extreme Poverty	Incidence of Poverty	Relative Poverty Risk	Share of Total Poor Population
Aragatzotn	25.6	57.0	+6.1	6.6
Ararat	17.1	49.4	-8.0	8.8
Armavir	13.0	36.7	-31.6	7.8
Gegharkunik	13.3	43.4	-19.2	6.7
Lori	34.7	61.7	+14.8	9.8
Kotayk	30.5	60.3	+12.2	10.4
Shirak	40.7	77.3	+44.0	13.5
Syunik	25.9	50.0	-6.9	4.5
Vayots Dzor	15.6	34.7	-35.4	1.2
Tavush	13.6	27.6	-48.7	1.5
Yerevan	29.1	56.6	+5.4	29.2
Total	25.4	53.7	-	100.0

Note: Relative poverty risk is simply the percentage difference in the headcount measure for the group compared to the national average.
Source: World Bank, Armenia Poverty Update, June 2002.

Three primary factors appear to drive these regional differences. The first is the degree of urbanization. The high level of urban poverty means that more highly urbanized marzes tend to suffer from higher rates of poverty. Altitude also plays an important role in the geographic distribution of poverty. Agricultural productivity is much lower at high altitude. The heavy weight of agriculture in rural incomes thus means that regional poverty rates tend to increase with altitude (see Table 6.4). Finally, the most extreme poverty is found in the regions affected by the earthquake in 1988. The marzes of Lori and Shirak suffered extensive damage to their infrastructure and other productive assets and have yet to recover fully. Together, these two marzes account for over a quarter of all the poor in the nation. In Shirak, which also has a

relatively high rate of urbanization and high altitude, the poverty rate is 44 per cent higher than the national average and extreme poverty is 60 per cent over the national average.

Table 6.4

Incidence of Rural Poverty by Altitude, 1998/99
(percentages)

	≤ 1,300 meters	**1,301-1,700 meters**	**≥ 1,701 meters**
Poor	42.35	54.93	57.99
Extremely Poor	16.37	24.86	28.28

Source: National Statistical Service, Social Snapshot and Poverty in the Republic of Armenia, Yerevan 2001.

Demographics and poverty

In addition to geographic differences, there are also strong demographic differences in the incidence of poverty. Children under the age of five and adults over 61 years of age are much more likely to be poor than older children or adults. Because their share in the population is not that large, these two groups do not constitute a majority of the poor – small children account for about nine per cent and the elderly about 13 per cent of the poor.[6] However, because they lack opportunities to support themselves, these two groups are particularly vulnerable.

Working age adults, who comprise the largest number of the poor, do not face a higher than average risk of being poor. Adults in certain household structures, however, are more likely to be poor. Large households and households with many children are more likely to be poor.[7] The household structures that contribute most to the risk of poverty are those that include the elderly and fewer than two adults.[8] The high risk of poverty for these households is presumably a reflection of their relatively high dependency ratios.

High dependency ratios and relatively poor employment prospects also appear to affect female headed households. Because of the emigration of many males, female headed households are relatively common in Armenia, comprising 27 per cent of all households, and are much more likely to be poor than male headed households.[9] The high rate of poverty among female headed households appears to be due, at least in part, to the lack of opportunities in the labour market, as almost two thirds of all the unemployed in Armenia are women.[10]

Employment and poverty

Employment matters vitally for poverty reduction. Being unemployed or out of the labor force dramatically increases the probability of being poor. Having a job – any kind of job – dramatically reduces the risk of poverty.

Table 6.5

Poverty and Labour Force Participation of Head of Household, 1998/99 (percentages)

	Incidence of Poverty	Relative Poverty Risk
Salaried Workers	44.8	-16.6
Self-Employed	44.7	-15.0
Other Employment	48.1	-10.3
Seasonally Unemployed	39.1	-27.1
Unemployed	65.4	+21.8
No Labor Market Participation	63.8	+18.8

Source: World Bank, Armenia Poverty Update, June 2002

Unfortunately, too few Armenians are employed. The labour force participation rate is very low and unemployment rates are very high. Only about 60 per cent of the adult population is active in the labor force.[11] According to the 1998/99 survey, nearly one quarter

of the economically active population is unemployed, and a recent ILO study suggests that the figure may be as high as one third.[12]

The situation is much worse in urban areas where nearly 45 per cent of those who are still searching for work are unemployed.[13] Since only one half of urban households are economically active, this implies that fewer than a third of urban adults have a job. Even this low figure may overstate the true employment picture as many workers are underemployed and many registered employees of large firms do not receive regular wages and may be employees in name only.

The employment situation in rural areas appears much less grave. The rural labour force participation rate is much higher at 72 per cent, and only about five per cent of rural workers report that they are unemployed.[14] There is still a large degree of underemployment in rural areas, however. Very few opportunities for wage labour or self-employment exist and most of the rural labour force must rely on the agricultural economy. Agriculture has served as an important safety net during the transition period, but with so many workers being absorbed into the sector, productivity – measured as output per worker – has declined steadily. This suggests that a large number of agricultural workers are underemployed, without enough land to work.

Indeed, for rural households, the amount of land is a critical determinant of well-being. Farm households with access to relatively large holdings are much less likely to be poor (see Table 6.6). Households whose labour is underemployed on relatively small plots are much more likely to be poor. The relationship between land size and the risk of poverty is strongest for the smallest plots and is particularly acute for the landless. This suggests that a relatively

small increase in access for small holders and the landless would have the biggest impact on poverty.

Table 6.6

Poverty and Land Size in Rural Areas
(percentages)

Land Size (Hectares)	Incidence of Poverty	Incidence of Extreme Poverty
Less than 0.2	31.8	60.7
0.2 to 0.5	18.3	50.3
0.5 to 1.0	19.2	49.7
More than l.0	12.6	35.9

Source: World Bank, Armenia Poverty Update, June 2002.

The quality of land also matters a great deal. The importance of altitude was highlighted above, but irrigation is also critical. The results from the recent Farm Household Survey show that not only the productivity, but also the profitability of all crops surveyed increases with access to irrigation.[15] The increased profitability translated into higher consumption levels for farm households, suggesting that improving access to irrigation would also prove effective in rural poverty alleviation.

Comparisons of poverty over time

As mentioned above, the results from the 1996 Household Survey and the 1998/99 survey are not strictly comparable, and the results from the 2001 survey are not definitive.[16] A very limited attempt to reconcile some of the differences and make comparisons for the incidence of poverty for the first two survey periods has been made; the estimates from the 1998/99 data have been adjusted to account for the differences in methodology in 1996 and 1998/99, and the adjusted estimates differ accordingly from the estimates reported in Table 6.1.

These results should be interpreted with caution and viewed as indicative of possible short term trends, rather than precise point estimates.

With these caveats in mind, some indications of the short term trends in the incidence of poverty in the late 1990s can be drawn. The estimates from the adjusted data suggest that the overall incidence of poverty may have declined (see Table 6.7).[17] The decline in the incidence of extreme poverty appears to have been much more pronounced than for overall poverty. This suggests that the depth and severity of poverty also declined. Much of the apparent improvement is due to the improvement of the situation in rural areas, where the reduction in the incidence of both overall poverty and extreme poverty was much larger than in urban areas.

Table 6.7

Poverty and Extreme Poverty Incidence in 1996 and 1998
(percentages)

	Extreme poverty incidence		Poverty incidence	
	1996	**1998**	**1996**	**1998**
Total	27.7	15.3	54.7	49.1
Urban	29.6	17.7	58.8	55.0
Rural	24.4	11.9	48.0	40.6

Note: In order to account for some of the differences in methodology in the 1996 and 1998/99 studies, a number of adjustments have been made to the estimates reported here from the 1998/99 data: in order to avoid seasonal distortions only data from the fourth quarter of 1998 were used; the 1996 poverty line properly inflated was used for both years; and per capita consumption instead of per-adult equivalent was used as the welfare measure (World Bank, op. cit).

Source: World Bank, Armenia Poverty Update, June 2002.

The failure to achieve a more substantial reduction in poverty despite sustained moderate growth during the recovery period is surprising. Part of the reason for these disappointing results from the household surveys is almost certainly the timing of the 1998/1999 survey, which coincided with the Russian financial and economic crisis. The effect of the Russian crisis was felt strongly in Armenia as remittances fell. The loss of remittance income was particularly important for urban households who rely much more heavily on transfers from abroad than do rural households. The importance of the Russian crisis should not be overstated, however. The direct impact on the Armenian economy was relatively short lived.

The fundamental causes for the high levels of poverty are less transient: the collapse of real income and a sharp increase in inequality combined to push down consumption levels dramatically during the early years of the transition and they have yet to recover. Although there is some suggestion that extreme poverty may be declining as growth recovers,[18] the overall incidence of poverty appears to remain stubbornly high, with roughly one half of the population reported to be in poverty, regardless of the survey year or methodology (see Tables 6.1 and 6.7).[19]

Human poverty

Human poverty is not limited to low levels of income and consumption. There are many dimensions of well-being, among them education, health and a long life. These and many other factors contribute not only to higher incomes, but are also important in their own right. Levels of income and human poverty are often strongly correlated. However, in contrast to developing countries, most transitional countries do not suffer from high levels of

deprivation across these other dimensions of well-being. The legacy of the pre-transition educational and health systems is of relatively well educated and healthy societies.

This pattern certainly holds true in Armenia, where the poverty that exists is primarily income, and not human poverty. Indeed, the level of human capital in Armenia is quite high by international standards: there is nearly universal literacy, infant mortality is low, and life expectancy is high.[20] So far, none of these indicators of well-being has shown any tendency to decline during the first ten years of transition. There are, however, some worrying signs of deterioration that may signal a risk of lower and less evenly distributed levels of human capital in the future.

Health

There has been a dramatic decline in the share of public resources devoted to the health care system. Over the 1990s, public spending on health fell from 7.21 per cent of GDP in 1991 to just 1.4 per cent in 1999.[21]

The accessibility of health care has clearly suffered. Compared to the early 1990s, home visits by physicians, referrals to polyclinics, and ambulance calls have all fallen by 40-60 per cent.[22] This decline is not a reflection of improved health. Morbidity rates have been rising, with sexually transmitted disease and tuberculosis – a disease virtually unknown in pre-transition Armenia – growing at particularly alarming rates.

Access to quality health care is also becoming much less equal. Public spending now accounts for less than 40 per cent of total health care expenditures.[23] The majority of health care spending is private and its distribution across households is highly skewed. The poorest quintile accounts for only two per cent of private health care expenditures, while the wealthiest quintile accounts for over 80 per cent. As the out-of-pocket costs for health care increase,

requiring much higher spending by households, the poor have become much less likely to seek out professional care. In the bottom quintile of the population, only about one quarter of those reporting sickness received professional care, while over half of the sick in the wealthiest quintile received professional attention. The type – and presumably quality – of health care received also varies with income. A pattern has emerged in which the poor rely much more heavily on polyclinics and the wealthy rely relatively more on private physicians.[24]

The inequality in access to health care is not exclusively a function of private expenditures. Public expenditures have also become regressive. Because patients face significant out-of-pocket expenses even at public institutions, the poor tend to seek out health care – even publicly subsidized care – much less frequently. The ability of the wealthy to pay for these additional expenses – which include medicine and informal payments for service – allows them the leverage necessary to access public services. As a result, the wealthiest quintile captures 40 per cent of public health care expenditures, while the poorest quintile manages to capture just 13 per cent.[25]

Education

Armenia is a very well educated society. Levels of educational attainment compare favourably with those of most developed countries, and historically, access to education has been quite equitable. As is true with health care, however, the rapid changes associated with transition have presented the educational system with daunting challenges. Most obviously, the public resources allocated to education have plunged from seven to nine per cent of GDP in the 1980s to two to three per cent of (a much smaller) GDP in the 1990s.[26] Private household expenditure on education is now roughly twice as large as public expenditure, and this

spending is highly uneven across the income distribution. Households in the richest quintile now spend three times as much per child as households in the poorest quintile.[27]

The decline in public resources for education may well jeopardize the tradition of universal educational access. Already enrolment rates have begun to fall – steadily, if slowly – for primary schools. Primary school enrolment, which was nearly universal during the Soviet period, has fallen to about 93 per cent, and the largest declines are among the poor.[28] Overall inequality in educational achievement has also grown over the 1990s, and this inequality is strongly correlated with household incomes. Even for public education, households face significant ancillary expenses – like transportation and food – which may place the cost of education beyond the means of poor households.[29] These direct household expenses and the opportunity cost of time spent in school combine to make poorer households less likely to enroll in school at all educational levels. The positive relationship between income and educational attainment is especially strong at the highest levels, where the non-poor are three times more likely than the poor to pursue higher education.[30]

In addition to inequality of access, the quality of education may also be becoming more unequal. The ability of relatively wealthy households to pay for ancillary educational costs, and more importantly for extra tutoring, also places their children at an advantage in entering more prestigious schools. As a result, public spending on higher education has become regressive as wealthy students are able to invest in extra tutoring and secure admission to the competitive public university system.[31] In contrast, public spending on technical and vocational schools – alternatives more accessible to lower income groups – is still progressive.

Regardless of how they are distributed across households, the rates of enrolment and money spent on education are, of course, very crude indicators of the quality of the human

capital produced. One of the challenges any successful educational system must meet is the creation of skills that are relevant for the work place. Unfortunately, a recent educational survey suggests that there is a serious mismatch between the demands of today's labour market and the types of skills and knowledge imparted by the educational system: there are reportedly a lack of specialists with relevant skills produced by secondary schools and a large oversupply of students pursuing higher education in disciplines for which there is little professional demand.[32] In order to maintain Armenia's high level of productive human capital, it will be vital for the educational system to evolve to provide general knowledge and specialties more in line with the post-transition economy.

Conclusions

Armenia must create jobs to reduce its poverty level. It must also increase the productivity of workers by investing in the assets they have to work with.

Transfers clearly have a place in any poverty reduction strategy. Some of the most vulnerable groups with the highest rates of poverty, like young children and the elderly, have few economic opportunities of their own and certainly need assistance. There is a strong argument for assistance to families with school age children who are at risk of abandoning their education because of economic pressures, and high rates of poverty and scarce employment opportunities for women suggest that female headed households may also be likely candidates for assistance. Unlike many poor countries, two thirds of the poor in Armenia live in urban areas, with almost a third in the capital, so beneficiaries should be relatively easy to identify and target.

Transfers alone will not solve Armenia's poverty, however. Even with perfect targeting, just to bring the consumption of every poor person up to the poverty line would

require additional transfers worth seven per cent of GDP. With a more realistic 40 per cent leakage rate for benefits to the non-poor, additional transfers of almost 12 per cent of GDP would be required.[33] It is unlikely that transfers of this scale will be politically feasible, and they do not address the fundamental causes of Armenia's poverty, namely, the lack of employment opportunities and low productivity.

The lack of opportunities is clear with less than one half of all household income coming from wage earnings and income from self-employment and entrepreneurial activities negligible for all but the wealthy. Unemployment is unacceptably high and because productivity has declined, even employed workers may not earn enough to escape poverty.

To boost employment and productivity, investment in all types of capital should be stimulated. The stock of physical capital in Armenia has been decimated. Much of the Soviet era capital, though physically unchanged after liberalization, lost its value as relative prices changed. Capital assets accumulated to produce under the old price regime could no longer produce profitably and so they were allowed to deteriorate or sold for scrap. Much was lost and to recover productivity growth, much must be replaced.

The situation with respect to human capital is much less grave, but no less important. Human capital is Armenia's best and most important asset. The high level of human capital in Armenia is the accumulated product of excellent health and educational systems and cultural attitudes that were developed over decades. As yet, there are no clear indicators – emigration aside – that the stock of human capital has been greatly diminished. But the economic and social changes of the last ten years have shaken the health and education systems. These systems are the sources of human capital, and their capacity to continue to add to Armenia's human capital must be a source of concern. Particularly worrying are the signs that equitable

access to high quality services may be slipping. If true, this is a dangerous trend. Increasing inequality in access to quality health care and education today suggests that key aspects of human capital and hence well-being will become more unequal in future. If inequality of outcomes is allowed to grow, the challenge of eliminating poverty will become much more difficult.

Notes

1. National Statistical Service, Social Snapshot and Poverty in the Republic of Armenia, Yerevan, 2001.

2. Household level data are generally preferred to aggregate welfare measures like income per capita, which are highly imperfect indicators of the impact of macroeconomic changes on poverty. In unequal societies, changes in national income reflect primarily what is happening to the income of the wealthy, and national accounts also fail to capture a good deal of economic activity. The latter concern certainly appears to be relevant in Armenia: in a 1999 survey of Employers and the Self-Employed in Armenia, 75 per cent of respondents admitted carrying out "unaccounted economic activity"; in a 1996 Labour Force Survey, 65 per cent of the self-employed reported engaging in "unrecorded economic activity" (National Statistical Service, op cit.).

3. World Bank, Armenia Poverty Update, 2002.

4. Because it reflects the actual consumption patterns of the relevant population, this approach to establishing the poverty line – the food-energy intake method – is preferred to the establishment of an arbitrary monetary poverty line, like the World Bank's US$1 per day. For a detailed description of the food-energy intake method see Martin Ravallion, Poverty Lines in Theory and Practice, LSMS Working Paper 133, World Bank, 1998.

5. The 1996 poverty lines were 6,612 (US$15.20) and 6,612 (US$24.20) drams per month of per capita expenditure in 1996 prices for poverty and extreme poverty; in average 1998/99 prices, these poverty lines would be 7,194 and 11,735 drams. The National

Statistical Service, Social Snapshot and Poverty in the Republic of Armenia, Yerevan, 2001.

6. World Bank, op. cit.

7. National Statistical Service, op. cit.

8. World Bank, op. cit.

9. World Bank, op. cit.

10. UNDP, op. cit.

11. World Bank, op. cit.

12. Cited in UNDP, National Human Development Report: Ten Years of Independence and Transition, Yerevan, 2001.

13. World Bank, op. cit.

14. World Bank, op. cit.

15. Cited in World Bank, op. cit.

16. There are a number of difference between the 1996 and the 1998/99 surveys. The three most important differences are: (i) The change in the welfare measure discussed in the text. (ii) Differences in the poverty line. See endnote 6 for the monetary value of the poverty lines. (iii) The change in the duration and timing of the survey. Seasonal variation in consumption may well affect comparisons of poverty estimates over time. The data indicate that Armenia experiences very pronounced seasonal variations in consumption, and the 1996 and 1998/99 surveys were not conducted during the same season.

17. Strictly speaking, no conclusions regarding the changes in the incidence of poverty can be drawn from the estimates reported here. The source does not test for the statistical significance of the apparent changes or report standard errors. The relatively small changes reported in the estimates above, particularly for the urban population may simply reflect sampling error in the survey data rather than actual changes in the underlying population. For a discussion of testing for the statistical significance of poverty estimates see Nanak Kakwani, Testing for Significance of Poverty Differences with Application to Côte d'Ivoire, World Bank LSMS Working Paper 62, 1990.

18. Again, the survey results from 2001 are not directly comparable with the earlier surveys. However, the relatively large drop in extreme poverty – from roughly a quarter of the population in 1996 to 15 per cent in 2001 – suggests that once allowances for the differences in methodology are accounted for, it is likely that extreme poverty has declined.

19. Interestingly, the poorest of the poor do not report experiencing an improvement in their lot. In the autumn of 2001, the UNDP Monitoring and Analysis Unit surveyed 700 of the "most vulnerable extremely poor" households across Armenia. On average these households reported that their living conditions were appreciably worse than in 1996 in term of "material security and food quality", employment, water quality and housing (Ruben Yeganian and Nelson Shahnazarian, in Armenia Social Trends, December, 2001).

20. UNDP, op. cit.

21. National Statistical Service.

22. Ibid.

23. World Bank, op. cit.

24 Ibid.

25 World Bank , op. cit

26. UNDP, op. cit.

27. World Bank, op. cit.

28. UNDP, Education, Poverty and Economic Activity in Armenia, Yerevan, 1999.

29. World Bank, op. cit.

30. UNDP, 1999.

31. World Bank, op. cit.

32. Cited in UNDP, 2001.

33. These estimates assume a population of 3.02 million (World Bank, op. cit.).

Chapter 7

The Transition to Inequality

Thomas Kelly and Armen Yeghiazarian

In its last twenty years as part of the Soviet Union, inequality and poverty were not major political or economic problems in Armenia. With the economic restructuring associated with the transition to a market economy, however, there was a dramatic fall in the average well-being of the population. As discussed in the previous chapter, poverty increased rapidly during the transition. This was due only in part to the collapse of output. A second factor driving the increase in poverty was an equally dramatic increase in inequality. In this chapter we examine the nature of inequality in Armenia and the impact it is likely to have on future economic performance.

Income inequality

Before independence and the transition to a market economy, Armenia was a remarkably equitable society. The Gini coefficient for the distribution of income was just 0.25.[1] During the transition inequality soared and estimates from the most recent household survey put the Gini coefficient for income as high as 0.59.[2]

There are many measures of inequality that summarize the way income is distributed across the population and many ways to paint this picture for Armenia: one half of all income accrues to just the richest 12 per cent of the population;[3] the income of the wealthiest quintile is 32 times higher than that of the poorest quintile;[4] and the poorest 55 per cent of the population – those whose fall below the poverty line – receive just 16 per cent of the total income.[5]

All these measures point to the same conclusion: income inequality in Armenia is extremely high. Measured by the Gini coefficient, Armenia's income inequality is among the highest for transition economies. Table 7.1 compares Armenia's Gini coefficients for income

inequality with those of other transition countries of similar per capita income levels. Armenia's income inequality is by far the highest among its peers in this reference group.

Table 7.1

Income Inequality in Selected Transition Countries in 1998

	Gini Coefficient for Income	1998 GNP per capita (PPP US$)
Armenia	0.59	2,074
Azerbaijan	-	2,168
Georgia	0.41	3,429
Kyrgyzstan	0.44	2,247
Moldova	0.41	1,995
Tajikistan	0.47	1,041

Source: World Bank, Armenia Poverty Update, 2002.

This high level of inequality appears to be caused by the extreme concentration of incomes in the top decile of Armenian households. Table 7.2 provides a more detailed picture of the income distribution than the summary measures listed above. Here the extraordinarily high concentration of income among the richest households is evident. The top decile of the population receives 45 per cent of all income and the bottom half of the population receives just 15 per cent.

Transition to inequality

Armenia's transition to a market economy can be divided into two stages. The first stage, from 1990 to 1994, included an energy crisis, international conflict, the disruption of trade routes, hyper-inflation, and a severe contraction of output. The second stage, beginning in 1995, has been characterised by solution to the energy crisis, an end to conflict, easing of transportation restrictions, a return to macroeconomic stability, and moderate economic growth.

The first stage of the transition was accompanied by structural changes in the economy that deepened poverty and increased inequality. Painting with broad brush strokes, we can

identify several trends in the labour market and distribution of assets that had strong impacts on inequality during the restructuring of the economy.

Before the transition, the industrial sector paid among the highest wages and was by far the largest non-agricultural employer. The severe recession that accompanied the transition hit this sector particularly hard. Industry's share of total output fell from 60 per cent in 1989 to just 25 per cent in 1994 as many sub-sectors became non-competitive under the new price structure. Employment fell and productivity – and therefore wages – plunged (see Table 7.3). A similar phenomenon occurred in the construction sector. As investment collapsed during this period, over one half of the relatively well paid construction jobs disappeared and wages fell sharply.

Table 7.2

Income Distribution by Decile, 1999

Decile	Share of Gross Income (per cent)
I	0.7
II	1.9
III	2.9
IV	4.0
V	5.0
VI	6.4
VII	8.1
VIII	10.7
IX	15.3
X	45.0
Total	100.0

Source: Oxfam, Growth with Equity: Policy Choice for Poverty Reduction Project, Yerevan, 2002.

At the same time, agriculture's share of total GDP surged from 16 per cent in 1989 to 49 per cent in 1994. Although industrial employment did not decline as fast as output, a large number of workers did lose their relatively high paying jobs and shifted into agriculture. As workers took advantage of access to newly privatized agricultural land, the sector's share of employment surged from 18 per cent in 1989 to 34 per cent in 1994. With the large influx of

workers to a relatively fixed amount of land, productivity in agriculture – and therefore the returns to agriculture – declined.

As tax revenues fell and the crises mentioned above strained government resources, spending on the social sectors also fell. This was important not only for its impact on the quality of services provided, but also because the government was one of the largest employers. As public expenditures fell from well over half of GDP before the transition to just 21 per cent in 1994, wages in sectors like education and health fell to a fraction of their pre-transition levels.

Table 7.3

Average Wages by Sector and Gini Coefficients for Wages

Average Wages (current US dollars/month)	**1989**	**1995**	**2000**
Construction	364	27	77
Industry	249	19	54
Transport, Communications	229	25	73
Education, Culture, Arts	149	7	23
Trade, Public Catering	147	24	38
Health	139	8	24
Gini Coefficients	0.20	0.38	0.41

Note: The wages for 1989 are in 1989 current rubles converted into USD at the official exchange rate. Gini coefficients are calculated for wages in the non-agricultural sector.

Source: Author's calculation based on The Economy of Armenian Soviet Socialistic Republic in 1989, Yerevan, 1991; Statistical Yearbook of Armenia (1997,1998), Yerevan 2001, pp. 45-46, 63-64; Statistical Yearbook of Armenia (1999,2000),Yerevan 2001, pp. 49-50, 69-71.

The first stage of transition thus had a bruising effect on most households. The downward pressure on incomes was felt across most – but not all – of the distribution. Employment in the high wage industries, namely, industry and construction, fell by nearly a third. For workers who managed to retain their jobs in these industries, real wages plunged as productivity fell. The large number of workers flowing into agriculture pushed the returns to agricultural production down to near subsistence levels. Public sector workers were much less

likely to lose their jobs, but with the decline in government expenditure, their already low wages fell even further.

Although these structural changes in the labour market affected a very large proportion of households, they did not affect all households equally. The downward movement in real wages was accompanied by a marked increase in the dispersion of wages. As can be seen in Table 7.3, the Gini coefficients for wages more than doubled from a remarkably low 0.20 before the transition to 0.41 in 2000. (Of course, if a wage rate of zero were included for all the newly unemployed, wage inequality would appear even worse.)

This increase in wage inequality was an important contributor to overall inequality, but was not the sole reason for the increased concentration of income. A further result of the structural changes in the economy was a change in the functional distribution of income. The share of wages in total income fell dramatically; profits, transfers, and remittances have all become much more important sources of income than before the transition. This exacerbates inequality because the distribution of profits is much more highly concentrated than wages. Almost two thirds of all profits accrue to the richest decile and only negligible profits are earned by the poorest 60 per cent of the population.[6]

Although there is very little research on the distribution of assets in the Armenian economy, the highly concentrated flows of profits suggest that the industrial and commercial assets generating these profits must also be very highly concentrated.[7] Not all assets have become highly concentrated, however. The initial privatization of agricultural land and housing was fairly equitable.

The current distribution of income appears to reflect the resulting distribution of assets. The relatively even distribution of agricultural and housing assets, together with very highly concentrated industrial and commercial assets is consistent with the pattern of income distribution that has emerged during the transition: there is quite little inequality among the

poorest 60 to 70 per cent of the population, but very high incomes accruing to the wealthiest households who earn the vast of majority of commercial and industrial profits.

This new inequality that has arisen in Armenia is due primarily to the changes in the labour and capital markets described above. But these changes are not immutable. At a fundamental level, the state is capable of altering the distribution of income by changing the distribution of assets or intervening in labour markets. Less controversially, the state can also intervene to counteract the disequalizing effects of the markets at the margin.

Table 7.4

Average Monthly Pensions and Wage Rates in CIS Countries, 2000

(at current US dollar exchange rates)

	Average Pension (Armenia = 100)	**Average Wage Rates (Armenia = 100)**	**Average Pensions as Proportion of Average Wages (per cent)**
Armenia	100	100	19
Azerbaijan	195	118	32
Belarus	382	175	42
Georgia	100	79	25
Kazakhstan	343	229	29
Kyrgystan	119	62	38
Moldova	85	78	21
Russia	361	188	37
Ukraine	190	101	36

Note: Average wage rate for Georgia is from 1999.

Source: Author's calculation based on The Social and Economic Situation in the Republic of Armenia in January-December 2001, pp. 185, 190, Yerevan, 2002 (in Russian).

In this context, in many transition economies pensions play a critical role in supporting the poorest households. The elderly are the largest group of pensioners, and in Armenia they are among the most vulnerable to poverty. Pensions thus have great potential for equalizing income. Unfortunately, Armenian pensions have not fulfilled this potential to the extent they might. Table 7.4 shows that in comparison to other transition countries, Armenian pensions have the least equalizing effect. Instead of increasing to help mitigate rising inequality,

average pensions have actually been falling relative to average wages. Since 1994 average pensions have fallen from 84 per cent to just 19 per cent of average wages. In 2001, the average pension was equivalent to just US$8.20 per month. Providing they had no other source of income, this would put almost all pensioners below the extreme poverty line.[8] Since pensioners are such a large segment of the population – 13 per cent of the total in 2001 – the decline in pensions relative to average wages that has left so many in poverty is clearly an important contributing factor to inequality and also clearly an important opportunity missed.

In addition to its role in mitigating the disequalizing effects of labour and capital market outcomes, the state plays another critical role in determining society's level of inequality. As the primary provider of health and education services, the state plays a fundamental role in building society's human capital and determining how this human capital is distributed. There are as yet few signs that the distribution of human capital has become less equal. However, as discussed in Chapter 6, there are indications that equality of access to quality educational and health services may be declining. This is a worrying sign because any increase in the inequality in human capital will result in even greater income inequality in the future.

Inequality and growth

Since the second stage of the transition began, the economy has been growing at roughly five per cent a year. The current pattern of economic growth will not cause inequality to fall, however. There are several reasons for this. The most important is that the base of growth in industry, construction, and services is quite narrow and is not generating a great deal of employment. At the same time, the drive for higher productivity per worker in agriculture and the reforms in the social sector will substantially reduce employment in these sectors. The sectors that are managing to generate growth will not be able to absorb the high levels of unemployed workers from obsolete and noncompetitive industrial firms, from agriculture, and from the overstaffed social infrastructure. In the absence of plans to change the distribution of

assets, the current pattern of slow employment growth means that high levels of inequality are likely to persist.

This is a problem. The causality between growth and inequality runs both ways. Not only is the current pattern of growth unlikely to reduce dramatically the high level of inequality, but the high level of inequality will also affect the prospects for rapid growth.

An international consensus has emerged that high levels of inequality hinder both economic growth and poverty reduction. The argument for why inequality hinders poverty reduction has two parts. The first is that the income distribution determines how the poor share in the economy's growth. The argument is a simple one, but the arithmetic is undeniable: the higher the level of inequality, the smaller the absolute gains of the poor as the economy grows. For instance, in the Armenian economy, since 45 per cent of the income accrues to the top decile, if all parts of the distribution grow equally, the top decile will receive 45 per cent of any increase in GDP – just 55 per cent will remain for the rest of the population, of which just 15 per cent will go the poor.

The importance of this argument for Armenia should be clear. During the second stage of the transition, moderate growth has been sustained, but little poverty reduction has been achieved because little of the increase in GDP has accrued to the poor. It has been estimated that if Armenia had the same level of inequality as Russia – which is still a very unequal country by international standards – Armenia's poverty rate would be just 44 per cent instead of the current 55 per cent.[9]

The second argument for why inequality hinders poverty reduction is that inequality hinders economic growth. Most economists now believe a higher level of inequality means slower aggregate growth.[10] This has not always been the case; in the 1950s it was hypothesized that high levels of inequality might stimulate growth. Recent empirical studies have shown this hypothesis to be wrong, however, and we now know that countries with more equal income distributions grow faster. The empirical evidence for this is very strong,[11] not

only from cross-sectional econometric work, but also from case studies of country experience.[12]

The theoretical reasons posited for this relationship are many.[13] They include political economy reasons regarding stability and fiscal policy, as well as a number of economic reasons. The most important of the economic reasons include: the argument that higher levels of equality lead to improved health and education and therefore growth; the argument that greater equality leads to larger domestic markets and greater exploitation of economies of scale, resulting in more industrialization and growth; and the argument that greater equality in asset distribution leads to more equal access to credit and more opportunities for the poor to make productive investment.

Regardless of which are the most important transmission mechanisms between high inequality and low growth, the connection between the two does suggest some specific policy objectives of immediate relevance for Armenia. The first two involve the avoidance of yet further concentration of assets. Historically, human capital has been relatively equally distributed in Armenia; but again, there are some worrying signs of growing inequality in access to education and health services. Ensuring affordable access to these services across the distribution will be a key to more equitable growth. Of course providing these public services will be expensive for the state, but it is a means of ensuring greater equality that avoids distorting incentives or promoting conflict, and any "effective public redistribution requires a willingness and capacity to raise revenues, especially from the non-poor."[14]

Land is also fairly equitably distributed in Armenia. The problem with agricultural land is not inequality of ownership, but rather its low productivity. The negative impact of inequality on growth suggests that increasing the concentration of ownership of land in order to take advantage of economies of scale may not be the best choice of strategies for increasing productivity. Alternatives that avoid increasing the concentration of assets – like increasing access to irrigation, improving farm to market roads, and providing credit and extension

services to promote higher value crops – are likely to do more for promoting long run aggregate growth.

Finally, policy initiatives that make the pattern of future growth more equitable are critical. Broader access to markets will be one key. Monopoly power in factor and output markets narrows the base of growth; whereas policies that stimulate small and medium enterprises and improve their market access will tend to improve the income distribution over time. Greater access to financial markets will be of particular importance. It is not just the rich that save and invest. There is abundant international evidence that with viable investment opportunities the poor will not only invest, but will also self-finance much of their investment through increased savings.[15] With better access to factor and output markets and better access to savings vehicles, and with complementary public investment that increases the rate of return to private investment, the poor will save and invest and accumulate assets that will narrow the distribution of wealth and hence income.

Conclusions

The message from the recent economics literature is clear: both economic theory and global experience teach us that inequality hinders long run growth. The theoretical arguments and empirical evidence are not specific to Armenia; but nor is there any reason to expect Armenia to be exempt from the pattern of global experience. If Armenia continues on its current path, the chances of rapid long run growth are greatly reduced. Slow growth combined with high inequality will make it extremely difficult to reduce poverty and will make meeting objectives like the Millennium Development Goals much less likely.

Armenia can alter its current path, however. The pattern of growth can become more equitable, making the distribution of assets and income more equitable. There is no single policy that will effect this change; but placing this goal at the center of all economic policy formation should be the critical policy priority.

Notes

1. WIDER World Income Inequality Database.
2. National Statistical Service publications.
3. Oxfam, Growth with Equity: Policy Choice for Poverty Reduction, Yerevan, 2002.
4. National Statistical Service, Social Snapshot and Poverty in the Republic of Armenia, Yerevan, 2001.
5. Oxfam, op. cit.
6. Oxfam, op. cit.
7. The disproportionately large share of income accruing to the wealthiest households may be partly explained by a concentration of certain types of human capital – knowledge of certain foreign languages, for instance – and by certain types of social capital, like information and reciprocity networks among the elite.
8. Calculated using 1999 US dollar to dram average nominal exchange rate. The value of the minimum food basket, i.e., the extreme poverty line, was 7,196 dram in 1999 prices.
9. Oxfam, op. cit.
10. See World Bank, World Development Report 2000/2001: Attacking Poverty, Washington, DC., 2001.
11. For econometric evidence of the negative effect of income inequality on growth, see A. Alesina and R. Perotti, "The Political Economy of Growth: a Critical Survey of the Recent Literature," World Bank Economic Review, 8, 1996; N. Birdsall et al., "Inequality and Growth Reconsidered," World Bank Economic Review, 7, 1995; F. Bourguignon, Comment on Inequality, Poverty and Growth: Where Do We Stand, Annual World Bank Conference on Development Economics, Washington, DC, 1995; K. Deniger and L. Squire, "Economic Growth and Income Inequality: Re-Examining the Links," Finance and Development, 34(1), 1997; F. Larrain and M. Vergara, Income Distribution, Investment and Growth, Development Discussion Paper 596, Harvard

Institute of International Development, 1997; and T. Persson and G. Tabellini, "Is Inequality Harmful for Growth?" American Economic Review, 84, 1994.

12. See Keith Griffin and Amy Ickowitz, "The Distribution of Wealth and the Pace of Development," in Terry McKinley, ed., Macroeconomic Policies, Growth and Poverty Reduction, London: Palgrave, 2001.

13. For a review of the reasons see Keith Griffin and Amy Ickowitz, op. cit., and Frances Stewart, Income Distribution and Development, Queen Elizabeth House Working Paper 37, Oxford, 2000.

14. World Bank, op. cit., p. 81.

15. Note that the role of the financial sector for the poor is not primarily one of financial intermediation. Rather, much of the investment by poor households is self-financed and the profitability of investment opportunities is the primary determinant of savings behaviour. As such, the role of the financial sector is primarily to provide convenient and safe savings vehicles. See Nancy Birdsall et al., Why Low Inequality Spurs Growth: Savings and Investment by the Poor, Inter-American Development Bank, Office of the Chief Economist, Working Paper 327, 1996.

Chapter 8

The Role of Public Finance in Poverty Reduction

Levon Barkhudaryan and Keith Griffin

The transition from a centrally planned to a market oriented economy has enormous implications for the role of the state and public finance. In this chapter we examine a relatively narrow but extremely important issue, namely, the impact of state expenditure and taxation on reducing widespread poverty. We begin by examining the main trends in public finance since 1994, i.e., the period after the introduction of the dram as the national currency. We then discuss the possible contribution of public expenditure to poverty reduction and the promotion of human development. Lastly, we consider tax policy and mechanisms for mobilizing resources and increasing equity in the distribution of income.

Main trends in public finance

The state in Armenia is relatively small in terms of the resources at its command and the level of expenditure. Our analysis begins in 1994, the first year of recovery out of the deep transition depression of the early 1990s. By then the economy had overcome the energy crisis, hyperinflation and the external shock of the Nagorno-Karabakh conflict with Azerbaijan, a new currency had been introduced, and the economy had been stabilized. Output had begun to increase, but as shown in Chapter 1, incomes were far below pre-independence levels.

As can be seen in the first column in Table 8.1, government expenditure in 1994 was slightly less that 24 per cent of gross domestic product. This percentage fluctuated a bit from year to year, but there was no discernible upward trend. The peak year was 1999 (when government expenditure accounted for 28.75 per cent of GDP) and the lowest year was 1996 (when expenditure was 22.87 per cent of GDP), but in the terminal year of 2001, the expenditure ratio was very similar to what it was in the initial year (namely, 24.41 per cent). Of course in absolute terms real expenditure tended to rise because of the increase in GDP.

Not only has government expenditure been a relatively constant percentage of GDP, it has also been a relatively low percentage of GDP. Whether compared to other transition economies or to other market economies with a comparable level of per capita income or to the mature market economies of the OECD countries, public expenditure in Armenia has been modest. This raises the possibility that the state in Armenia not only is small but is relatively weak, i.e., that it has failed to perform functions which states commonly perform elsewhere.

Table 8.1

Government Expenditure, Revenue and Foreign Finance, 1994-2001
(per cent of GDP)

	Expenditure	Revenue	Foreign Finance
1994	23.86	17.4	2.29
1995	27.10	17.5	9.39
1996	22.87	17.0	5.89
1997	24.78	18.3	8.14
1998	25.08	19.7	7.06
1999	28.75	22.0	7.28
2000	25.34	19.7	3.40
2001	24.41	20.6	4.55

Notes:
1. Expenditures refer to the consolidated budget, which includes central and local government.
2. Revenue includes current revenue plus capital revenue, e. g., from sales of state owned assets.

Source: Ministry of Finance and Economy.

It is noteworthy, for example, that capital expenditure is a small proportion of total government expenditure, and, moreover, the proportion has been falling steadily since 1998. Given the emphasis placed in Chapter 2 on the crucial role played by investment in ensuring a smooth transition to a market economy, it is alarming to see that state investment is low and declining. In Table 8.2 we present the data on state investment as a percentage of total government expenditure. As can be seen, state investment was high in 1994, namely, 21.5 per

cent of total expenditure. It then fell sharply and reached a low point in 1996. Investment recovered in 1997 and 1998, when it was 19.5 per cent of total expenditure, but then began to fall so that by 2001 it was only 14.4 per cent of total government expenditure.

Table 8.2

State Investment as a Percentage of Total Government Expenditure

1994	21.5
1995	12.1
1996	10.1
1997	17.7
1998	19.5
1999	16.6
2000	15.1
2001	14.4

Source: Ministry of Finance and Economy.

The expenditure data in Table 8.1 refer to the consolidated budget. That is, the data include expenditure by the central government, payment of pensions by the social insurance fund and expenditure by local government. The largest category by far, as one would expect, is central government expenditure. What is surprising, however, is the poverty of local government. Public expenditure by local government in the last six years has varied between 0.97 per cent of GDP in 1996 and 1.34 per cent in 2001. Local government clearly is exceptionally weak and obviously cannot play a significant role in promoting development. This is a great pity, since there is much to be done at the local level in providing infrastructure, rehabilitating dwellings, schools, medical clinics and public buildings, and improving the irrigation system. All these functions at present are performed by the central government, unfortunately rather ineffectively. Indeed it was suggested in Chapter 5 that locally organized public works could be used to increase investment, create employment and reduce poverty. This will not be possible, however, until more budgetary resources are made available to local government.

Let us turn next to the revenue side of the consolidated public accounts. The data in the second column of Table 8.1 include tax and non-tax revenues, special contributions and capital revenues, e.g., from the sale of state owned assets; the data do not include grants. Government revenue so defined has been insufficient to cover government expenditure and consequently the state has run a persistent budget deficit. More encouraging, as can be seen in the table, is the fact that revenues as a percentage of GDP have tended slowly to increase. Armenia has enjoyed some success in mobilizing an increasing volume of resources. In the mid-1990s, government revenue was roughly 17 per cent of GDP whereas today they are about 20 per cent of GDP. This represents progress.

It must be said, however, that much more needs to be done, particularly in increasing tax revenue. The ratio of taxes to GDP in Armenia is very low. In 2001, for instance, tax revenue accounted for only 18 per cent of GDP. This, again, is lower than in most other transition economies and much lower than in the OECD countries. The state in Armenia is likely to remain small and weak until it is able to raise more resources through taxation.

The structure of taxation also deserves careful consideration. In 2001 indirect taxes accounted for 58 per cent of the total and direct taxes for only 42 per cent. This was a radical change from 1994, when indirect taxes accounted for only 26.5 per cent of the total and direct taxes for 73.5 per cent. In other words, there has been a much greater reliance on indirect taxes with the passage of time. Since indirect taxes can be relatively regressive, one could argue that tax reforms have accentuated inequality in the distribution of income and aggravated poverty. On the other hand, it could be argued that the increase in excise taxes on alcohol, tobacco and petroleum products contributed to the progressiveness of indirect taxation, as did changes in the basis for taxing imports. In contrast, the revaluation of fixed assets and inventories in 1995 (to compensate for the effects of the hyperinflation of the early 1990s) reduced the base for profits tax and hence made this direct tax less progressive.

Table 8.3

Changes in the Structure of Taxation
(percentages)

	Share of GDP		Share of Total Taxes	
	1994	**2001**	**1994**	**2001**
Direct taxes	9.7	7.6	73.5	42.2
Indirect taxes	3.5	10.4	26.5	57.8
All taxes	13.2	18.0	100.0	100.0

Source: Ministry of Finance and Economy.

In Table 8.3 we show how the composition of tax revenues has changed, as just described, and also how the relative weight of the two types of taxes has changed in GDP. Indirect taxes increased from 3.5 per cent of GDP in 1994 to 10.4 per cent in 2001. This is a dramatic rise in the relative weight of indirect taxation and it was this that enabled the aggregate tax ratio to increase from only 13.2 per cent of GDP in 1994 to 18 per cent seven years later. Direct taxes, in contrast, now account for a lower share of GDP than they did in 1994. In the initial year direct taxes were equivalent to 9.7 per cent of GDP whereas in 2001 they accounted for only 7.6 per cent of GDP. This is a fall of just over two percentage points. In other words, if direct taxes had maintained their share of GDP, the tax ratio in 2001 would have been 20.1 per cent rather than 18 per cent. Defenders of a reduced emphasis on direct taxes argue that the increase in the exemption level for personal incomes and reduction of the tax rate on corporate and personal incomes and social insurance contributions helped to reduce poverty, increase employment and stimulate investment.

Despite these changes in taxation, however, the budget has remained in deficit and the country has continued to be dependent on foreign finance to balance the books. The third column of Table 8.1 contains the data on foreign finance as a percentage of GDP. The first thing to note is that foreign resources fluctuate widely from one year to another. In 1994 (the lowest year) foreign finance was equivalent to 2.3 per cent of GDP while in 1995 (the highest

year) foreign finance rose to 9.4 per cent of GDP. Foreign finance clearly is not a stable source of revenue. The next thing to note is that foreign revenue normally has been more than sufficient to cover the difference between government revenue and expenditure. Only in 1994, 1995 and 2000 was there a shortfall in foreign resources. This suggests that the objective of foreign finance was not just to cover the government's deficit but to contribute resources to finance general development. Lastly, there is no clear trend in foreign finance, but there is a slight hint in the data that foreign assistance might be less generous in future. Foreign finance was the lowest in 2000 and 2001 than it had been since 1994. If this is indeed indicative of a new trend, it will be important for the government to continue and even increase its efforts to raise additional tax revenues.

Public expenditure, human development and poverty

Let us consider next the composition of government expenditure. We are primarily interested in those expenditure categories which can have a direct impact on poverty or which will contribute to human development or which are essential to accelerating economic growth. In Table 8.4 we have singled out four expenditure categories for examination: education, health, housing and expenditures on residential sectors (which is simply called "housing" in the table), and transport, roads and communications (called simply "transport"). Under each heading in the table, we express expenditure on the item concerned both as a percentage of GDP and as a percentage of total public spending.

It is clear from the previous analysis that aggregate government spending in Armenia is relatively low. This inevitably will make it difficult to provide adequate funding for the priority programmes we have identified. And indeed this has turned out to be the case. Let us start with education. In 1994, education accounted for 8.3 per cent of total government expenditure; by 2001, the share of education had risen to 10.5 per cent. Actual spending patterns thus reveal that education has enjoyed increased priority. This is also evident when one examines expenditure on public education as a percentage of GDP: there has been a slow rise in

education spending from 1.97 per cent of GDP in 1994 to 2.56 per cent in 2001. Even so, the proportion of the country's resources allocated to education is remarkably low, namely, less than half the average in OECD countries.

Table 8.4

The Composition of Public Expenditure, 1994-2001
(percentages)

	Education		Health		Housing		Transport	
	GDP	Expen-ditures	GDP	Expen-ditures	GDP	Expen-ditures	GDP	Expen-ditures
1994	1.97	8.3	1.42	6.0	1.58	4.8	0.65	2.7
1995	2.60	9.6	1.85	6.8	1.27	4.7	0.43	1.6
1996	2.02	8.8	1.38	6.0	0.69	3.0	0.46	2.0
1997	1.97	7.9	1.19	4.8	1.12	4.5	1.10	4.4
1998	2.07	8.3	1.43	5.7	1.35	5.4	1.05	4.2
1999	2.30	8.0	1.38	4.8	1.59	5.5	0.98	3.4
2000	2.86	11.3	0.94	3.7	1.50	5.9	0.60	2.4
2001	2.56	10.5	1.34	5.5	0.87	3.6	0.60	2.5

Notes: 1. Housing expenditure includes expenditures on residential areas as well as spending on housing in a narrow sense.
2. Transport includes expenditures on transport, roads and communications.

Source: Ministry of Finance and Economy.

If spending on education continues to be low, it is very likely that the next generation of Armenians will be less well educated than the present generation. Low spending on education also will perpetuate poverty since new entrants into the labour force will not have the skills and training necessary for well paid, highly skilled jobs. In addition, neglect of public education, because of its direct effect on human capital formation, will have negative consequences for the overall growth of the economy and hence completion of the transition to a well functioning market economy will be delayed.

Some might be tempted to argue that education should be left to the private sector, but that would be a serious mistake. The market for education services is highly imperfect and if Armenia were to rely on the market to provide education to its people, the outcome would be both inefficient and inequitable. That is why even the most advanced market economy countries have a very large public education sector financed by taxation. The state in Armenia cannot neglect this responsibility and, within the amount allocated to social spending, it should give priority to education.

Similar considerations apply to public expenditures on health. They are necessary to alleviate poverty, to promote human development and to facilitate economic growth. The market for health services, as in education, is highly imperfect and governments have been forced to intervene on grounds of equity and efficiency. In Armenia, unfortunately, there has been a noticeable even if very slow tendency for health expenditure as a proportion of total government expenditure to decline. As can be seen in Table 8.4, in 1994-96 spending on health accounted for about 6.2 per cent of the total whereas in 1999-2001 it accounted for only 4.7 per cent of the total. A similar tendency also is apparent when one looks at government spending on health services as a percentage of GDP, although the decline is much slower. None the less, the level of expenditure is very low. In 1999, for instance, Armenia devoted 1.38 per cent of its GDP to public spending on health; this was less than one-fourth of the proportion of GDP spent on public health in the OECD countries, viz., 6.2 per cent. Moreover, the composition of health expenditure is heavily weighted in favour of hospitals. In fact, in 2001, three times as much was spent on hospitals as on primary health care. This was a smaller ratio than in the mid-1990s, but even so, it is likely that the poor would benefit if funds could be reallocated from hospitals to primary care programmes.

Considering education and health together, it is clear that the “social sectors” have been neglected. As a result, previously achieved levels of human development are unlikely to be sustained, economic growth is likely to be hampered and efforts to reduce poverty substantially

will be frustrated. Neglect of “human capital” can have serious consequences for the future of the country.

It should be added, however, that the introduction of a family benefit system in 1999, replacing the previous complex system of multiple subsidies and allowances, was a step forward. The next step should be to supplement family benefits with employment on public works programmes. Also of high priority is improvement of the pension system. The level of pensions has not kept pace with the growth of nominal GDP and in real terms pensions are very low, much lower in fact than in most other transition economies of the former Soviet Union. Indeed a pensioner trying to survive on just his pension would be classified as “extremely poor”. Moreover, the ratio of the average pension to the average wage in Armenia is perhaps the lowest among the countries of the former Soviet Union and hence the system is inequitable as well as impoverishing. It is important to correct this.

Also important is investment in physical infrastructure, including investment in housing and residential amenities, transport and communications. Government spending on housing, etc. appears to have slowly trended upwards, although in 2001 housing accounted for only 3.6 per cent of total government expenditure and 0.9 per cent of GDP. A similar pattern can be seen in transport, etc. The medium term trend seems to be gently upwards, but the short term trend is less encouraging. In fact state spending on transport, whether measured as a proportion of total expenditure or of GDP, has declined steadily since it reached a peak in 1997. If this were to continue, the growth of the economy would be put in jeopardy, employment prospects would diminish and the high incidence of poverty would persist.

In summary, government spending has not played the role that it could and should. This is partly because the general level of spending has been very low and partly because not enough priority has been given to spending on human capital and physical infrastructure. The state has a major role to play in encouraging pro-poor growth. So far, it has played that role inadequately.

Tax policy and resource mobilization

We have seen that the ratio of taxes to GDP in Armenia is very low but rising. We have also seen that the tax structure has changed dramatically, with much greater emphasis now being placed on indirect taxes. In this section we will examine in some detail the most important taxes and speculate about the effects of these taxes on the incidence of poverty and the distribution of income. We shall begin with an analysis of direct taxes, specifically the corporate income tax, the personal income tax and social insurance contributions. We will then consider taxes on wealth and conclude with a discussion of indirect taxes.

Despite the privatization of large state enterprises, the private wealth that privatization has created and the high degree of inequality in the distribution of income that has resulted, corporate profits are taxed very lightly in Armenia. Between 1997 and 2001, the corporate tax rate was reduced from 30 per cent of profits to 20 per cent. A number of tax exemptions exist, there is provision for accelerated depreciation allowances for investments and losses can be carried forward against future profits. The consequence of the low tax rate plus exemptions is that in 2001 the corporate income tax produced little tax revenue, namely, 1.3 per cent of GDP. In principle one could argue that the low rate of corporate taxation could stimulate investment, but in practice it has not done so, or at least not yet, since the low level of investment is perhaps the greatest problem the economy confronts.

The personal income tax produces even less revenue, namely, only 0.9 per cent of GDP in 2001. Most people pay no income tax, since the tax-exempt threshold is 20,000 drams a month or well above the poverty line. This makes sense because the cost of raising small sums of money from thousands of poor taxpayers would be very high and consequently the net yield of revenue would be low. Arguably less sensible, perhaps, is the low progressivity of the personal income tax and the low tax rate. Between 1998 and 2001, the top rate of tax was reduced from 30 per cent to 20 per cent and consequently the progressivity of the income tax

ranges from a minimum tax rate of 10 per cent to the new maximum rate of 20 per cent. The personal income tax therefore has a negligible effect on the overall distribution of income.

The most important direct tax is the compulsory social insurance contribution paid by employers and employees. In 2001 this tax on employment (for that is what it is) generated revenues equivalent to 3.0 per cent of GDP. During the period 1993-2001, the maximum rate of social insurance contribution was reduced in several steps from 38 per cent to 15 per cent of an employee's gross wage. The system also was simplified to make it easier for small firms to comply. The problem, however, is that the tax introduces a strong disincentive for small businesses to create new jobs, and since the expansion of employment is a primary mechanism for reducing poverty, this is worrying. A radical solution would be to abolish the tax in order to create strong employment incentives and compensate for the loss of revenue by adjusting the tax rates on corporate and personal incomes. This however is unlikely to be politically feasible.

If small businesses grow beyond a certain size, they will become liable for the ordinary compulsory social insurance contribution. Payment of this tax will increase their costs of production, make them less competitive and possibly lower their rate of growth in future. Thus directly and indirectly the system of financing social insurance by small businesses makes it more difficult to increase employment and reduce poverty.

There are three taxes on wealth. There is a progressive tax on the value of buildings, with a high tax-exempt threshold of three million drams and tax rates that rise from 0.1 to 0.8 of the value of the asset. The tax is thus very small, is rather inequitable in the way it is administered and in 2001 produced revenues equivalent only to 0.4 per cent of GDP. Vehicles are subject to a property tax as well, with progressive rates. There is also a land tax that in 2001 produced revenues equivalent to 0.2 per cent of GDP. Tax rates vary depending on the use of the land but in general the rates are low. The tax on agricultural land, for example, is 15 per cent of "cadastral net income". This might sound high, but agriculture is exempt from personal and corporate income taxes and value added tax. Thus agriculture is in fact taxed very lightly.

There is no tax-exempt threshold for the land tax. Given that farm land is distributed rather evenly, a simple flat rate seems desirable; and given that farmers tend to be poor, a low tax rate also is desirable. But as average incomes in agriculture begin to rise, the sector should be required to make a reasonable contribution to tax revenues. The land tax should be retained as a broad base for taxation.

Let us turn finally to indirect taxes, the most important source of revenue at present. Value added tax is the centre-piece of the entire tax system. In 2001, VAT generated revenues equivalent to 6.7 per cent of GDP. There is only one positive rate, namely, 20 per cent. Exports are zero-rated while imports are taxed at the 20 per cent rate. Agriculture, as we have seen, is tax exempt. There are also excise taxes on alcohol, tobacco and petroleum products. These taxes are a significant source of revenue and in 2001 were equivalent to 2.6 per cent of GDP.

In summary, an analysis of the tax system indicates that there is considerable scope for raising additional revenue. The level of taxation should increase along with the tax base and if the tax system as a whole is elastic, tax revenues will rise faster than GDP. There is room to simplify the tax system and increase the efficiency of tax collection. And a central issue for the future will be the fairness of the tax system. Lastly, it should be possible to eliminate the disincentive against employment and thereby contribute to a reduction in poverty.

Chapter 9

Foreign Capital and Foreign Aid

Keith Griffin

Armenia is heavily dependent on foreign resources in various forms for sustaining its economy. It receives a considerable amount of official development assistance from multilateral and bilateral donor agencies; it receives private transfers from overseas foundations, usually related in some way to the diaspora; it receives a significant amount of direct foreign investment; and finally, it receives large flows of emigrants' remittances from Armenians working abroad either temporarily or permanently. Unfortunately, it has not been possible to quantify all these flows accurately and produce a time series of foreign resource inflows. Consequently it has not been possible to undertake a complete analysis of the role of foreign capital in the country. This is a task for another time and another person.

We can however raise a number of issues for consideration and present fragments of data that hopefully shed some light on the issue. Let us begin by seeing what can be learned by scrutinizing the national income accounting data. The relevant information is presented in Table 9.1. The period covered is from 1994 (when the new national currency, the dram, was put into circulation) to the first half of 2001.

The first column of the table contains data on final consumption as a per cent of gross domestic product. Consumption includes both private and public consumption. The most striking thing about consumption in Armenia is that it exceeds GDP. Armenia is consuming more than it produces. In the first six months of 2001, for example, consumption exceeded production by 16.2 per cent. The same was true in every other year in our series. How is this possible? The answer is that consumption in the country as a whole can exceed production only

if Armenia sells some assets abroad, borrows from abroad, or receives foreign investment or transfers from abroad, such as grants and remittances. We know that Armenia sold few assets to foreigners; the foreign resource inflow mostly took the form of foreign aid (grants and loans), foreign direct investment and remittances from abroad.

Table 9.1

Consumption, Investment and Savings
(per cent of GDP)

	Final Consumption	**Gross Investment**	**Net Exports**	**Gross Savings**
1994	105.8	23.4	-33.8	-10.4
1995	117.5	18.4	-38.3	-19.9
1996	111.7	20.0	-32.7	-12.7
1997	114.7	19.1	-38.0	-18.9
1998	111.2	19.1	-33.8	-14.7
1999	108.3	18.4	-29.0	-10.6
2000	107.4	19.1	-27.4	-8.3
2001 (6 months)	116.2	16.2	-27.5	-11.3

Source: Columns (1) – (3): Tacis, Economic Trends, Quarterly Issue, Armenia, July-September 2001, Annex Table 1.6, p. 125; Column (4): Author's calculations.

In other words, foreign savings were used to support current consumption above what would otherwise have been possible. In the years immediately after independence, when Armenia entered into a deep transition depression, it is hardly surprising that foreign resources were used to increase consumption, both private and public. But this is not sustainable in the long run and it is a cause for concern that it has continued as long as it has. Let us put it another way: if Armenia had used the foreign resources it received to increase investment rather than consumption, the country would be considerably more prosperous today than it is.

Investment and savings

The second column in Table 9.1 contains data on gross investment as a per cent of GDP. As can be seen, the investment rate varied from 23.4 per cent of GDP in 1994 to 16.2 per cent in 2001. There may have been a slight tendency for the rate of investment to decline over time, but that is not our primary concern here. The issue of concern to us is how was gross investment financed? There are two possibilities: either with domestic savings or with foreign resources of various types.

Direct estimates of domestic savings are unreliable, but we can take advantage of a national income accounting identity to estimate gross savings. It is true by definition that investment plus net exports must equal savings. Gross investment, as we have seen, is reported in the second column of the table. Net exports are reported in the third column. Net exports is the difference between exports and imports. If net exports are positive, a country is exporting more than it imports and is accumulating assets abroad. If it is importing more than it is exporting, net exports are negative and the country is having to finance the deficit by relying on foreign resources.

In Armenia, net exports are heavily negative. Indeed, net imports varied between 38.3 per cent of GDP in 1995 and 27.4 per cent in 2000. This very large excess of imports over exports was financed by foreign capital inflows of various sorts, including emigrants' remittances. In fact it was the availability of foreign capital that made large negative net exports possible. In other words, the direction of causality, we believe, ran from foreign aid (and other forms of foreign capital) to imports, and not the other way round.

Using the identity: gross investment + net exports = gross savings, we can calculate gross savings. This is what has been done to produce the figures in the fourth column of the table. The remarkable finding is that gross savings in Armenia are negative, and they have been

negative in every year for which we have data. In 1995, the negative savings were equivalent to nearly 20 per cent of GDP while in 2000, the best year, savings were minus 8.3 per cent of GDP. The implication is that all of the investment that occurred in Armenia between 1994 and 2001, plus a bit more, was financed by foreign resources. The situation was slightly less bad in the second half of the period, but the fact remains that Armenia is saving nothing out of its current income in order to increase the stock of physical capital. It is entirely dependent on foreigners and emigrants to finance investment.

In other words, our analysis of national income accounting data suggests two things. First, part of the inflow of foreign resources has been used to supplement domestic consumption, both in the private sector (household consumption) and in the public sector (government current expenditure). Second, part of the inflow of foreign resources has acted as a substitute for domestic savings and, in fact, all of the investment that has occurred has been financed by foreign capital. Armenia is in an extraordinary position in which it is dependent on foreign resources for all of its investment and part of its consumption.

This makes the country highly vulnerable to external influences. There is no guarantee that foreign aid will continue indefinitely at high levels and meanwhile, as long as the donors are willing to support the country, high aid dependence will give them considerable policy leverage and political power. Aid conditionality could be quite unpleasant. Furthermore, foreign investors can always look for greener pastures and take their funds elsewhere. Those foreign investors who are part of the diaspora may be attracted to Armenia by more than the profits they hope to earn, but other investors can be expected to respond to global market forces, over which Armenians have little control. Emigrants' remittances are perhaps more reliable, but so little is known about emigrants—who they are, how many migrants have gone abroad, how long they plan to stay, and what determines the flow of remittances—that accurate

prediction is impossible. Given the vulnerability and uncertainty that Armenia faces, it would be prudent to plan to reduce dependence on foreign resources and to adopt a deliberate policy of greater self- reliance.

Foreign direct investment

Foreign direct investment (FDI) has become an important source of foreign capital. Starting from practically nothing in 1995, it gradually increased as the economy began to recover from the transition depression and by 1998 foreign direct investment accounted for 11.7 per cent of GDP. That was the peak year. Since then private foreign capital inflows have declined steadily, but in 2001 they still accounted for 3.3 per cent of GDP. The data are reported in the first column of Table 9.2.

Table 9.2

Foreign Direct Investment, 1995-2001
(percentages)

	FDI/ GDP	FDI/ Gross Investment
1995	0.1	0.5
1996	1.1	5.5
1997	3.2	16.8
1998	11.7	61.3
1999	6.6	35.7
2000	5.4	28.3
2001	3.3	20.4

Source: National Statistical Service.

Perhaps the best way to put FDI in perspective is to express foreign direct investment as a percentage of total investment. This is done in the second column of the table. There it can be seen that in the peak year of 1998, FDI accounted for more than 61 per cent of gross investment. This is a very high proportion of the total and, again, represents great dependence on an external source of capital to finance growth. Foreign direct investment did decline in

subsequent years, although in 2001 it still accounted for more than 20 per cent of all investment.

Our view is that the government is wise to welcome private foreign direct investment. Foreign capital should be treated neither better nor worse than domestic capital and it certainly should not be granted special privileges. The problem is not that there is too much private foreign investment but that there is much too little domestic investment, private and public. The solution to the problem of heavy reliance in FDI, if indeed it is a problem, is to increase Armenia's savings rate so that it is able to finance most of its investment from domestic sources.

China, for instance, has a much lower average income than Armenia, yet China's savings rate during its transition to a market economy has been between 30 and 40 per cent year after year, while Armenia's savings rate, as we have seen, has been negative. If China can achieve a high savings rate, there is no reason in principle why Armenia cannot do the same. The macroeconomic choice Armenia faces is between adopting policies that favour somewhat higher private and public consumption in the short term or adopting policies that favour higher savings and investment in the short term, which will yield much higher consumption in the long term.

It may be tempting to assume that Armenia can have the best of both worlds by using foreign aid and FDI to finance investment while using remittances plus domestic output to finance consumption. This however would be a dangerous strategy: it implies that investment, growth, employment creation and poverty reduction would depend on decisions taken externally, outside Armenia. It implies a loss of economic sovereignty that few countries would be willing to tolerate and, moreover, it probably wouldn't work because the flow of foreign

capital of the required magnitude would be unlikely to be available indefinitely. No country can realistically hope to prosper with a zero or negative savings rate.

Taxation and external financing

We have argued, in effect, that foreign resources have acted as a substitute for domestic savings. This has made possible an increase in consumption, even when the foreign resources have been allocated to, and financed, specific investment projects. This occurs because resources are fungible and consequently the ultimate change in the pattern of resource use may be quite different from what investors or aid donors intended. A similar issue arises when foreign aid is used to finance a country's budget deficit. The purpose of the external financing is to cover the gap between government revenue and expenditure, but it may in practice influence the size of the gap either by encouraging additional expenditure or by allowing the government to relax its efforts to raise additional revenue through taxation.

Table 9.3

Central Government Revenue and External Financing of the Budget Balance, 1995-2000, (per cent of GDP)

	Central Government Revenue	External Financing
1995	12.2	10.5
1996	14.3	6.5
1997	15.7	5.0
1998	17.2	1.6
1999	19.3	4.7
2000	16.7	2.2

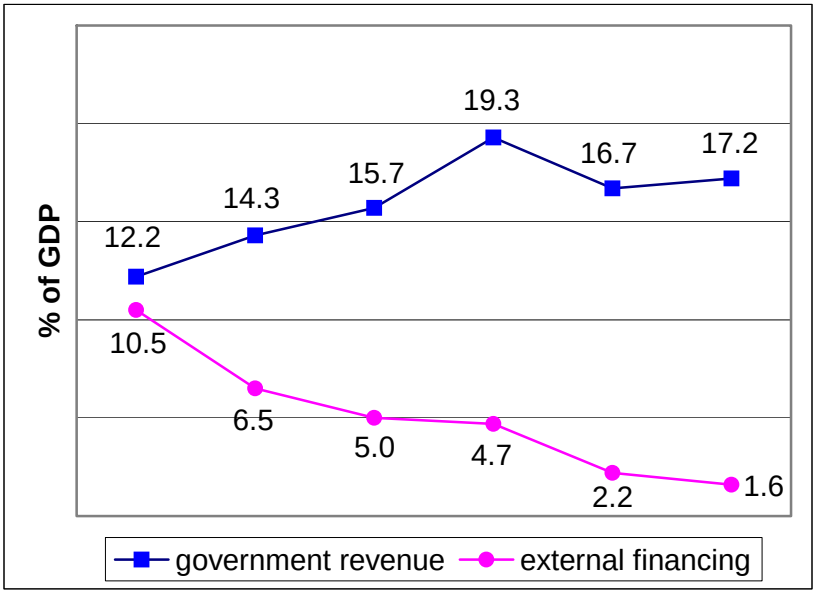
Sources: Tacis, Economic Trends, Quarterly Issue, Armenia, July-September 2001, Annex Table 4.9, p. 153.

This issue is potentially of importance in Armenia because much foreign aid has in fact been used to finance the central government's budget deficit. In Table 9.3 above we present data for 1995 to 2000 on central government revenue as a per cent of GDP and external financing of the budget balance, also as a per cent of GDP.

Central government revenue varied from 12.2 per cent of GDP in 1995 to 19.3 per cent in 1999 and, as discussed in Chapter 8, showed some tendency to increase over time. The budget however remained in deficit throughout the period covered in the table and external financing was used to fill the gap. As can be seen in the second column of the table, external financing of the budget balance varied from 10.5 per cent of GDP in 1995 to a low of 1.6 per cent in 1998, and there was a clear tendency for external financing to decline. That is, there was an inverse relationship between government revenue as a per cent of GDP and foreign financing as a per cent of GDP. This can be seen very clearly in Figure 9.1, where external financing is plotted in descending order and compared with government revenue for the corresponding year.

Figure 9.1

The Relationship between Government Revenue and External Financing



It is evident from Figure 9.1 that the lower is external financing, the higher is government revenue, and vice versa. The question is what is the causal relationship. Is the pattern merely random? This seems improbable. Does the causal relationship run from revenues to foreign financing, in the sense that when government revenues increase, the need for external resources to cover the deficit diminishes and consequently external aid declines? This is the interpretation of the relationship that both government and donors prefer. Our own interpretation, however, is that the causal relationship runs from aid to taxes. That is, when foreign aid is readily available, government relaxes its effort to increase taxation a bit and when aid becomes more difficult to obtain, government increases its effort to raise more revenue from taxation. In other words, foreign aid acts as a substitute for taxation. This is analogous to our earlier argument that foreign aid (and foreign resources in general) often act as a substitute for domestic savings.

Conclusions

It is widely recognized that foreign resource inflows have played a significant role, and perhaps a decisive role, during the first ten years of Armenia's transition to a market economy. The conventional view is that emigrants' remittances have helped to sustain consumption during a period of severely depressed incomes, and that this has been especially important for the poor; that foreign aid has helped to facilitate the reform effort and, above all, has helped to finance the central government's fiscal deficit while tax reforms were being introduced; and that private foreign capital, particularly direct investment, has ensured that physical capital formation was sufficient to stimulate growth and thereby help to reduce poverty.

There is truth to this conventional view, but it is not the whole truth and nothing but the truth. The conventional view certainly is correct in its implication that foreign capital inflows,

broadly defined, have had a pervasive influence on the economy, affecting consumption, investment and government expenditure. Indeed the conventional view possibly understates just how dependent Armenia has become on external resources and how vulnerable it is to economic and political changes originating abroad. A case can be made, we believe, for a policy which places more emphasis on self-reliance, if only on prudential grounds.

Our analysis indicates that aggregate consumption in Armenia exceeds national income. We do not have enough information to determine the effects of foreign capital inflows on the distribution of consumption and the distribution of income, but given the magnitude of the inflows (which themselves cannot be measured accurately), the effects could be considerable. This is a topic that merits further investigation because of the obvious implications for poverty. Be that as it may, it evidently is true that foreign capital has been used in large part to supplement consumption. This would be even more alarming if foreign capital inflows were mostly loans because it would imply that Armenia is borrowing abroad in order to finance current consumption and would not be generating future income with which to service the foreign debt. In such circumstances a debt crisis would be inevitable. Fortunately, however, a large part of the foreign resource inflows consists of emigrants' remittances and grants and hence repayment of capital does not arise. There is, however, an important policy implication, namely, that as long as foreign resources are used to supplement consumption, the authorities should be careful to avoid foreign indebtedness.

Another way to try to understand what has been happening is to look at the relationship between foreign capital inflows and domestic savings. Some economists argue that foreign capital supplements domestic savings and hence raises aggregate investment by the amount of the capital inflow. I believe, however, that foreign capital is a substitute for domestic savings and hence that inflows of foreign resources reduce the savings rate. Indeed, I have argued this

for such a long time that this is sometimes called the "Griffin effect" in the professional literature.[1] Armenia, unfortunately, confirms the Griffin effect with a vengeance. Not only have foreign resources displaced domestic savings, but gross savings in Armenia are negative. This is an example of extreme dependence on foreign capital to finance investment and growth and underlines the importance of our policy recommendation to increase the savings rate in the country.

Foreign capital inflows also affect the behaviour of the government. Our analysis indicates that an increase in foreign resources in the hands of the government reduces tax effort and that a reduction in the availability of foreign resources provides an incentive to governments to increase tax revenues. This could be considered an application of the "Please effect", named after the economist, Stanley Please, who called attention to the relationship between changes in taxation and changes in the savings behaviour of individuals.[2] Call it what you will, the data suggest that a reduction in Armenia's dependence on foreign resources to finance the budget deficit would result in higher levels of taxation and an increase in public savings (or rather, a reduction in the rate of negative savings by government). This evidently is a controversial proposition that deserves more research.

There is one other possible effect of large inflows of foreign resources on the performance of the economy that should be mentioned. This is sometimes called "Dutch disease" after research on the Netherlands revealed that large inflows of oil revenues led to an appreciation of the exchange rate to the detriment of Dutch exports of manufactured goods. The argument in Armenia would be that inflows of foreign aid and emigrants' remittances have been so large that this has resulted in an appreciation of the dram, a loss of competitiveness in foreign markets and consequently poorer export performance than would otherwise have occurred. This problem could be especially important here because Armenia's exports already

face major barriers in the form of closed borders with Turkey and Azerbaijan. On the other hand, if the current level of foreign resource inflows can be expected to continue indefinitely, the effect on the exchange rate is of little consequence. This, too, is a subject that deserves more research.

However enough has been written, we believe, to indicate that Armenia's heavy dependence on foreign resources is a very mixed blessing. Large inflows of foreign capital alter the behaviour of the economy in many ways, some of which are positive and some of which are negative. It should not be assumed that when it comes to foreign aid, the more of it Armenia receives, the better. A more critical evaluation of the role of foreign capital in the future development of the country should be high on the agenda of policy makers and their advisers.

Notes

1. For an early analysis of the Griffin effect see Keith Griffin, "Foreign Capital, Domestic Savings and Economic Development," Bulletin of the Oxford University Institute of Economics and Statistics, 1970 and Keith Griffin and John Enos, "Foreign Assistance: Objectives and Consequences," Economic Development and Cultural Change, April 1970.

2. See Stanley Please, " Savings Through Taxation: Mirage or Reality," Finance and Development, Vol. 4, No. 1, 1967.

Chapter 10

Policy Conclusions: A Strategy for Pro-Poor Growth

Keith Griffin

The astute reader will have noted that in the previous chapters little mention was made of the demographic characteristics of Armenia. The reason for this is that the accuracy of demographic data is uncertain. The 1989 population census indicates that at that time the population of the Soviet Socialist Republic of Armenia was 3.3 million. It is widely recognized, however, that the 1989 estimate is too high. The figure was inflated so that the leaders of the republic could establish a claim for Union resources to repair damage from the 1988 earthquake as well as to justify an increase in "normal" transfers from the Union, many of which were based on the size of the population.

While it is agreed that 3.3 million overstates the size of the population in 1989, it is not possible to correct the data to produce an accurate estimate. Those well informed about Armenian statistics, however, believe that 3.0 million is a plausible estimate, and this is the figure we shall use.

Projections based on the 1989 census produced an estimate of the size of the population in 2001 of 3.8 million. Preliminary results of the 2001 population census, however, indicate that the population is 3.0 million. Thus the discrepancy between the 2001 census estimate and the estimate based on projections from the 1989 census is 26.7 per cent! The picture is further confused by the widespread belief that the 2001 census figure also is an overestimate and that the true size of the population may be slightly lower. Be that as it may, we shall assume that the best estimate of population size in 2001 is 3.0 million. The implication is that there was

zero population growth in Armenia between 1989 and 2001. This, in turn, implies that the rate of growth of GDP is the best estimate we have of the rate of growth of output per capita.

Looking into the future, there is considerable uncertainty about how fast the population is growing, or declining. Official estimates, still based on the 1989 census, are that the crude birth rate is 9.6 per thousand and the crude death rate is 6.6 per thousand. The natural rate of growth of the population would thus be about 0.3 per cent per annum. Taking net emigration into account, the rate of growth of the population is said to be about 0.1 per cent a year.[1] In order to avoid spurious precision, however, it may be better to assume a zero rate of growth of population for the immediate future. This is what we have done.

Priority for investment

Our assumption of a zero rate of growth of the population may be rather optimistic. Everything else being equal, it implies that Armenia can regain the pre-independence level of per capita income sooner than would be possible if the population were growing. Even so, there is a great deal of catching-up to do, as was demonstrated in Chapter 1.

Obviously it is a high priority to bring the average standard of living back to what it was in the late 1980s as quickly as possible and then to raise living standards further, at least to what they would have been if the growth trajectory during the Soviet period had continued. This will require sustained rapid growth of output and income and that, in turn, will require high levels of investment in physical, human and natural capital. Moreover, unless it is assumed that foreign resources will be available to finance domestic investment, a high domestic savings rate will be essential.

Unfortunately, net investment has been very low throughout the transition period and gross savings have been negative. (See Table 1.3 and Table 9.1.) The policy implications are clear. First, increasing investment in physical, human and natural capital should receive very

high priority. Second, a parallel effort must be made to increase the savings rate. All other economic policies should be subordinate to these two objectives.

The avoidance of rapid inflation, for example, should not be seen as an end in itself but as one way to stimulate private investment by increasing the confidence of actual and potential entrepreneurs. Price stability increases the confidence of investors because it makes it easier to detect and predict changes in relative prices. This is particularly true in transition economies where investors are unfamiliar with the role played by relative prices and the fluctuations that normally occur from the interaction of the forces of supply and demand. But confidence also depends on quantity stability. For example, if energy supplies are unstable and uncertain, then investors will be reluctant to invest their funds in risky industrial enterprises; if supplies of irrigation water are unstable and unpredictable, then farmers will be reluctant to invest in agricultural improvements. Thus policy makers should be concerned with maintaining economic stability. Economic stability includes not just price stability, but also the stability of supplies of key production inputs such as electricity and irrigation water.

A similar point applies to price liberalization and microeconomic interventions by the state. One does, of course, want to "get prices right" so that resources are allocated efficiently, but it is more important in Armenia at this stage of the transition process to remove obstacles to investment, and in particular to remove administrative and other obstacles to the creation of new, small private sector enterprises. Liberalization should not be seen as an end in itself but as one way to encourage and generate more investment and employment. The objective is to increase the volume of investment substantially and at the same time ensure that it takes the form of small, widely dispersed, labour intensive projects. The best way to do this is to create incentives and a regulatory environment that encourages small and medium sized enterprises to emerge and prosper.

The transition to a market economy is not just about growth, it is also about structural change. In Chapter 2 we argued that structural change in Armenia has occurred through contraction whereas it would have been much better to have adopted a policy of investment-led structural change. The reason for this is that structural change occurs not through a reallocation of existing stocks of the factors of production but by allocating new investment to the most profitable economic activities. Although much time has been lost, it is not too late to change course and adopt an investment-led strategy. We make four specific policy recommendations to encourage this.

First, the government should use monetary and fiscal policies to maintain a high level of aggregate demand. That is, deflationary policies should be avoided. The reason for this is that it is important to provide strong general incentives to invest and to ensure that when investment does result in increased output, there will be a market for that output. Second, priority should be given to ensuring that certain "key" prices reflect social (and not just private) costs and benefits. The purpose of this is to create a structure of incentives that will help to ensure that investment is allocated efficiently. In Armenia this implies that priority should be given to improving capital markets (not just interest rate policy but also measures to ensure that everyone has access to credit markets), to improving the market for energy and to maintaining an exchange rate that does not discourage exports.

Third, the government should give high priority to increasing public investment in infrastructure and human capital (particularly education and health). The reason for this is that public and private investment are complementary, not competitive, and hence if public investment is low, private investment will be inhibited. Unfortunately, public investment in Armenia is exceedingly low and it is urgent that this be corrected in order to accelerate growth, create employment opportunities and reduce poverty. Fourth, we specifically recommend that

the government organize a public works programme to invest in infrastructure and simultaneously create jobs for the unemployed. Many public works projects could be organized and implemented at the local level, provided local community institutions are strengthened both financially and institutionally.

There are, for example, approximately 900 villages in Armenia. A UNDP consultant has estimated that there is a need to invest roughly $1 million in each village in roads, irrigation, water management, sewage treatment, repair of public buildings, and so on. The total cost for investment in village infrastructure would therefore be about $900 million. Gross domestic product is roughly $2 billion. If 30 per cent of this were allocated to investment in physical capital, and if one third of all investment were allocated to village rehabilitation, roughly $200 million would be available each year. This implies that it would take less than five years to provide all the villages in the country with much improved infrastructure. This example is, of course, merely illustrative, but it does indicate that rapid progress is feasible.

The centrality of employment

The creation of more jobs and more productive jobs is the second pillar on which a pro-poor growth strategy rests. Employment creation, in turn, depends upon the "initial conditions" and the subsequent pattern of growth. As regards the initial conditions, there were two favourable circumstances and one unfortunate circumstance. These are discussed in Chapter 4.

First, a land reform was implemented which created a small peasant farming system. This ensured that the initial distribution of wealth in the agricultural sector was egalitarian and that the distribution of income from farming and livestock activities would be evenly distributed. The egalitarian small peasant farming system also made it possible for the rural

areas to act as a “safety net” and absorb large numbers of workers who were displaced from industry when the manufacturing sector collapsed.

Second, housing was privatized. It gave the population, particularly the urban population, some security in turbulent times. Not only were people assured of having shelter, they also received a valuable asset. Some were able to use part of their dwelling to start a small business, e.g., a restaurant, coffee shop, repair shop or retail store. Owning a house provides an asset on which one can build.

Unfortunately, third, the privatisation of large state industrial enterprises was unsuccessful. In did nothing to stimulate industrial expansion or increase efficiency but it did result in a highly unequal distribution of income and wealth. The privatization cannot be reversed now, and we do not recommend that the government attempt to do so, but we do strongly recommend that policy makers should give high priority to the promotion of small and medium sized enterprises. This will require elimination of administrative barriers to entry and access to credit. It will also require public investment in transport, power and communications.

Turning next to the pattern of growth, the point of departure should be recognition that the Armenian economy is characterized by high levels of unemployment, high levels of part-time employment, high levels of low productivity employment in the urban informal sector and peasant agriculture, and considerable full-time employment in jobs which pay such a low wage that workers are forced to live in poverty. In addition, many people have become discouraged by poor job prospects and have withdrawn from the labour force. This is discussed in Chapter 5. Unlike in a typical developing country, however, the labour force in Armenia is well trained, well educated and skilful. Hence from a policy maker’s point of view, the abundance of under-utilized labour should be seen as an asset.

In some cases this human capital may go abroad to seek employment. Pessimists will regard this as “brain drain”. A more hopeful interpretation is that in present circumstances Armenians can obtain a higher return on their human capital by emigrating (permanently or temporarily) than by seeking scarce, low paid employment at home. Those left behind will benefit from emigrants’ remittances as long as the emigrants continue to send them. Indeed it probably will make sense to continue to invest in public education even if it is known that a high proportion of the newly educated will look for jobs abroad, since remittances may more than cover the private and public costs of education.

One must not push this argument too far because if emigration is biased in favour of the most highly skilled labour, as is possible, the average level of skills of the remaining labour force will be reduced. This however underlines the importance of adopting an employment intensive pattern of growth that is based on a high demand for skilled labour. There are also implications for education policy. The decline in the productivity of labour has reduced the domestic return on human capital, while the decline in public expenditure on education since the 1980s has increased the private cost of attaining a given level of human capital. Lower returns and higher costs will reduce the demand for education. This should concern policy makers because the decline in productivity in principle could be corrected rather quickly whereas once the education system is allowed to deteriorate, it will take quite a long time to restore it. Once again, this underlines the importance of adopting a skilled labour intensive pattern of growth.

Investments in human, physical and natural capital are complementary: the return on one depends on the availability of the other two. For example, Armenia might well be able to create a comparative advantage in the export of some high value vegetables and fruit, but this will require skilled farmers and food processors (human capital), an efficient water

management system (natural capital), and a good air freight network (physical capital). All the pieces must be in place for a potential comparative advantage to be translated into a profitable economic activity.

In the economy as a whole, growth during the recovery period since 1994 onwards has been characterized by a negative output elasticity of employment. That is, employment has declined while output has increased. Some analysts might argue that this reflects a lag in the response of employment to a rise in production, but if so, the lag is exceptionally long. We believe, in contrast, that the negative elasticity is evidence of structural problems, e.g., narrowly based growth, poorly functioning credit markets, biases against small and medium sized enterprises, and inadequate public investment in infrastructure. A pro-poor growth strategy will have to address these structural issues if it is to be successful. This does not imply that policy makers should favour one sector of production over the others – we believe that several parts of agriculture, services and manufacturing have the potential for more employment intensive growth – but it does imply that economic policy in general, and the structure of incentives that results from policy, should be biased in favour of job creation and an increase in the average productivity of labour.

Poverty

This comes out clearly in Chapter 6, where the anatomy of poverty is analyzed. Poverty has declined in Armenia since 1996, but the rate of decline has been frustratingly slow. In 1998-99 more than half of the population of the country still were living below the poverty line and in urban areas it was just over 60 per cent. The one encouraging sign is that the incidence of extreme poverty has declined noticeably. (See Table 6.1.)

Not only is there more poverty in urban than in rural areas, but poor urban households have to rely heavily for their sustenance on remittances, transfer payments and proceeds from

the sale of household assets. Indeed more than half their income comes from these three sources. Remittances alone account for 26 and 31 per cent, respectively, of the poorest and next poorest quintile of the urban population. This highlights the fact that in urban areas, not having a job, i.e., being unemployed or out of the labour force, makes it much more likely that one will be poor. Unfortunately, less than a third of the urban population have a job. Once again, employment creation is the key to poverty reduction.

The situation is different in rural areas. Thanks to the equitable distribution of land, employment in agriculture is high. The problem is that because the average size of a peasant farm is very small, the productivity of labour is low and falling. If this continues, poverty in the rural areas will be perpetuated. The solution here is to raise the productivity of labour by investing in physical and human capital and by creating non-farm rural employment opportunities so that labour gradually is drawn off the land and the ratio of land to labour rises.

Income poverty is, of course, only one aspect of the poverty problem. Armenia is fortunate, because of its inheritance from the Soviet period, that human poverty is much less pronounced than income poverty. There are, however, signs that health and educational standards are deteriorating and this is bound to lead to an increase in human poverty fairly soon unless remedial action is taken quickly. Furthermore, there are signs that the distribution of health and educational services is becoming more unequal and if this trend continues it will exacerbate inequalities in the distribution of income.

Inequality

There has been a dramatic rise in income inequality in Armenia since the transition to a market economy began. This greatly increased the incidence of poverty, which of course would have increased in any case because of the fall in average income. There are many ways to measure inequality and several different definitions of “income” that can be used. In Table

10.1 we have assembled many of the indicators of inequality that can be encountered in the published literature and that are frequently cited. As a summary measure of inequality we have used the Gini coefficient, perhaps the most widely used indicator worldwide.

The last column in the table contains Gini coefficients of the distribution of earnings. We have observations for six years, the longest series in the table. Earnings, of course, refer to earned incomes and exclude income from property, e.g., interest, profits, rent, etc. The Gini coefficient of earnings thus indicates the degree of inequality in the distribution of wages and salaries. In 1989 the Gini coefficient for earnings was exceptionally low (0.258),

Table 10.1

Indicators of Inequality:
Gini Coefficients, 1989-1999

	Distribution of:			
Year	**Income**	**Expenditure**	**Consumption**	**Earnings[b]**
1989	0.251[b]			0.258
1991				0.296
1992				0.355
1993				0.366
1994				0.321
1995				0.381
1996	0.602[c]	0.444[c]		
1999	0.593[c]	0.372[c]		
1996-99	0.59[a]		0.32[a]	

Sources: (a) World Bank, Making Transition Work for Everyone: Poverty and Inequality in Europe and Central Asia, Washington D.C., 2000, Tables 4.1 and 4.2, pp. 140 and 144.
(b) UNICEF, A Decade of Transition, Innocenti Research Centre, Regional Monitoring Report No. 8, 2001.
(c) National Statistical Service, Statistical Yearbook of Armenia 2001, Yerevan, 2001, Tables 64 and 67, pp. 85 and 88.

indicating that the wage and salary structure was highly compressed and that earnings differentials were narrow. During the transition to a market economy, however, wage differentials widened and the Gini coefficient increased steadily. By 1995, the last year in our series, the Gini coefficient had risen to 0.381. That is, between 1989 and 1995, earnings inequality as measured by the Gini coefficient increased 47.7 per cent. This is an enormous change in just six years and it is highly likely that the greater dispersion in wages that occurred during this period contributed to poverty among employed wage earners.

In the first column of Table 10.1 we have observations for three years, including a pre-independence year (1989) and two years in the 1990s (namely, 1996 and 1999). We also have a figure which is said to be the average for the period 1996-99. These Gini coefficients measure the degree of inequality in the distribution of income as conventionally defined and in principle include earned income, earnings from self-employment and income from property. It is noteworthy that the Gini coefficient for income in 1989 was unusually low (0.251) and that it was almost identical to the Gini coefficient for earnings. This is reassuring since there was very little income from property in the Soviet period and hence the two coefficients should have been about the same.

The privatisation of state owned enterprises, the emergence of new private enterprises and the introduction of market forces had two effects: they made it possible for people to have income from property and they made it certain that income from property would be unevenly distributed, indeed highly concentrated. This, in combination with greatly increased earnings inequality, resulted in a highly unequal distribution of overall income. By the second half of the 1990s the Gini coefficient had increased to 0.59 or 0.60. That is, between 1989 and the late 1990s, income inequality increased by 136 per cent or more! If these figures are accurate, they

imply that the distribution of income in Armenia today is among the most unequal in the world.

The distribution of expenditure tends to be less unequal than the distribution of income. The reason for this is that high income households do not spend all their income but put some income aside as savings whereas low income households often spend more than their income and try to sustain their consumption by selling some assets, drawing on previous savings or borrowing. The data for Armenia are consistent with this behaviour, since the Gini coefficients for expenditure in 1996 and 1999 (reported in the second column of the table) are lower than the Gini coefficients for income for the same years.

Finally, the third column contains an estimate of the Gini coefficient for "consumption" for the years 1996-99. It is not clear how " consumption" differs from "expenditure", nor is it clear how the estimate was obtained. The value of the coefficient is not consistent with other indicators in the table and appears to be much too low. The reader is advised to ignore this estimate; it is included in the table for the sake of completeness.

It is increasingly becoming accepted, as the World Bank puts it, that "high inequality is bad for growth." [3] The policy implication is that government should seek, and expect to find, many measures which simultaneously improve the distribution of income and increase the rate of growth. Examples of such measures in Armenia would include policies to generate employment (including public works programmes), policies to increase human capital (e.g., through a reallocation of public expenditure in favour of education and health), policies to increase the skills of the poor so they can compete more effectively in the labour market, policies to improve the efficiency of capital markets and to increase access to credit by small and medium sized enterprises, and policies which reduce barriers to entry by new enterprises

and increase competition generally (which would help to erode monopoly profits and rents and reduce corruption).

All of these policies would reduce poverty and inequality and accelerate growth. Many of the policies also would require an increase in government spending, and in the taxes necessary to finance increased spending. A larger, stronger and more focused state will be necessary if Armenia is to effect a successful transition to a market economy. As regards inequality specifically, there is considerable evidence that the higher is government expenditure as a percentage of GDP, the lower is the Gini coefficient of the distribution of income.[4]

Monetary policy and the banking system

Of course if government expenditure is financed by a large increase in the money supply, inflation is likely to result. After five years of rapidly accelerating inflation from 1990 to 1994, the authorities quite rightly were determined to bring the level of prices under control and this has been a central objective of monetary policy ever since. It is, however, possible to have too much of a good thing and the time may have come to consider whether the objectives of monetary policy should be broadened to address problems of employment creation and poverty reduction.

Considerable success has been achieved not only in controlling inflation but also in transforming the banking sector inherited from the Soviet Union into a commercially oriented capital market. Nevertheless, as discussed in Chapter 3, the banking sector is weak and the capital market is embryonic. Financial intermediation is shallow, the range of financial institutions is narrow, the ability of the commercial banks to mobilize domestic savings is exceedingly limited and few banks on their own are able to finance long term investments. Real rates of interest charged by commercial banks are very high and hence it is not surprising

that the rate of default is high on those long term investments that do manage to secure funding.

It is quite possible that a reduction in real interest rates, and greater monetary accommodation by the Central Bank, would stimulate investment demand, increase the volume of lending and simultaneously reduce the risk of default. It is also possible that financial deepening of a conventional type could be advantageous. For example, active involvement in the creation of specialized mortgage lending institutions could help to mobilize savings, promote investment in housing and encourage the construction industry, thereby creating more jobs for relatively low skilled workers and reducing poverty. One has the impression that monetary policy in Armenia is both orthodox and conservative.

Less orthodox would be initiatives by the monetary authorities to create financial institutions which specialize in lending to small and medium sized enterprises (SMEs) and other institutions which specialize in lending to small farmers. Beyond that, the monetary authorities might take the initiative in ensuring that barriers to entry faced by small and medium sized firms are reduced, so that the institutions that lend to them become commercially viable. We have stressed throughout this study that pro-poor growth implies giving priority to the development of SMEs and it would be entirely appropriate for the monetary authorities to play a leading role in promoting these firms.

More adventurous still would be active study, monitoring, evaluation and promotion of micro-credit programmes. There is enormous experience throughout the world with micro-credit schemes and there is probably much that is valuable that Armenia could learn from other countries. Micro-credit is unlikely to transform the economy, but it could help to transform the lives of some very poor people. We recommend that the feasibility of greatly enlarging micro-credit schemes be seriously considered.

None of these suggestions for a less orthodox and less conservative monetary policy are costly, none would impose an additional burden on taxpayers and all, directly and indirectly, would benefit the poor. Given the very high incidence of poverty, the balance of risk and reward, we believe, favours a more active and adventurous set of policies.

Public finance during the transition

It was shown in Chapter 8 that government expenditure is relatively low and that tax revenues are an even lower proportion of GDP. There is thus considerable room for policy makers to increase expenditures and taxation. It was also shown that public investment is very low and we strongly recommend that it be increased.

We also recommend that the sectoral composition of public spending be altered in favour of greatly increased expenditure on education, health and physical infrastructure. Our analysis has implications for tax policy, too. The recent emphasis on indirect taxation probably has increased income inequality and we recommend that in future more emphasis should be placed on direct taxation, and specifically on corporate and personal income taxes.[5] On the other hand, we suggest that taxes on employment should be avoided and hence that the compulsory social insurance contribution should be radically altered or abolished. The land tax in principle is highly desirable, but in practice it has not been used to mobilize resources. We recommend that in future taxes on urban and rural land should play a more prominent role.

The thrust of our argument is that the government should be more active in promoting growth, raising investment, creating employment, reducing inequality and eradicating poverty.[6] It is unrealistic to expect that market forces alone, acting spontaneously, will achieve the government's policy objectives. This is especially true when the ultimate objective is systemic change, i.e., to transform a centrally planned economy into a market oriented economy. Markets are not designed to effect systemic change. Their role, a very important one,

is to allocate resources efficiently, and even in this task they often fail, as is well known. The government must determine the "rules of the game" of the market economy, create the institutions necessary for markets to function effectively and adopt macroeconomic policies to steer the market economy in the desired direction.

Economic performance during the transition from plan to market has been disappointing so far. Average incomes are below what they were 15 years ago, there is high unemployment and underemployment of labour, poverty is widespread and inequalities of income, wealth and opportunities are enormous. Surely it is possible to do better than this. Indeed the purpose of this study is to analyze what went wrong and what can be done to put things right. We have tried to be selective in our recommendations and to identify policies that merit the highest priority. Our hope is that the study will be useful and contribute in a small way to a brighter future for Armenia.

Notes

1. See, for example, United Nations, Statistical Yearbook for Asia and the Pacific 2000, Bangkok: ESCAP, 2001.
2. It is perhaps interesting to note that research on self-reported happiness indicates that happiness is strongly and negatively influenced by the level of unemployment. Jobs are more important than income in raising self-reported happiness. See Bruno S. Frey and Alois Stutzer, "What can Economists Learn from Happiness Research?", Journal of Economic Literature, Vol. XL, No. 2, June 2002.
3. World Bank, Making Transition work for Everyone: Poverty and Inequality in Europe and Central Asia, Washington D.C., 2000, p. 331. Also see Keith Griffin and Amy Ickowitz, " The Distribution of Wealth and the Pace of Development ", in Terry McKinley, ed., Macroeconomic Policies, Growth and Poverty Reduction, London: Palgrave, 2001.
4. World Bank, op. cit., p. 357.
5. An increase in taxes on profits and incomes could reduce private savings somewhat, that is the Please effect mentioned in Chapter 9, but if the additional tax revenue is used to finance state investment, the net effect on savings would be positive.
6. Our call for a more active government is consistent with the opinions of the poor themselves. In a survey of 700 "extremely poor" families who had three or more young children, people were asked which institutions or social groups (the government, marz authorities, community authorities, the church, international organizations, social organizations, family surroundings, family members or

themselves) were most responsible for their low standard of living. The answer given, by a very large margin, was “the government of the country.” (Ruben Yeganian and Nelson Shahnazarian, “Comparative Analysis of Social Situation in Marzes of Armenia Based on the Results of Special Surveys,” Armenia Social Trends, December 2001, Table 4, p. 50.)