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**POVERTY, INEQUALITY AND POLICY
AFFECTING VULNERABLE GROUPS
IN MOLDOVA**

Giovanni Andrea Cornia

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Correspondence should be addressed to:

UNICEF Innocenti Research Centre
Piazza SS. Annunziata, 12
50122 Florence, Italy
Tel: (+39) 055 20 330
Fax: (+39) 055 2033 220
Email: florence@unicef.org

Poverty, Inequality and Policy Affecting Vulnerable Groups in Moldova

Giovanni Andrea Cornia^a

^a Department of Economics, University of Florence <giovanniandrea.cornia@unifi.it>

Summary: This paper analyzes the changes that have intervened in the field of income poverty and human poverty since the onset of the transition in Moldova. With a biblical contraction of GDP, a fast rise in inequality, a drop in social expenditure and a weakening of civil society, most indicators of income poverty and human poverty deteriorated sharply since 1991. A clear improvement is evident since 2001, but most indicators of wellbeing still have to recover their pre-transition levels.

Poverty in Moldova is largely a rural problem affecting agricultural labourers, small farmers and households in declining mono-industry towns. Children living in families with three or more children, in single-parent families or with substitute guardians, as well as pre-school age children living in remote rural areas (where public support systems collapsed) are particularly vulnerable. Social policy has moderated substantially the impact of the crisis in some areas (as in primary and secondary education, child health and poverty among pensioners) but not in other (poverty, adult mortality, kindergarten enrolments, and social marginalisation). In addition, the mass migration that took place to respond to the spread of poverty solved some problems but concurrently created new ones, especially in the field of child socialisation and family stability.

There is some scope for social and macroeconomic policy to help reducing the negative inheritance of the first ten years of transition. Macroeconomic policy is rather deflationary, and keeps aggregate growth below what is needed to eradicate poverty quickly while paying little attention to its impact on inequality. There is a room therefore to place greater emphasis on an equitable pro-poor growth characterized by greater investment in agriculture and higher overall employment intensity, as well as a better allocation of migrant remittances and stronger social policies.

Keywords: children, inequality, poverty, transition, macroeconomics, social policy, health, education, fertility.

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1. SCOPE OF THE STUDY, DATA SOURCES AND MAIN CONCLUSIONS

This paper documents the changes that have intervened in the field of income poverty and human poverty in Moldova since the onset of the transition, and in particular since the late 90s, identifies the profile of the population groups most at risk, provides an explanation of the shifts recorded during this period (be they due to macroeconomic, institutional, social and developmental factors), and presents policy suggestions on how to reduce income poverty and human poverty over the medium term.

Most of the information used comes from micro data on poverty incidence and utilisation of social services derived from Household Budget Surveys (HBS) conducted since 1997 by the Department of Statistics and Sociological Studies and elaborated in the form of Reports on Poverty in Moldova (2000, 2001 and 2002) by the Poverty and Policy Monitoring Unit (PPMU) of the Ministry of Economy. Several data are also drawn from the 2003 Public Expenditure Review and the 2004 Poverty Assessment of the World Bank, the UNICEF IRC TransMONEE database, the 2003 and 2004 Statistical Yearbooks of Moldova, and a long series of independent studies undertaken in recent years by Moldova research centres, United Nations agencies, the IMF, World Bank, and bilateral development agencies.

With a few but important exceptions, such as migration, the statistical information available in Moldova is comparatively abundant and of adequate quality and allows to reconstruct relatively credibly the poverty trends and features of this country. In particular, thanks to the assistance provided by the UNDP and World Bank, the country can count on a comparatively large amount of information on survey-based poverty and inequality trends and on their immediate causes. Random surveys of comparatively good quality have been taken since 1997 while smaller, non-random and non comparable (but still useful) information exists for the prior years. The routine data compiled by the Department of Sociology and Statistics are also relatively abundant and detailed and help in painting a reasonably credible poverty picture in Moldova. The main problems affecting them derive from the partition of the country, following the Transdniestrian war of 1992. Indeed, this partition complicates the use of statistics. While some indicators (e.g. for health status) concern the whole country, others (such as those on economic performance) relate only to the area controlled by the Moldavian government, where the majority of the population, i.e. 3.6 million people, live. In addition, though the partition took place in 1992, in some datasets the resident population series were adjusted only in 1998.

The analysis of the policy and non-policy determinants of income poverty and non-income poverty is, in contrast, more tentative in part because of data problems (household surveys were introduced only in 1997) and in part because different models of poverty emphasize different aspects of the problem (e.g. individual characteristics of the households affected vs. public policies). The area in which the analysis is most deficient concerns the impact of different policies on the immediate determinants of poverty and social indicators. This is especially true for the impact of macroeconomic and institutional policies but applies also – if to a lesser extent – to the analysis of the impact of development policies and social

protection policies).¹ The methodologies for this kind of macro-micro analyses are not yet fully established and required the ability to combine different data files. Finally, reasons of space, this paper does not deal adequately with changes over time in indicators of ‘perceived well-being’ derived from consultations with the poor through anthropological studies and sociological surveys. This is a major drawback as – emphasized by the current ‘qualitative-quantitative’ debate on poverty measurement – this type of study is a major source of intellectual and policy enrichment. These analyses will therefore be referred to only occasionally and in the context of a more quantitative analyses.

The overall picture that emerges from this study and the literature reviewed herein suggests that poverty in Moldova shares several common features with that of other transitional economies of the region but has some specific peculiarities that require tailor-made analyses and responses. The main findings of the analysis suggest that:

1. Income poverty as well as some other dimensions of human poverty sharply deteriorated since 1991. With very few exceptions, they still have to recover their pre-transition levels. Most of the current official and academic literature on poverty in Moldova goes back to 1997, but a complete understanding of the extent, causes and responses of the present predicament – and of the ground that needs to be recovered – requires placing the poverty problem into its proper historical context, i.e., the period 1989/1991-2004;
2. Unlike in the developing countries of Latin America affected by the debt crisis of the 1980s – but similarly to what is observed in all other members of the former Soviet Union – the trends in different indicators of well-being show a marked co-variation, thus suggesting that the social crisis faced by Moldova is of deep, structural and multifaceted nature rather than of cyclical and single-faceted nature;
3. This strong co-variation among indicators of well-being indicates that poverty in Moldova clearly simultaneously exhibits low income and consumption levels, high mortality and morbidity, declining access to subsidized health and education, growing social exclusion, limited participation in decision-making and disempowerment of the poor. The problem cannot be solved therefore only by interventions focussing on the reduction of income poverty but requires a broader approach;
4. The poverty profile that emerges from the analysis of available data and the review of existing studies points to a situation observed in several other economies in transition. Poverty is largely a rural problem (70% of the total) and affects mostly agricultural labourers and small farmers. Households in small declining mono-industry towns are affected even more though their numbers are comparatively limited because of the small weight of small towns in the total population. Demographic factors (such as gender, age and disability) are not a dominant contributor to overall poverty, though they constitute specific risk factors for some small population groups (e.g. families with three or more children that account for 3

¹ The panel component in the HBS makes it possible to analyse the evolution of household well-being and the long-term incidence of income poverty and vulnerability and to gauge the poverty impact of shocks and policy changes. However, the usefulness of these data for policy analysis would increase substantially if they could be coupled with the routine data collected by various branches of the public administration (about service supply, coverage, utilisation, costs, benefits incidence and so on). Such combined data would especially be needed for the evaluation of existing or planned social protection programs.

per cent of the overall population). In turn, poverty incidence by level of education is not significantly different except for people with higher education. This finding – typical of the economies in transition – is never observed in developing countries with similar income levels per capita;

5. The causes of such huge deterioration in well-being between 1991 and 2000, and of the improvements recorded since then, are certainly to be sought in the long-lasting growth collapse recorded over 1992-6, the subsequent blow of 1998-9 and the marked growth rebound that began in 2001. But – as ignored in most poverty literature on Moldova – the initial (1991-1996) jump in income poverty depended also on the considerable increase in inequality recorded during that period. Rough calculations would suggest that some 20 per cent of the increase in income poverty between 1989 and 1995 would not have occurred had the Gini index of income inequality risen not from 0.26 to 0.42 but to a more tolerable 0.35. Likewise, future prospects for poverty alleviation depend on the ability of setting in motion a more equitable pattern of growth;

6. Social policy has moderated substantially the impact of the crisis in some areas (as in primary and secondary education, child health and poverty among pensioners) but not in other (poverty among the working age population, adult mortality, kindergarten enrolments, marginalisation of some social groups) and is still susceptible of improvements (by increasing public expenditure in some areas and the re-targeting of social expenditure). The current macroeconomic policy is also susceptible to improvements as its current stance (characterized by a budget surplus, an effective current account equilibrium, high interest rates and an appreciating exchange rate) is inherently deflationary and keeps aggregate growth below its potential. Finally, policies in the field of institutional development (property rights, bank competition and so on) could also do much to strengthen a balanced pro-poor growth. Greater banking credibility and regulation, for instance, might allow to capture and intermediate a greater part of migrant remittances a substantial part of which is still held in cash;

7. Poverty trends in Moldova have been closely linked to developments in Russia, as confirmed not only by the costly dissolution of Comecon and the former Soviet Union but also by the devastating effects of the 1998 Russian crisis on well-being levels of the citizens of Moldova, similarly to the effects on Ukraine and other CIS members. All this suggests to reduce the dependence on a single economic partner and accelerate the diversification of trade, financial flows and migration flows;

8. In view of the multiplicity of the factors affecting poverty, it is quite clear that a serious attack on poverty requires interventions on several front, including: the explicit search for not only of robust and sustained growth, but by of an equitable pro-poor growth characterized by greater investment of resources in agriculture; higher employment intensity (including for low skilled and semi-skilled workers in the countryside and in small cities); supportive labour market policies; the mobilization, investment and better allocation of migrant remittances; and output and export differentiation.

2. TRENDS IN THE EXTENT, DEPTH AND DURATION OF INCOME POVERTY, 1989-2004

2.1 Approaches to the measurement of income poverty in Moldova

Prior to 1997, when a randomized HBS comprising about 6.000 households was introduced and taken since then every quarter, Moldova did not dispose of a regular random system for collecting data on household incomes and expenditures. It could count, however, on yearly surveys (affected by some sampling bias) of about 1350 households that provided some information on incomes and expenditures, though this information is not immediately comparable with that generated by the new household surveys. All this poses a serious problem, as a proper evaluation of poverty trends and anti poverty measures in Moldova should use 1989/91 as a baseline, and not 1997 (as currently done), as all indicators of well-being in the initial part of the transition exhibited much worse values than in the late 1990s. Whenever possible, therefore, the analysis in this paper is extended backwards to 1989/91.

The country does not have an officially sanctioned poverty line. Several national and international agencies and researchers have produced poverty data, starting from the PPMU, the World Bank, the DSS and a few researchers. All these institutions and scholars recognize that poverty is a multidimensional phenomenon encompassing numerous aspects of well-being and requiring therefore a variety of gauges, income or consumption-based, assets-based, capabilities-based and so on. Among the income/consumption poverty concepts that have been used so far in the comparatively large literature in this area one finds the following concepts: (i) absolute (normal and extreme) poverty lines (ANPL and AEPL) – that have been built in normative, empirical or participatory manners, (ii) relative poverty lines (also in this case built to measure in a normative way normal or extreme poverty, RNPL, REPL), and (iii) subjective poverty lines (SPL). The method of construction of these poverty lines may be briefly reviewed so as determine their applicability and usefulness in analyzing poverty changes in the Moldavian context.

1. Absolute (normal and extreme) poverty lines (ANPL, AEPL). There are three main producers of poverty estimates, all making use of the HBS data produced by the DSS, i.e. the Policy Poverty Monitoring Unit (PPMU) of the Ministry of the Economy, the World Bank (WB) and the Department of Statistics and Sociology (DSS).

- *DSS approach.* The Department of Statistics and Sociology has developed in a normative way (according to Government Decision no. 902 of August 28, 2000) a fairly broad ‘minimum consumption standard’ that includes all the goods and services that a normal family is expected to consume to conduct a decent life. The ‘absolute normal poverty line’ (ANPL) is then fixed as 50 per cent of such ‘minimum consumption standard’, after standardizing all members of the households in adult equivalent terms using the OECD scales that assign a weight of 1 to the head of the family, 0.7 to all other adults and 0.5 to children.

- *PPMU approach.* In this approach the absolute extreme poverty line (AEPL) proposed by PPMU is set equal to the cost of 2282 Kcal a day generated by the food products effectively consumed by the people in the 2nd to 4th consumption deciles. The prices used to

determine the Lei cost of the poverty line are an average of the unit values paid by the poor for the quantities purchased. Adjustments are made for differences in rural and urban prices. Unlike the World Bank approach, PPMU used the OECD scales in order to standardize the consumption of different family members into adult equivalent units. The ANPL assumes the presence of a non-food basket, which is determined on the basis of the effective goods consumed by the population close to the extreme poverty line.

- *World Bank approach.* The AEPL developed by the World Bank (2004b) corresponds to the cost per adult/day of 2100 calories (multiplied by 30 to standardize it on a monthly basis) where the foods included in this caloric basket correspond to 90 items effectively consumed by the poor i.e. people in the 3rd to the 5th deciles of the distribution of per capita consumption expenditure. This national poverty line amounted in 2002 to 171.6 Lei per person/month. No equivalent scales were used to standardize the consumption expenditure per capita into adult equivalents, while different unit values are used to take into account rural-urban price differentials.

The World Bank ANPL was obtained by adding an allowance for tobacco and drugs, clothing and footwear, health care, education, transport and communications and entertainment (but not utilities, housing and consumer durables) corresponding to some average of the effective consumption of households in the 3rd to 5th deciles (Signoret 2004 in World Bank 2004b). For 2002, this added another 30.2 Lei per person/month to the poverty line. Also in this case, no equivalence scale was used to standardize the consumption expenditure into adult equivalent units, while the same rural-urban price adjustments were carried out.

2. Relative poverty lines. Though relative poverty lines are notoriously of little use for tracking the evolution of material deprivation in low income societies and though they can lead to wrong policy conclusions (as in case of sharp recessions accompanied by a decline in inequality or, as happened in Moldova in 2002, in case of a rapid expansion accompanied by a deterioration in income distribution) both the World Bank and the PPMU have ventured in the development of such poverty lines that were used, inter alia, in official documents such as the Government of Moldova, PPMU (2003) 'Poverty in the Republic of Moldova 2000':

- *PPMU approach.* The 'relative poverty line' used by the PPMU was set at the level of 50 per cent of the average household consumption expenditures per adult equivalent, or 210 Lei. The equivalence scales used are the same as in the case of the absolute poverty lines. In turn the 'extreme relative poverty line' is the value of 40 per cent of the average equalised household consumption expenditure.

- *World Bank approach.* In turn, the 'relative poverty line' used by the World Bank (2004b, p.51) was set at 60 per cent of the median unequivalized per capita expenditure per year.

3. Subjective poverty lines. The PPMU has also calculated a 'subjective poverty line' (SPL) following the subjective approach developed by Bernard van Praag at the University of Leiden. In this approach households are asked whether they can make ends meet easily, not so easily, with difficulty and so on. In addition, various groups of households (differing by their size and location) are asked what is the amount of money they think is sufficient to

escape poverty. This information allowed PPMU to estimate several subjective poverty lines (see Table 1).²

The subjective approach has a number of informational advantages, as it allows understanding the people's (rather than the government's or World Bank's or UN's) perceptions of what it means to be poor and can therefore be relevant for the development of anti-poverty policies. Its main problem is that the perception of poverty may be influenced by several factors such as national economic trend, expectations about the future, climatic changes, observation of 'economic distance' in relation to other households or emotional changes, i.e. factors that are independent from the objective changes in material circumstance of the people interviewed. In any case, such approach can be used as a good complement to the dominant ANPL or AEPL one.

² Brought to the extreme, this approach implicitly entails the development of 'individual poverty lines' as the perception of poverty and minimum consumption needed to escape it, may differ substantially from one individual to another.

Table 1: Summary of the values of different poverty lines, the incidence of poverty and extreme poverty and the poverty gap

	1997	1998	1999	2000	2001	2002	2003
A. Poverty lines (all in Lei per capita/month in current prices)							
(i) absolute poverty line (food share in parenthesis)							
- normal poverty line PPMU	....	128.9 (78)	179.2 (78)	234.8 (78)	257.3 (78)	270.7 (78)	-
- normal poverty line WB	99.3 (86)	104.7 (84)	130.0 (83)	175.2 (84)	193.1 (85)	201.8 (85)	-
- normal poverty line DSS	-	-	-	-	....	....	....
- internat. poverty line 2.15\$ WB	85.0 (?)	91.6 (?)	127.6 (?)	167.5 (?)	183.9 (?)	193.7 (?)	-
- extreme poverty line PPMU	...	101.0 (100)	140.4 (100)	183.9 (100)	201.5 (100)	212.0 (100)	-
- extreme poverty line WB	85.5 (100)	88.4 (100)	107.8 (100)	147.5 (100)	163.4 (100)	171.6 (100)	-
(ii) relative poverty line							
- relative poverty line PPMU							-
- relative extreme pov line PPMU						210	-
- relative poverty line WB							-
(iii) subjective poverty line							
- subjective poverty line PPMU							
1 person household	-	-	-	301.2	-	-	-
3 persons household	-	-	-	279.0	-	-	-
5 persons household	-	-	-	269.3	-	-	-
B. Poverty Incidence							
- normal poverty line PPMU	...	52.0	73.0	67.8	54.6	40.4	26.0*
- normal poverty line WB	47.4	61.6	71.2	70.6	62.4	48.5	....
- normal poverty line DSS	-	-	-	-	51.2	42.2	....
- international poverty line WB	43.4	57.7	67.6	67.1	58.4	44.6	....
-extreme poverty line PPMU	....	37.4	59.7	52.2	38.0	26.2	15.0
-extreme poverty line WB	37.5	51.7	61.3	60.9	52.0	37.8	....
- relative normal pov. line PPMU	-	23*	23*	23.0*	23.8	22.9*	....
- relative extreme pov. line PPMU	-	-	-	-	13.5	-	-
- relative normal pov. line WB	...	...	....	....	...	...	....
- subjective poverty line	-	-	-	-	-	84.2	-
- self evaluation by the population	-	-	-	-	-	68.0	-
C. Poverty Gap							
- normal poverty line PPMU	....	19.5	32.3	27.0	19.3	12.4	....
- normal poverty line WB	16.5	25.1	29.7	28.9	24.0	16.5	....
- international poverty line WB	....	....	....	....	....	....	....
- extreme poverty line PPMU	....	12.4	22.7	17.6	11.6	6.6	3.1
- extreme poverty WB	12.0	19.3	23.0	22.2	18.0	11.6	...

Source: World Bank (2004a, 2004b), PPMU (2003), Government of the Republic of Moldova (2004).

Notes: * author's estimate.

2.2 Conceptual and measurement problems

While the broad trends and features of poverty in Moldova identified on the basis of the numerous poverty lines described above are broadly consistent and point to a fairly clear picture, and while the literature produced in this field by the PPMU and other national and international bodies is truly impressive, the current approach to poverty measurement in Moldova is still perfectible in a few regards. In particular, it might be possible to remove a number of methodological problems concerning the determination of the level of poverty and the ranking of poverty incidence and intensity among different groups. Furthermore, the data for Moldova suffer from measurement and quality problems that may weaken some of the conclusions arrived at on the basis of the present datasets and procedures.

The main problems of current poverty measurement in Moldova may be summarized as follows:

1. Too many poverty lines are being used, some of which are of limited relevance in the Moldova context.³ Too many concepts of consumption poverty are being used in the analyses on Moldova produced by national and international institutions. Table 1 includes 12 poverty lines, and a few more could be listed. As noted, some of these measures (as the RNPL and REPL) are not useful in the Moldavian context and should be abandoned. Likewise the international poverty line of 2.15 \$ a person/day is not useful as it was estimated on data for about 20 developing countries that are very different from Moldova. For this reason, this poverty line cannot be used as a reference (Pogge and Reddy 2005) and should be dropped.

As for the ANPL and AEPL estimated on national data, it is quite evident that the trends identified on the basis of the PPMU, World Bank and DSS approaches identify – unsurprisingly – similar trends.⁴ Yet, the different estimates differ in a non-negligible way. For instance, the 2002 poverty headcount ratio estimated on the basis of the ANPL was equal to 48.5 according to the World Bank and 40.4 according to PPMU. Second, while similar the WB, PPMU and DDS trends are not parallel, they tend to converge in period of crisis (e.g. 1998) and diverge in years of recovery. Third, the different equivalence scales used in these three approaches make that the value of the PHR for specific groups changes and – even more important – that the ranking of the different groups in poverty changes as well, as shown by the recurrent switch in the ranking of poverty among families headed by pensioners versus families with 2 children (see later). The latter group appears to be on top of the poverty list if one uses per capita equivalence scales and no economies of size in consumption, but not if one uses OECD or other equivalence scales and assumes reasonable economies of size in consumption. This is an important issue, as it can influence the priorities of anti-poverty policies, and of transfer policies in particular.

This proliferation of measures is quite confusing, as the results of analyses using different standards are not comparable. For policy purposes, there is a need to stick to a single ANPL and AEPL (both set at an appropriate level see below) and to a few measures of inequality,

³ PPMU computes and publishes also a large number of synthetic measures of inequality (decile ratios, Gini, entropy, Atkinson, Theil, etc.) that are not used in the subsequent analysis.

⁴ This should not be surprising as the years under investigation were characterized by marked swings in output.

and rather focus on the analyses of the relation between poverty, policy changes and structural factors.

2. Absolute extreme poverty lines (based exclusively on the cost of 2100 or 2278 calories) **are not meaningful in a country such as Moldova**, in which a range of different survival requirements are faced; the absolute extreme poverty lines (based exclusively on the cost of 2100 or 2278 calories) are meaningless. A food-only poverty line may make some sense in a sub-tropical country with large families and a relatively young population. However, in a country like Moldova – where winter temperatures can fall as low as -20C° and a high share of the population is elderly – survival requires access to a modicum of shelter, heating, electricity and some life-saving drugs. This is all the more true as while in the past utilities and drugs were provided at highly subsidized prices, this is no longer the case. In Moldova's winter, people consuming 2100 or 2278 calories per day – and nothing else – face much higher risks of death, as confirmed by the Moldavian dismal mortality statistics. Thus, 'food-only' poverty lines are not conceptually helpful to identify a minimum survival package.

3. The ANPL of PPMU and (especially) the World Bank poverty lines are low, leading to an underestimation of the number of the poor (assuming all incomes in kind are accurately accounted for, see below). In fact, the implicit food share of the World Bank's ANPL ranges between 83 and 86 (see Table 1) well in excess of the usual standards by which the food share never exceeds 75-80 per cent of the consumption of the extreme poor (as well illustrated by the '80-80 Lipton's rule'). In turn the food share of PPMU's ANPL is 78 percent, still high but also at limit of the international range of food share of the poor. For instance, p. 26 of the Bulletin of Statistic published in 2004 of DSS indicates at p.26 that in 2003 the food share of the bottom quintile was 76.5 and that of the second quintile was 65.4.

The high value of the food share of the ANPLs estimated by World Bank and PPMU depends on the method used for constructing them. While the food component of the poverty line is 'normatively' determined (as the number of calories that assures proper nutrition is set by an expert body), the non-food allowance is derived in a 'non-normative' (i.e. empirical-behavioural) way, that basically measures what people consume around the poverty line (actually below it, i.e. the 3rd to the 5th deciles for the World Bank and the 2nd to the 4th for PPMU). However, these 'effectively consumed quantities' do not necessarily guarantee adequacy in relation to a minimum normative standards. Also, the approach followed conflicts with consumer theory. In addition, in the case of ANPL developed by the World Bank, no allowance was made for expenditures on utilities and housing (that the 2001 HBS shows account for no less than for 8.5 and 8.1 per cent of the total expenditure by the poor and extreme poor) thus excluding from the computation of a minimum standard an input essential for the production of a minimum of well-being. This practice is in sharp contrast with direct field observation where concern for access to these consumption items is paramount. For instance, in an interview with this author, the mayor of Floresti (a typical de-industrializing town of 30.000 people) indicated that the 3500 poor pensioners living in the town allocated some 40 per cent of their meager consumption expenditure to gas, electricity and no longer subsidized drugs. For the winter months, the extremely poor can apply for a monthly heating subsidy of 16 lei per month, but such subsidy is low in relation to the need and, as it is non-universal, it may cause self-exclusion from the benefit because of the stigma

and high informational costs attached to the subsidy application. Indeed, Table 11 in section 3 suggests that this kind of subsidy is allocated in a very regressive way.

4. The poverty line needs to be revised upwards in view of the declines experienced in subsidies for health and education services. The World Bank (2003) public expenditure review of 2003 shows that, following the drastic fiscal adjustment of 1998-99, the overall public expenditure on health, education and social protection declined markedly over 1997-2001 both as a percentage of GDP and in real terms (Table 2). This sharp reduction in social spending was accompanied by growing inequality in the access to services, a deterioration in their quality and the introduction of user charges in health and education. The introduction of official fees for service at public institutions – together with a rise in informal payments – have de facto raised the price of health services to a much higher level than before. Table 2 seem to indicate that the average Moldavian citizen lost almost half of the health and education subsidies received from the government in 1997. While some of this consumption may have been simply foregone, its most essential part was absorbed by the households who had to bear in this way a higher cost to satisfy their basic needs.

Table 2: Trends in the main budget aggregates and in the index of public expenditure on health, education and social protection

	1996	1997	1998	1999	2000	2001	2002	2003	2004
A. In percentage of GDP									
Total Revenue	26.6	33.0	30.5	25.1	25.6	22.7	22.5	24.2	23.2
Total Expenditure	36.2	40.4	33.9	28.7	26.6	22.7	23.0	22.6	22.1
Budget deficit/surplus	-9.6	-7.5	-3.3	-3.2	-1.0	0.0	-0.5	1.6	1.1
Social Expenditure	19.9	22.0	16.2	11.8	11.8	10.8	12.4	12.3	11.4
-Education	10.3	10.0	7.0	4.7	4.5	4.8	5.5	4.8	4.7
-Health	6.7	6.0	4.3	2.9	2.9	2.8	3.5	2.6	2.4
-Culture, sport, youth	0.8	0.9	0.9	0.5	0.5	0.4	0.6	0.6	0.6
-Social protection*	2.1	5.1	4.0	3.8	3.8	2.6	2.9	2.7	2.9
-Social protection**	...	8.4	8.4	6.1	6.2	5.7	....	....	...
B. Index of expenditure in constant prices (1997=100)									
Social Expenditure		100	77.5	57.2	57.2	57.0			
-Education		100	69.7	50.3	47.7	54.7			
-Health		100	67.6	45.1	48.8	52.2			
-Culture, sport, youth									
-Social protection*									
-Social protection**									

Source: Elaboration on World Bank (2003) and budget data provided by the Ministry of Finance provided UNDP-Kishinev (e-m by Liudmila Barcari). * includes only the transfers from the state budget to the social insurance fund, ** includes the outlays of the social security fund financed with payroll taxes and not included in the state budget.

This means that the real value of the non-food allowance component of the poverty line should have been raised in 1998-99 in relation to 1997 so as to reflect the de-subsidisation of essential public consumption on health and education, as well as utilities and transport. On

the basis of the documents available, it is not clear whether this correction, which should have led to a rise in the real value of the poverty line over time, was carried out by either PPMU or the World Bank.

5. It is not clear that all incomes are recorded. If not, is the under-recording bias constant, declining or increasing? It is well known that the ratio of average consumption expenditure per capita computed on the basis of the HBS tends to be a fraction (ranging between 40 and 150 percent, with a median of around 60) of the consumption expenditure per capita derived from the national accounts (Ravallion 2001). A second issue in this regard, well illustrated by the analysis of the Indian data, is that such ratio can change sharply over time, thus casting doubt on the consistency of the poverty trends identified. This problem is well known to DSS and PPMU, as in Moldova the cash component of national income is the lowest in the European region. The recording and imputation of agricultural incomes is therefore complex and could underestimate the effective consumption expenditure per capita. Likewise it is unclear to this author the extent to which a (growing volume) of migrant remittances enter the income and consumption accounts of the HBS. The evidence mentioned later in this paper suggests tentatively that remittances are only partially recorded in the HBS, possibly leading in this way to an undercounting of overall household consumption.

6. The estimated poverty alleviation elasticity of growth (paeg) appears too high. The elasticity value used to guide policy decisions was tentatively estimated by PPMU at around 3, while the values estimated by the World Bank (2004b, p. 94) are about the same (though with very high variations from one year to the next). However, such a value appears to be incompatible with the comparatively high level of income inequality prevailing in the country (Gini of 0.42-0.44) and with the ratio of the poverty line to the average income per capita of about 0.5 in 2002, as the PPMU yearly poverty line was 3248 Lei while the GDP per capita was around 6100 Lei (Ministry of Labour and Social protection, 2003).

Indeed, according to Table 3, reproducing the estimates of Kakwani et al. (2003) based on a large sample of 'growth-poverty episodes' for countries with different levels of inequality, the Moldavian poverty alleviation elasticity of growth should be in the 1.4-1.6 range. The reasons of the discrepancy between the PPMU and the estimates in Table 3 should be clarified. The discrepancy may be due to recent improvements in collecting information on food consumption and food inventories in the HBS, that have caused an increase in rural incomes faster than what it would have been the case with no changes in methodology. A second explanation is that the distribution of consumption expenditure is not smooth and shows considerable bunching (a hump) around the poverty line, so that even comparatively modest variations in consumption expenditure per capita move many people in and out of poverty.

While the latter explanation may account for the high poverty-growth elasticity observed over the last few years in relation to changes in consumption expenditures within its specific 1997-2002 range of variation, it is unlikely that such high elasticity will hold for wider ranges of the distribution. This means that it would be unreasonable to assume the same poverty growth elasticity for projecting the poverty impact of future growth.

Table 3: Poverty-growth elasticities (left panel) and poverty-inequality elasticities (right panel) under different assumptions about the Gini coefficient (by column) and the ratio of the poverty line (z) to average income or consumption per capita μ (by column)

	Poverty-growth elasticity				Poverty- inequality elasticity			
	Gini coefficients							
z/μ	0.3	0.4	0.5	0.6	0.3	0.4	0.5	0.6
0.33	-3.9	-2.1	-1.3	-0.8	5.2	3.3	2.4	2.0
0.50	-2.8	-1.6	-1.0	-0.7	2.5	1.7	1.3	1.2
0.67	-2.0	-1.2	-0.8	-0.5	1.2	0.9	0.8	0.8
1.00	-1.2	-0.8	-0.5	-0.4	0.2	0.2	0.3	0.4

Source: Kakwani et al. (2003).

2.3 Trends in income poverty

Though not widely acknowledged, the population of Moldova experienced poverty before the introduction of the market reforms. Yet, because of the full-employment, egalitarian distribution, medium level of per capita income and price stability prevailing during the socialist era income poverty was low and mainly affected marginal groups. Atkinson and Micklewright (1992) suggest that in 1989 the proportion of the wage earner with a wage below the ‘official minimum’ was around 15 percent. In fact, the situation was less rosy than suggested by the income statistics as the distribution of real consumption was affected by queuing and the chronic rationing of most goods, dual distribution systems, parallel markets and regional differences in the supply of consumer goods, i.e. factors that had a marked disqualifying effect on the distribution of consumption poverty and family well-being.

Poverty in Moldova began to rise in 1990-91 just before the official onset of the transition. Its overall evolution over the last 15 years is clear, though its level and trend over the 1989-96 period can be only estimated approximately and through indirect and tentative methods. As a result of this informational vacuum, and despite a severe deterioration in living conditions over 1992-96, the poverty issue started to be recognized politically only in 1997 when the first random HBS was introduced. Broadly, the poverty trend can be distinguished into four sub-periods.

1. The first sub-period, 1991-1996, witnessed an extremely severe transformational recession induced by adverse initial structural conditions, the collapse of the Comecon (with the attendant increase in energy prices affecting energy imports), the Transdnestrian conflict of 1992, the 1992 and 1994 floods that hit the country’s agricultural and food processing sectors (that account for almost a half of the country’s GDP) and persistent political instability. This period was characterized by a sharp and protracted decline in GDP per capita and a marked increase in income inequality (Table 4 and Figure 1). Although no

precise information is available, it can be tentatively estimated⁵ that as a result of the economic collapse, hyperinflation and a sharp rise in inequality recorded over 1992-4, the poverty headcount ratio (PHR) rose markedly during this period starting already in 1992 – to reach 65-70 per cent by 1995, and possibly even higher levels during the early years of hyperinflation.

Table 4: GDP index (1989=100) in Moldova and her main trading partners, 1989–2004

Countries	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Moldova	98	80	57	56	39	38	36	37	34	33	34	36	38	41	44
Romania	94	82	75	76	79	85	88	83	79	78	79	83	87	91	96
Russia	96	91	78	71	62	59	57	58	55	59	64	68	70	75	80
Ukraine	97	86	78	67	52	45	41	39	39	39	41	45	47	49	55
<i>Memo items:</i>															
CIS average	96	90	78	70	61	57	55	56	54	54	59	62	65	69	74
Georgia	88	69	38	29	25	26	29	32	33	34	34	36	38	41	43
Albania	90	65	60	66	71	81	88	82	92	100	108	116	121	129	137
Uzbekistan	102	101	90	88	84	83	85	87	90	94	98	102	106	107	110
Poland	88	82	84	88	92	99	104	112	117	122	127	128	130	133	140

Source: EBRD (2003), and EBRD (2004).

Notes: the data for 2003 are preliminary, 2004 is a projection based on the first two quarters.

The uniqueness of the Moldavian recession must be underscored. Of the about 30 European in transition economies, only Georgia recorded a deeper recession. In Moldova, the cumulative GDP contraction over 1989-96 was equal to 65 percent, i.e. far more pronounced than in the other European economies in transition (Table 4). In addition, after signs of stabilization in 1997 (as opposed to 1994-6 as in most other countries) the decline continued in 1998-9 in the aftermath of the August 1998 Russian crisis. Indeed, in Moldova the lowest level of output (30 per cent of the 1989 level) was reached in 1999 and the recovery began only in 2000. For the Moldavians, the 1990s were truly a lost decade.

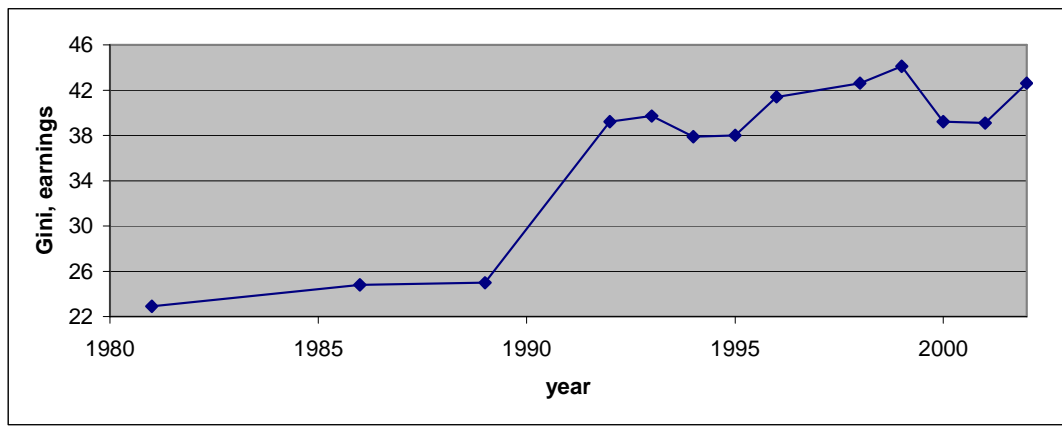
No doubt, the biblical collapse of output described above was responsible for most of the increase in poverty over 1991-6. During this period, however, poverty rose also because of a marked worsening of the distribution of income. As shown in Figure 1, the Gini index of the distribution of gross earnings rose from 0.250 in 1989 to 0.392 in 1992, to stabilize at broadly that level over 1993-95. Hyperinflation, a marked shift in relative prices and the compression of public social expenditure also contributed to poverty pushing upwards.

2. During a second sub-period spanning 1997 and the first half of 1998, output started to recover slowly (thanks to a growth of 1.6 per cent in 1997) while inequality stagnated at a Gini level of about 0.42. Though no direct data are available, indirect estimates based on the method illustrated in footnote 7, it is likely that during this period the PHR showed a timid downward trend, i.e. from 60 per cent to 52-54 percent, a modest change but an important one as it signalled a reversal in the poverty trend.

⁵ A tentative way to reconstruct the poverty trend consists in making use of the relation derived from Bourguignon (2002) who showed that any percentage variation in the poverty headcount ration ($\Delta\text{PHR}/\text{PHR}$) can be mathematically decomposed in the weighted algebraic sum of the percentage change in mean income (approximated by $\Delta\text{GDPc}/\text{GDPc}$)

3. These initial, timid signs of recovery were suddenly swept away during a third sub-period spanning from August 1998 to the end of 1999, during which the Moldovan economy recorded a further contraction in GDP (of around 6 per cent in 1998 and 3 per cent in 1999) owing to the contagion of the August 1998 Russian financial crisis and the ensuing 100 per cent rouble devaluation that affected the Moldavian exports and emigration to Russia, and that in turn forced a similar devaluation of the lei vis à vis the dollar. During this period poverty and extreme poverty rose respectively to over 70 and 60 per cent (Table 1) due mainly to a new 6 per cent fall in output and, to a lesser extent, in to a worsening of inequality (World Bank 2004b, p.80).

Figure 1: Trend of the Gini coefficient of distribution of gross earnings, 1981-2002



Source: TransMONEE 2004.

4. The fourth period under review, from 2000 to 2005, was dominated by an economic recovery and a modest but steady decline in income inequality (but less in consumption inequality) that accelerated markedly in 2003. The renewed recession of 1998–99 had clearly signalled to many Moldavians that new survival and development strategies had to be sought. One of these new strategies was emigration towards Western Europe (as opposed to traditional destinations such as Russia and the Ukraine). Because of the massive increase in remittances (that lessened the balance of payments constrained) and of an improvement in overall domestic conditions, the country was able to achieve a modest growth in 2000, despite a damaging frost and drought, and robust growth over 2001 – 2004. In addition, as noted, inequality declined somewhat between 2001 and 2002 and markedly in 2003 (Figure 1, Table 5, Table 6). The 2003 improvement is characterized in particular by the sharp rise in the income share of the bottom quintile, despite the decline of agricultural output that took place the same year (Economic Statewatch Q2/2004), thus confirming the favourable effect of a broad based output expansion (6.3 percent) on income distribution and poverty.

Table 5: Comparing the trends of the Gini coefficients of various concepts of income

	1997	1998	1999	2000	2001	2002	2003
Disposable money income	....	0.679	0.700	0.651	0.632	0.591	0.549
Total disposable income	0.436	0.443	0.436	0.419	0.428	0.421	0.389
Private consumption	....	0.397	0.395	0.378	0.379	0.364	....
Wages	....	0.426	0.441	0.392	0.391	0.426	

Source: HBS-based income and consumption inequality are from Government of Moldova, PPMU (2003), and for 2003 from the Bulletin of Statistic 2004, 'Aspectele privind de trai al populatiei', p.27, DSS, while the wage inequality data are from TransMONEE 2004.

Table 6: Evolution of the quintile distribution of total disposable income, 1998-2003

	1998	1999	2000	2001	2002	2003
1 st quintile (Q1)	3.9	4.5	4.6	4.3	4.6	5.8
2 nd quintile (Q 2)	9.7	9.8	10.4	10.4	10.4	11.2
3 rd quintile (Q 3)	15.0	14.7	15.1	14.8	15.0	15.5
4 th quintile (Q 4)	22.6	22.0	21.9	21.7	21.6	21.8
5 th quintile (Q 5)	48.8	49.0	48.0	48.8	48.3	45.7
ratio Q5/Q1	12.1	10.9	10.4	11.3	10.5	7.9

Source: DSS (2004)

As a result of these two positive effects, as well as because of broad price stability, the poverty headcount ratio fell at a sustained pace and at the end of 2002 it reached a level of 40 per cent according to PPMU estimates and 48.5 per cent according to World Bank estimates (Table 1). In 2003 the PPMU poverty rate fell to around 26 per cent and the PPMU extreme poverty rate at 15 percent, showing a poverty alleviation elasticity of growth of over 5, a value that warrants some probing even taking into account the clear improvement in equality that took place in 2003. As consumption inequality fell by 3 points (from 39.5 to 36.6 over 1999-2002), some 30 per cent of the poverty decline was induced by the improvements in the distribution of consumption expenditure. (This may however be in part a statistical effect due to better accounting of food stocks by farmers.)

These preliminary, and possibly controversial, conclusions about the fall in poverty incidence are questioned by the results of the self-assessment of the poverty status carried out in August 2002 that indicated that 68 per cent of the households interviewed considered themselves in poverty (Table 1), a much higher rate than that estimated by the PPMU (40.4) and World Bank (48.5). These results can be interpreted in several ways. The first observation is that the poverty lines used by the PPMU and the World Bank is too low (see above), and thus underestimates the real level of poverty as perceived by the people (this point is developed more fully in section 2.1 (iii) above). A second explanation is that the interviewees associate to the term 'poverty' a kind of 'low income status' that differs from the PPMU and World Bank poverty line that focus only on severe deprivation. However contrary to the case of objective approach that showed higher poverty rates in rural areas, the subjective poverty was higher in urban areas (66 per cent of the households) than in rural

locations (58 percent). Again, this could be explained by the lack of access to a plot of land by most urban residents, or be the result of higher expectations about the minimum level of consumption by urban residents.

2.4 Depth of poverty

The poverty gap shows even greater variations over time than the poverty and extreme poverty rate. While it did reach some 30 per cent in 1999 (a very high value, observed only in severely deprived developing countries) it fell to almost one third of its value by 2002 (while the improvements in poverty incidence were of 'only' 60-70%). Even greater improvements were observed for the extreme poverty gap, pointing in this way to major improvements among those remaining in poverty. Indeed, by 2003, the extreme poverty gap was only 3.1. In terms of human well-being, this improvement is highly relevant. While a poverty gap of 30 per cent may increase the risk of death and higher morbidity among the poorest population groups, one of 10-12, let alone one of 3.1, is not likely to imply high death rates and under-nutrition, though it may still reduce access to health care, school enrolment and access to other essential services.

This high 'growth-poverty gap' elasticity seem consistent with the high poverty alleviation elasticity of growth estimated by PPMU and World Bank. However, as already noted above concerning the 'growth-poverty' elasticity, it is difficult to reconcile such high elasticity and the image of 'shallow poverty' in 2002, and especially shallow extreme poverty with the fairly high value of the Gini index, i.e. 0.42 (see below). This point needs clarification.

2.5 Is poverty transient or permanent?

From a programme and policy perspective, it is essential to understand whether poverty affects different groups of people or the same groups of people over time, if in fact the latter it would make the solution of the poverty problem far more complex. Indeed, the permanent poor may adopt unsustainable coping strategies such as the distress sale of assets (land, houses, working animals and consumer durables), the withdrawal of their children from school and the adoption of strategies (such as prostitution and child labour) that carry considerable risks, gradually entrench poverty among those who adopt them, raise the probability of its intergenerational transmission and give rise to a class of 'hardcore poor' and a culture of poverty and dependence.

The panel component in the Moldavian HBS makes it possible to identify the poverty dynamics for individual households and, by aggregation, to evaluate whether poverty in Moldova is predominantly transient or permanent. In this regard, analysis of the panel data shows that during the 1997-2002 period the vast majority of the population (86 percent) experienced poverty for at least one year. Yet, for many of them poverty was a transitory phenomenon as 15.1 per cent of the population was in poverty for only one of the four years covered, 20.7 per cent for two and 24.1 for three. At the same time, a sizeable 26.5 per cent of the population remained in poverty all four years. This group of persistent hard core poor is constituted mostly by families with many children and with a head with less than college education and by groups of elderly unrelated individuals living together (World Bank

2004b). However, the incidence of year-to-year repeated poverty shows a decreasing trend (from 44 per cent of poor over two consecutive years in 1997-98 to 42 in 200-01, and 40 in 2001-02).

These results concern consumption poverty. In contrast, the data about widespread ownership of land and dwellings, fairly high levels of education and the seemingly universal coverage of basic social services would suggest that a class of 'hardcore poor' (characterized by poverty in all these dimensions) has not yet arisen to any sizeable extent in Moldova. Even the 26.5 per cent that has been estimated to be permanently consumption poor over 1997 and 2002 may in fact not have been asset poor, education poor and – if the poverty gap is not great – health poor. However, some indications to the contrary are slowly emerging. For instance, especially in small towns and remote rural areas, home appliances and heating systems are falling out of order, dwellings are not maintained, educational enrolments and health expenditures on newborns are being reduced, and assets may be sold (though this is not yet the case for land plots distributed with the land reform). Also, the persistence of low income and high inequality may cause long term apathy among the poor, loss of trust in the possibility of exiting the 'vicious cycle' of poverty. Certainly, the surge in emigration and the rise in remittances since 1999 might have broken this fatalism and the process of poverty entrenchment.

2.6 Features of poverty

Information about the socio-economic features of the poor is essential for the design of policies having a lasting poverty reduction effect. Consumption poverty in Moldova shares many common characteristics with other low-income transition economies but has some distinctive features not observed elsewhere.

1. Poverty and location. The strongest feature of poverty in Moldova is its concentration in rural areas and small towns. In 2002, 89 per cent of the poor were located in these two areas. It is also important to note that this considerable concentration of poverty in rural areas and towns has been rising steadily over time, both during the contractionary and expansionary phases of the business cycle, indicating in this way that the economic recovery of the last 3-4 years was concentrated in the main cities.

In 2002, for instance, people living in small towns had a 2.2 times higher risk of falling into poverty and a 2.9 times higher risk of being in extreme poverty than the residents of large cities like Kishinev and Balti (Table 7). The poor are also disproportionately located in small towns dominated by a failed or difficult-to-restructure mono-industry. The ratio of the poverty gap between towns and cities is even bigger (5 times greater). This basically means that the towns have proportionately more poor than the cities, that the poor population living in towns is poorer than that living in cities, and that their income distribution is more polarized.

Table 7: Incidence of poverty and extreme poverty by main socio-economic characteristics

	Poverty rate			Extreme poverty rate			Share popul. 1999*	Share of poor			Share of extremely poor		
	1997	1999	2002	1997	1999	2002		1997	1999	2002*	1997	1999	2002*
0. National	47.4	71.2	48.5	37.5	61.3	37.8	100	100	100	100	100	100	100
1. Location													
-rural	49.1	75.8	51.6	39.1	65.4	40.5	0.627	0.638	0.668	0.678	0.665	0.698	0.682
-small towns	61.0	80.3	62.5	49.9	72.0	52.4	0.162	0.157	0.183	0.200	0.202	0.190	0.254
-large cities	31.6	50.4	28.5	23.3	40.8	18.3	0.210	0.206	0.148	0.122	0.133	0.112	0.064
2. Regions													
- North		74.2			66.7		0.301		0.314			0.328	
- Centre		66.2			53.4		0.569		0.529			0.496	
- South		86.0			83.0		0.130		0.157			0.176	
3. Household size													
- no children	35.6	60.5	36.8	26.2	49.2	26.8	0.401	0.263	0.341	0.347	0.235	0.321	0.324
- 1 child	47.9	73.0	53.0	38.0	64.5	41.9	0.283	0.292	0.290	0.300	0.292	0.298	0.304
- 2 children	55.5	81.3	60.9	45.7	72.5	48.1	0.232	0.292	0.266	0.241	0.303	0.274	0.244
- 3 children	61.3	87.9	75.9	51.2	75.8	65.4	0.066	0.105	0.081	0.090	0.111	0.081	0.100
- 4 & more children	71.7	89.7	87.5	59.9	84.6	83.3	0.017	0.048	0.022	0.031	0.049	0.023	0.037
4.Age of individual													
0-15	54.0	78.6	59.2	43.9	69.4	48.1	24.7	0.294	27.2	0.264	0.301	0.280	0.276
16-59	45.7	69.1	46.4	36.1	59.7	36.5	61.6	0.589	59.8	0.616	0.588	0.600	0.622
60 +	41.7	67.4	42.4	31.1	54.5	29.7	13.7	0.116	13.0	0.120	0.110	0.121	0.102
5. Gender hh head													
- male	47.5	72.6	49.6	37.3	62.5	38.8	73.3	0.737	0.747	0.703	0.731	0.747	0.705
- female	46.8	67.3	46.2	38.1	58.0	35.4	26.7	0.262	0.252	0.297	0.269	0.253	0.295
6.Education head of household													
- illiterate	0.509	0.781	....				0.010	0.017	0.011	....		
- primary	0.461	0.732	0.527				0.108	0.130	0.111	0.116			
- 2ary +vocational	0.507	0.743	0.442				0.759	0.776	0.793	0.744			
- higher education	0.289	0.490	0.244				0.123	0.075	0.085	0.058			
7.Labour mkt status													
- employed	47.0	71.1	49.6	37.3	61.8	39.5							
-farmer	49.1	74.0	53.9	36.8	62.5	45.0	0.103	0.075	0.107	0.207	0.073	0.105	0.217
-agric labourer	53.5	79.9	66.2	42.6	70.9	54.0	0.251	0.318	0.282	0.207	0.319	0.290	0.260
-non-agric labour	43.1	65.6	40.9	34.3	56.8	30.9	0.373	0.321	0.346	0.294	0.320	0.346	0.278
-self employed	34.8	51.8	33.1	29.3	44.3	24.8	0.022	0.015	0.016	0.015	0.016	0.016	0.014
-other	38.9	68.5	25.4	31.4	63.1	21.1	0.020	0.018	0.020	0.010	0.015	0.020	0.011
-unemployed	64.4	73.6	57.0	58.2	70.0	49.7	0.015						
-pensioner	46.5	71.2	46.8	36.6	58.4	33.9	0.231	0.253	0.230	0.252	0.251	0.220	0.229
8.Sector of work													
- agriculture	51.6	78.2	59.1	40.2	68.6	48.7	0.336						
- industry	43.3	59.6	38.0	33.4	52.2	29.7	0.069						
- construction	45.6	72.7	44.6	41.0	65.0	35.9	0.055						
- trade	46.3	65.3	43.6	38.5	54.4	33.3	0.064						
- transp. & comm.	45.9	70.0	37.8	35.0	57.8	25.6	0.036						
- other	24.3	53.7	32.5	19.3	44.9	24.3	0.015						
- state admin	36.4	67.1	27.8	27.1	55.0	21.8	0.028						
- education	35.6	62.5	33.8	27.8	53.1	23.7	0.039						
- other pub.services	44.1	62.7	52.2	37.4	57.3	41.2	0.051						

Source: derived from World Bank (2004b).

Notes: *computed using the population shares for 2001 as those for 2002 were unavailable.

Poverty in small towns – often former centres of *raions* – are linked to the model of industrialisation pursued before the transition that established just a few medium-large industries per town, giving rise to a highly un-diversified and risk-prone economic structure. With market liberalisation, these mono-industries have shown limited ability to compete, not least because of lack of investments in their restructuring, while the ability to diversify economic activities of small towns remained modest. Towns have thus been plagued by structural unemployment, while the limited service sector that has developed is associated with low-income agriculture. In addition, while the people in the rural areas can sustain their food consumption through subsistence agriculture, such opportunity is not available to small town dwellers. Clearly, support to industrial conversion and – even more important – to the development of town-based networks of labour-intensive small and medium enterprises is a policy priority.

Yet while poverty and extreme poverty are most acute in small towns, the bulk of the Moldavian poor live in rural areas, as the share of population in the countryside is close to two-thirds of the total (Table 7) and the incidence of poverty among this group is the second highest. For the people in rural areas, the relative risk of poverty and extreme poverty in relation to the cities is very large, i.e. 1.8 and 2.2 in 2002. The causes of poverty in rural areas have to do mainly with three factors. The first is the extremely limited rural employment opportunities outside agriculture. Unlike in, for example, countries such as China where Township and Village Enterprises created 200 million industrial and service jobs in rural areas, the overwhelming majority of rural residents farm the plots they were assigned by the land reform or hire themselves out as rural labourers on bigger farms that have slowly emerged in the post-reform period. The data in Table 6 show that while the share of the poor and extremely poor among the rural labourers is falling (because of the decline in their share in the total rural population) the opposite trend is observed for the farmers, possibly suggesting that people increasingly farm their properties though still at low levels of efficiency and productivity.

Furthermore, lack of inputs, credit and transport and storage infrastructure makes farmers cultivate only about half of their land and mainly in a subsistence mode⁶, leasing out the rest for little money to large farms that control what can be described as monopsonistic rental markets. Government of Moldova, PPMU (2003) data show that the probability of working as a farm labourers increases with the size of the household or origin, the age of the head of the household (with the youngest and oldest ones being more likely to hire themselves out) while it falls with an increase in educational attainments. Low wages for rural labourers is a third main factor behind rural poverty. The low level of agricultural wages (30 Lei/day in 2004, a level that remained broadly constant despite the rapid rise in wages observed in other sectors over the last 4 years, see Table 10) reflects the comparatively abundant (though falling) supply of rural labour by part-time farmers that are still producing a limited surplus for the market. Thus, appropriate policies in support to the small farmers in the field of farm inputs, investment, credit, infrastructure, and output commercialisation would have the triple effect of convincing farm households to cultivate a greater proportion of their land, raise agricultural wages and thus set in motion an egalitarian development pattern with a high poverty alleviation elasticity.

⁶ As in other economies in transition, the incidence of poverty declines with the increase in the proportion of farm output sold on the market.

In contrast, living in Balti and Kishinev implies substantially lower rates of poverty and especially of extreme poverty, pointing to the bias inherent to the functioning of market forces and public policy in allocating productive resources and opportunities across the nation. While fairly common in developing and transitional countries, the extent of the city-town-rural imbalance observed in Moldova is particularly pronounced.

2. Regional aspects of poverty. Unlike in most other countries, especially larger ones, in Moldova poverty is distributed in a relatively uniform way across judets. This is possibly due to the limited size of the country and the *judets*' broadly similar factor endowments. Generally speaking, the highest incidence of poverty is observed in the South (where the poverty rate is 1.23 times the national average) while the greater share of the poor and extremely poor live in the Central region that comprises a greater part of the overall population than the North and South (Table 7).

However, within the three main regions (North, South, Centre), poverty is not uniformly spread. Indeed, the results show considerable differences in the incidence of poverty between the judets part of the same region. Finally, there is initial evidence (Government of Moldova, PPMU 2003) that poverty incidence and features may vary considerably also between the *raions* of the same judets with poverty ranging from 13 to 26 per cent (at one extreme) and from 37 to 41 per cent (at the other), making the task of targeting public resources for anti-poverty interventions more complex, detailed and time consuming. Given this intra-regional and intra-judet heterogeneity, the identification of the major poverty groups at the national level is not sufficient for the design of effective poverty alleviation policies. Further effort at mapping poverty at the local level may be required.

3. Demography and poverty. Household demographic characteristics are often a good predictor of poverty. Indeed, in many countries, the poor are often found in incomplete families, in families with unfavourable actives/dependents ratios including those with a large number of children (who have a limited earning capacity), or in families headed by pensioners or including disabled among their members (as social insurance may be inadequate). This is true only part in Moldova, a country with demographic features that differ markedly from those of other countries with the same GDP per capita. Indeed, in Moldova, the bulk of poverty is not explained by high dependency ratios.

Poverty among children. Panel 3 of Table 7 suggests that the incidence of poverty and extreme poverty rises steadily with the increase in the number of children and that poverty headcount ratio is higher than the national average starting from families with two children. Similar results are presented in Table 7-panel 4 where the incidence of poverty appears to be falling steadily with the age of the person. However, some of these results are ambiguous as they were obtained by the World Bank (2004a)⁷ making use of 'per capita equivalence scales', by assuming in other words that children, adults and elderly have the same consumption needs and that there are no economies of size in consumption. These two

⁷ We could not locate similar data from the PPMU which uses in the computation of the poverty rates the standard OECD equivalence scales.

assumptions are not generally accepted in the literature and should be verified empirically in the Moldavian context before being adopted for the computation of poverty rates.⁸

All this is not to deny the greater incidence of poverty and extreme poverty, as well the greater poverty gap, in families with 3 or more children. The members of these families are poorer than the average because either the child allowance system does not reach all these families, or because the subsidy provided is not sufficient to lift the family to which they belong out of poverty, or because the parents would be poor even if they had no children. Whatever the reason, families with 3 or more children are affected by greater material deprivation and need to be assisted with more generous transfers. Yet, in Moldova, these families are a comparatively small proportion of the total number of families (8.3 per cent of the total) because – as noted later in the paper – the average number of children per family has been falling dramatically since 1989-91 in line with a drop in the total fertility rate from 2.3-2.4 in 1989-91 to 1.2 in 2003 (Table 15). Greater poverty incidence among large families (and the decline in kindergarten enrolment rates discussed later) may mean that poverty is associated to a surge in inactivity or part-time employment among women who have to care of their children at home (because of rising user fees) foregoing in this way some income. This problem can be successfully addressed by means of childcare and labour market policies raising the activity rate employment and its quality among poor women. However, solution of the poverty problem in large families – an issue that should no doubt receive the greatest priority – would not solve the bulk of the poverty problem in Moldova.

Independently from the number of children per family, a non-negligible number of children face a higher-than-average risk of poverty due to the characteristics of the families in which they live. This is the case of children leaving in single-parent families that now account for about 6 per cent of the total (either because of separation, divorce, death or migration of one parent) or living with substitute guardians, such as grandparents. As noted in section 4.1., the share of children living in these circumstances has increased due to changes in divorce and adult mortality rates and, especially, because of the emigration of the parents who, in some cases, may not provide adequate income from abroad. Government of Moldova, PPMU (2003) suggests that the share of such families among the long-term poor is growing, and accounts now for over one-fifth of all the persistently poor. Another group particularly exposed to the risk of poverty is constituted by infants living in rural areas. Because of the greater time needed for child care, feeding and parental supervision, households with pre-school children face a higher risk of falling into poverty as compared to households with school-age children. The design of child allowances may therefore take this into consideration.

In contrast, for the reasons mentioned above, the incidence of poverty in families with two children might have been somehow overestimated by the World Bank. Many of these families are, indeed, in poverty (but possibly with no greater probability than the national average) though it is unclear whether the main cause of this problem is the ‘low income’ received by the adults (due to low activity rate or low pay) or the ‘demographic burden’ represented by two children.

⁸ Furthermore the sensitivity test presented in World Bank (2004b, p.75) is not entirely satisfactory as it fixes the total poverty rate rather than letting it change with the change in poverty scale.

Poverty among pensioners is high, but not significantly different from the national average (Table 7, panel 6), while their risk of extreme poverty is a bit lower than the national average. Similar conclusions are arrived when looking at Table 7, panel 4, which indicates that the risk of poverty and extreme poverty is lower among the over-sixties than on average.⁹ These results are confirmed by logit regression analysis done by Government of Moldova, PPMU (2003). The fact that the level of poverty among pensioners in Moldova is not particularly high is due to the almost universal outreach and relative generosity of the pension system inherited from the socialist era, and that survived the fiscal difficulties of the first decade of transition. The future of such system is however been questioned because of mounting demographic imbalances, and as a result the government has introduced (but implemented in a limited fashion) a compulsory pension insurance system.

This average picture may however be somewhat misleading, as the pensioner population is relatively heterogeneous, and pension levels vary considerably from one group of pensioner to the other. For example, war veterans, long service and other privileged categories enjoy higher pensions than the average and minimum pensioners (until 2001) and survivor pensioners receiving much less (Table 8). As a whole, pension transfers are mildly regressive. In addition, the incidence of poverty among pensioners varies between the rural and urban areas. While rural pensioners face a lower-than-average risk of poverty (as they often can count also on a plot of land), the opposite is true in the cities where the pensioners that can count on part time work and food-plots are less numerous. Finally, there is evidence that the risk of poverty among pensioners rises steeply with their age, with the decline in their income-earning ability.

Table 8: Average pension per month and number of pensioners by different types of pensions

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Type of pension	Number of pensioners					Average pension/month (current Lei)				
Old age	555.970	535186	516861	495841	472556	87.6	85.0	86.1	143.3	169.8
- minimum	21824	63331	59097	9	0	60.4	64.9	64.9	65.0	....
- privileged 2	13176	13348	12807	12	5	102.9	100.5	101.2	165.2	208.0
Disability	112374	111735	113022	115526	115220	80.6	80.3	82.1	139.6	163.1
Survivor	35963	34493	37470	36012	33515	65.4	64.4	63.1	88.3	107.3
Long service	787	803	774	778	716	126.0	127.3	142.8	171.2	225.4
Chernobil acc.	1375	1595	2049	2178	2175	393.5	396.6	577.3	576.9	559.9
<u>Memo Item</u>										
Poverty line WB						128.9	179.2	234.8	257.3	270.7
Poverty line PPMU						104.7	130.0	175.2	193.1	201.8
Average wage						250.4	304.6	407.8	555.8	691.9

Source: Ministry of Labour and Social Protection (2003).

⁹ This is true a fortiori if one considers that the poverty estimates of the World Bank were obtained on the basis of 'per capita equivalence scales' while one could argue that the caloric consumption of an elderly non-active person is somewhat lower. On the other side, the World Bank (and PPMU) poverty line have not – or only partially - corrected for the increased health expenditure incurred by the households – and particularly by the elderly who are more disease prone than children and adults – following the cuts in public expenditure on health that intervened between 1997 and 2001 and that unloaded a considerable part of the cost of health on the families.

Poverty among the disabled. Available data (2003 PPMU poverty diagnostic for 2001) suggest that the incidence of poverty among the disabled is not greater than among the general population. Also in this case, the reason is that their inability to generate income is compensated- at least in part – by a disability pension that is similar in value to the old age pension and that covered no less than 115 thousand people in 2002.

Poverty and gender. Female-headed households are another category of households that frequently faces a higher-than-average risk of poverty in many developing countries in the same GDP/c range of Moldova. Female-headed households, and women more generally, face much higher risks of poverty because of a variety of discriminations affecting them in the labour market, access to education, housing, assets, credit and so on. However, while elements of gender discriminations are present in Moldova, the HBS and other data indicate that women-headed households face a slightly lower level of poverty than male-headed households. One key factor in this regard is that women have a human capital similar to (or even higher) than that of men. Also, many of the industries that experienced the biggest decline during the last decade (e.g. metallurgy and other industrial branches) were male labour intensive.

4. Poverty and human capital. In most developing countries, the level of education is a good predictor of the risk of poverty. This is less evident in the economies in transition where, until 1991, education was provided free of charge to everyone up to 16 years of age. Thus, the population of transitional economies is less heterogeneous in terms of human capital than that of other countries at the same income level. In Moldova for instance, in 1999 the illiterate were only one per cent of the population, those with primary education 10.8 per cent, those with different types of secondary education 75.9 per cent, and those with higher education 12.3 per cent (Table 6, panel 6), about half of the value observed in mature market economies. A key implication is that while secondary education is a sure way out of poverty in a low income developing country, this cannot be the case in Moldova – where the supply of people with this degree level is quite large while the demand for this kind of human capital is low because of the low level of economic activity.

This is well shown in Table 7, panel 6, where it appears that the incidence of poverty and extreme poverty does not vary at all between the illiterates, those with primary or incomplete secondary education and people with completed secondary or vocational education (see also Table 9 of the PPMU 2003 report). The risks of poverty fall only and fairly steeply among those with higher education who control skills in higher demand providing higher wages.

What can one conclude on the basis of these data? One first conclusion would be to widen the access of many more pupils – especially from poor families – to higher education, as this seems to be a sure way out of poverty. This policy should certainly be practiced for reasons of equity (education has a strong component of public and merit goods and – as such – the state should ensure the access also to capable but poor young people) and efficiency (as some of the students coming from low income strata may be more competent than those coming from the middle class or the rich). Yet, this policy suffers from limitations, as higher education is costly and it is unlikely the state and the households will be able to increase their resources as required to this end. The real solution is to stimulate those economic activities making an intensive use of the plentiful semi-skilled and skilled labour available. It is an investment

and job creation problem rather than one of increasing the level of human capital that is already pretty high in relation to that of countries with the same GDP per capita.

5. Poverty and labour market status. In most countries poverty affects most severely the unemployed, and active employment usually permits escaping it. Although also in Moldova the unemployed face a higher risk of poverty and extreme poverty (Table 7, panel 7),¹⁰ this group constitutes a very low share of the labour force. The registered unemployment rate (2.2 percent) is minuscule and even adopting the ILO definition of unemployment, the jobless rate would still be less than 12 per cent. Indeed, as in other low income economies, unemployment is not the primary concern of the poor, underemployment and low wages are. In this regard, the Labour Force Survey estimated that in 2002 underemployment concerned 17 per cent of the employees but this seems an underestimate due to the narrow definition of underemployment used. The latter, in fact, concerns not only those on part-time jobs, but also those in full-time work with low intensity, productivity and wages due to lack of skills, inputs or investments. In all these cases, employment is no guarantee of eluding poverty. Employed in high intensity jobs that produce goods that fetch artificially low prices or workers engaged in intense competition among job-seekers for few available jobs paying low wages are also, in a sense, underemployed.

Much un/underemployment is found among small farmers and agricultural labourers (Table 7), whose low wages depend on the domestic terms of trade of agriculture (that are influenced by lack of competition on the market for agricultural products) and, especially, low investment and productivity. Other working poor are engaged in trade, low-paying manufacturing sectors and insecure jobs that are common in the informal sector, among workers in the construction sector or among street vendors and small service providers.

6. Poverty and sector of employment. Analysis of the poverty incidence data by sector of employment (Table 7, panel 8) confirms that poverty is highest in agriculture. It also reveals that the households whose head is employed in the public sector and – surprisingly – education are generally better-off. Their poverty risk is in fact 20 and 15 per cent lower than the national average, but this is not true for those employed in ‘other public services’. Generally speaking, workers employed in the private sector have a somewhat higher risk of falling into poverty than those working in the public sector. This is not only due to the fact that the majority of the private sector employees is employed in agriculture (recognizing that hired agricultural workers and farmers are most affected by poverty), but also that the risk of poverty seems to be lower in the state administration than in industry.

7. Poverty and asset ownership. In principle, ownership of different reproducible and non reproducible assets (land, other physical assets, durable goods, financial assets, access to credit) should reduce poverty as the household could liquidate part of them to smooth its consumption over time. This is not entirely true in Moldova, where even poor household dispose of some assets (land, for instance), suggesting that such land market is till rather underdeveloped or biased. But, with these exceptions, also in Moldova, asset ownership has a moderating effect on poverty. Multilogit regression analysis conducted by the Government of Moldova (2003) on the 2001 HBS indicate that while ownership of farmland and simple household appliances do not reduce the risk of poverty, the size of housing, ownership of

¹⁰ In 2002, for instance, the unemployed had a 25 per cent higher risk than the employed of being extremely poor.

costly appliances (such as colour TV or washing machine) and bank savings tend to reduce it modestly but in a statistically significant way. The same is true for those who borrowed money from the bank, had access to electricity (but not other types of public infrastructure, such as school and libraries that are probably very evenly distributed across the country). The same is found for those receiving positive net transfers. From a policy perspective, the most interesting results concerns the poverty-reducing impact of credit programs and certain types of public infrastructure, as their expansion could have a positive effect, as observed in several other countries, where lack of credit and of key inputs acted as a brake on the development of SMEs.

8. Remittances incidence and poverty. Several studies have shown that migrant remittances can have a beneficial effect on income–poverty, though they may also affect negatively other aspects of well-being. The case of Moldova illustrates well this trade-off, as it has a very high proportion of her labour force working abroad, of migrant remittances on GDP and of private transfers on disposable income. If properly accounted, all these three ratios are likely to near 20 per cent of the total.

Accounting-wise, the HBS includes questions also on ‘private transfers’ without distinguishing whether these originate from abroad or within the country. In addition, the relation between remittances and poverty cannot be studied thoroughly as only part of them are accounted in the HBS, in which they represent 5.5 per cent of total household income against the 17 per cent of GDP estimated on the basis of the national accounts. Three factors may explain this discrepancy. First, remittances used for the construction of houses may not be considered as discretionary income and not be declared in the survey. Second, especially in the countryside, lax security and fear of theft may induce households living in isolated areas to ‘hide’ the remittances received for fear that this information may leak out and lead to theft of the moneys. Thirdly, the HBS under-sample the families of emigrants. As the ‘hump theory of migration’ suggests, migration is costly¹¹ and only those with resources or access to family or informal credit are able to finance their migration. This mean that the most likely to migrate are neither the rich (not impelled to move by material deprivation) nor the poor (who are credit-constrained), but a middle class of fairly young people with medium-high levels of skills and schooling. This high-remittances group is however under-represented in the HBS.

Noting the above, the overall picture appears to be one in which (i) the underestimation of remittances in HBS (both at the household level and in the aggregate) possibly leads to some overestimation of poverty; (ii) nevertheless, HBS data show that the ex-post impact of remittances in reducing poverty is very large – as many more families would have remained below the poverty line if there had not been the possibility of migration. Each migrant sends back on average 3000 dollars per year, i.e. six times the GDP per capita of the country (Ghencea and Gudumac, 2004) and therefore the income rise in the families and extended families is very substantial. A rough estimate is that migration reduced the incidence of poverty in 2002 by some 20-25 points, despite the fact that most of the migrants come from not-so-poor families (ibid); (iii) these sharp gains in income poverty were accompanied however by increases in social dimensions of poverty (discussed in section 4); and by a

¹¹ 2-3000 Euros per migrant is the most common estimate of the investment required for the illicit acquisition of visas and working permits, travel costs and the connection to networks in the country of destination.

deterioration, other things being equal, of income distribution as the majority of those who left belonged to the better educated part of the population. Indeed, a recent survey (Ghencea and Gudumac, 2004) found that 25.7 per cent of the migrants had higher education (that are less affected by poverty), 51 per cent attended a college or a professional school, and only 23.2 per cent had a secondary school degree. Furthermore, those with college or university degrees were more likely to migrate to the West and to be able therefore to send back bigger amounts of money to their families of origin.

3. INEQUALITY TRENDS AND POVERTY ALLEVIATION PROSPECTS

3.1 Trends in Income Inequality

The recent literature on poverty in Moldova pays little attention to the issue of inequality. This is probably due to the fact that since 1997 (the year in which it was first possible to compute income and consumption inequality indexes on the basis of randomized surveys) inequality has fluctuated within a narrow range. Yet during the initial part of the transition, inequality rose rapidly between 1991 and 1997, i.e. from a Gini coefficient of the distribution of earnings of 0.26 to 0.42, while a similar trend was most likely observed for income and consumption inequality.

The importance of inequality for poverty reduction is highlighted by the relation below in which – given a constant poverty line (z) – the percentage change over time in the proportion of the population living below (z), ($\Delta PHR/PHR$), can be decomposed into the percentage change in GDP ($\Delta GDP_c/GDP_c$, i.e. its rate of growth) and the percentage change in income distribution (parametrized for simplicity by the percentage change in the Gini coefficient, i.e. $\Delta Gini/Gini$), plus an interaction term IT (as the parametrisation of the distribution provides only an approximation of the latter). In symbols:

$$\Delta PHR/PHR = - \Delta GDP/c + \Delta Gini/Gini + IT$$

The above relation and the empirical literature shows that PHR declines following rises in GDP/c with elasticities which range widely (between 0.5 and 3.5) depending on the degree of inequality of the income distribution, the extent of its bunching around the poverty line and the ratio of the poverty line to the average income per capita (Table 5). The above relation and the literature also shows that a worsening of the income distribution affects the PHR (ibid.). In addition, the literature shows that a large rise in inequality or its persistence at fairly high levels, as in the Moldavian case, may affect the rate of growth of GDP per capita itself, thus depressing further the prospects for poverty reduction.

There are several reasons for this ‘growth–dampening effect’. First, when inequality rises substantially, the work incentives of the poor may wane, social and economic apathy grows and economic efficiency declines. Second, high inequality leads to slow human capital formation and growth as the poor are unable to fund the health, nutrition and schooling costs of their children. Third, when capital markets are imperfect and the poor cannot borrow, investment opportunities are concentrated in the hands of the rich who invest in activities with decreasing returns while the poor, who would engage in more productive activities,

cannot realize their productive potential. Fourth, high inequality may reduce taxation and the access to key public services that are essential for growth and social cohesion, as already happened in Moldova. Finally, a sharp social stratification can create political instability and trigger public protests that cause uncertainty among investors, reduce the security of property rights and contracts enforcement, drive away foreign investments and increase the cost of doing business.

In Moldova, part of the inequality rise of the early 1990s was unavoidable and physiological, given the changes in economic system and output collapse of the 1991-6 and the subsequent protracted stagnation. But part of it was eminently dysfunctional as it was closely related to the weakness of the legal and institutional development of the first years of transition that was unable to prevent a strong urban bias and a rapid wage polarization. As noted in part 2, these inequality changes were an important contributor to the surge in poverty rates in the first decade of transition. Thus, any policy aiming at reducing poverty alleviation must aim at moderating the level of inequality.

What specific factors explain the rise of income inequality in Moldova? To answer this question we use the Kakwani's decomposition that shows that at any point in time, the Gini coefficient (G_t) can be decomposed as follows:

$$G_t = \sum s_{it} C_{it}$$

where C_{it} is the concentration coefficient¹² of the i -th income component (wages, or entrepreneurial incomes, or capital income or transfers) at time t and s_i its share in total income. Changes over time in Gini coefficient can therefore be decomposed as follows:

$$\Delta G = G_{t+n} - G_t = \sum \Delta s_i C_i + \sum \Delta C_i s_i + \sum \Delta s_i \Delta C_i$$

where the Δs_i and ΔC_i refer to changes over the period $t - t+n$ in the shares of the various income components and their concentration coefficients. This decomposition therefore requires knowledge of, for both the initial and final year, the shares of each type of income and their concentration coefficients. The scattered evidence available in this regard in the literature on Moldova indicates:

1. A disequalizing change in the structure of household incomes. The transition to the market economy has induced large shifts in the structure of household income a shift that has had a disequalizing effect on the overall distribution of income. Indeed, the income components characterized by low inequality (social transfers and wages) fell and those characterized by high inequality (profits, rents, entrepreneurial incomes and incomes from the sale of agricultural products) rose. The most dramatic shift concerns the collapse of the wage economy, with a fall in the wage share between 1991 and 1997 of 27 points and its further drop by another two points by 1999, that was corrected only in part over 2000-2 due to a recovery in wages and, to a lesser extent, in formal sector employment. The share of

¹² The concentration coefficient C_{it} is similar to the Gini index except that the ranking of individuals is by the total income and not the i -th income components. As a result C_{it} can rank between 1 and -1 , instead of 0 and 1 as the Gini coefficient.

social transfers on total disposable income dropped too from 19.2 in 1991 to 11.6 percentage points in 1997 to recover in the following years (Table 9).

Table 9: Structure of household income by main types of income, 1989-2002

Income type	1989	1991	1993	1995	1997	1999	2002	2003	Gini range for income type
Wages and salaries	66.3	57.1	46.7	59.0	36.7	33.8	36.2	37.2	0.35-0.45
Self employment	14.9	15.1	26.2	12.4	36.7	39.6	32.0	32.8	0.45-0.60
Social benefits total	11.3	19.2	8.3	7.3	11.6	10.7	13.4	14.1	0.25-0.30
- pensions	....			4.8	10.7	9.9	12.1	-	
- child allowances	....			1.7	0.4	0.3	0.3	-	
- maternity	....			-	-	-	-	-
- unemployment	....		0.1	0.1	0.1	0.1	0.1	-	
- social assistance	....			0.7	0.4	0.4	0.9	-	
Property income	-	-	-	0.1	0.2	0.1	0.1	0.6	0.50-0.60
Other(incl. transfers)	7.5	8.5	18.5	20.0	14.6	15.7	15.5	15.2	0.45-0.55
<u>Memo item:</u> n. of hh in	1325	1325	1327	1325	5876	7651	6159	....
HBS									

Source: author's estimates on TransMONEE database, for 2003 and 2004 Centre for Economic Policy (2004), 2004 is a forecast.

In parallel, the privatization of state assets and the land, the removal of restrictions to entrepreneurial activities and the spread of commercial activities permitted part of the population to test their entrepreneurial skills. All this raised the share of informal sector incomes, mixed incomes, profits and other types of capital income. For instance, the share of self-employment income doubled between 1991 and 2000. The income from property and rents probably rose as well, although this hardly appears in Table 9. Finally, the share of transfers (of which remittances are a major components) doubled between 1991 and 2004.

2. Rising wage inequality. Prior to the transition Moldova had a very egalitarian wage scale and a Gini coefficient of the distribution of gross earnings equal in 1989 to a low 0.25. Wages differed little both within and among sectors. However, wage inequality rose sharply in 1992 reaching a Gini index of 0.397. Between 1992 and the crisis year of 1999 the distribution of wages worsened further reaching a Gini value of 0.441, to decline to 0.391 in 2001. Figure 1 on page 14 the distribution of gross earnings describes well such trend.

What explains this large shift in earnings inequality? The standard explanation offered focuses on the adoption of new wage settlement rules that – unlike during the socialist era – put a premium on human capital and skills. It emphasizes also that the rising demand for new skills (computer specialists, accountants, foreign language specialists, financial analysts, bankers, etc.) was not matched always by an equivalent supply of skilled workers, thus leading to scarcity rents and fast rising wages (Vecernik 1994, World Bank 1994). However, in addition to these two factors, overall wage dispersion in Moldova increased also because of a jump in inter-industry wage inequality that was hardly justified by differences in human capital and experience. Which industrial sectors gained from these changes? First of all finance, followed at considerable distance by electricity, gas and water, public administration, and industry while the sectors that suffered the largest losses were agriculture, health, education and, in recent years, trade (Table 10).

Table 10: Trends in the sectoral distribution of wages, 1989-2002

	1989	1995	1996	1997	1998	1999	2000	2201	2002	2003	2004**
Average	100	100	100	100	100	100	100	100	100	100	100
Agriculture		72.3	64.9	61.5	56.2	56.7	61.7	58.0	56.9	46.9	48.1
Mining		164.9	164.8	162.9	153.9	152.4	141.6	141.1	145.8		
Manufacturing		150.3	150.8	160.1	159.3	161.7	166.1	149.5	140.5	147.1*	140.1*
Electr. Gas and water		176.6	181.1	194.4	213.8	204.1	176.5	163.5	164.1		
Construction		144.3	132.4	148.5	144.7	140.0	132.3	125.6	121.1	133.0	148.6
Trade		109.4	113.0	115.1	106.1	104.7	96.7	97.7	82.6	..	..
Transport		134.8	138.1	147.2	150.4	149.5	155.7	158.3	152.5	162.2	161.7
Finance		338.5	362.4	374.7	453.4	549.1	576.9	419.1	370.8	330.7	298.3
Public admin.		161.1	157.9	149.0	156.5	144.1	126.9	136.5	143.0	122.1	113.6
Education		83.4	83.8	77.8	73.1	63.4	60.7	62.0	67.0	69.5	65.8
Health		88.3	86.1	80.0	73.3	61.3	56.4	57.9	63.5	65.8	77.5
Max/Min	2.62	4.68	5.58	6.09	8.06	9.68	9.35	7.22	6.51	7.04	6.27

Source: DSS (2003); for 1989 and 1992 see Atkinson and Micklewright (1992); for 2003 and 2004 data provided by Galina Savelieva of the Ministry of the Economy. Notes: * refers to the average of the three sectors; ** refers to the first 9 months.

3. The rise of private transfers. Private transfers were negligible during the socialist era but have become a major component of net disposable income, GDP and currency earnings. A large part of such transfers are constituted by migrant remittances that, as discussed elsewhere in this paper, have come to represent 6 per cent of GDP in 1997 and 15-16 per cent in 2003-4. Their incidence by income group therefore now influences the overall distribution of income in an important way.

Because of the arguments given in section 2.2, the first round impact of remittances on inequality appears to be disequalising. This is confirmed by World Bank (2004a, p.30) data that shows that the percentage of residents receiving transfers was 8.7 and 11 of rural areas and small towns against 28 per cent in the large cities. In addition, Table 11 drawn from the same study, shows that 72.5 per cent of the total transfers were received by the residents of large cities, whose combined population is 20.9 per cent of the national total. Clearly, given

this distribution, the impact of remittances on poverty was less than in the case they had been distributed in a more balanced way.

Table 11: Incidence of migrant remittances by income group, 2002

	Extreme Poor	Poor	Non-poor
Coverage of transfers	10.6	11.8	15.5
Percentage of the number of transfer transactions by poverty group	31.0	9.4	59.6
Percentage of the volume of transfer resources by transfer group	22.1	5.4	72.5

Source: Castel (2004) in World Bank (2004b).

The general equilibrium effects of remittances are more difficult to assess, and depends on several factors, above of all the capacity of the domestic financial sector to capture and invest in productive activities part of these financial resources. In addition, emigration is expected to increase the domestic wage rate of those categories of workers who left the country. Scattered evidence shows that tensions have emerged and wages have risen in some labour markets (e.g. construction workers in Kishinev) but not in others (e.g. agricultural labourers in the countryside, whose daily wage remains stuck at 30 lei per day). Also in this regard, the effect seems *prima facie* disequalizing.

4. Changes in the volume and targeting of social transfers. Social benefits includes social insurance expenditures, consisting of payments for old-age, disability, survivor and privileged and other pensions (accounting for 69% per cent of total social protection expenditure), unemployment benefits (2%) and sickness and maternity benefits (5%), as well as social assistance expenditures comprising, social pensions (2%) child related benefits (4%), and fuel, gas and electricity compensation, a variety of child allowances, and other small transfers. Even when their targeting is suboptimal, the incidence of this type of income is by far more pro-poor than the other income components. Yet, not only has the share of social transfers in total income and GDP has declined steadily over time (Table 9), but its composition has worsened over time with the rise in importance of transfers such as compensation for price increases in electricity, fuel and gas and non-monetary assistance that are very regressive (Table 12).

Table 12: Incidence of principal social benefits

	First	Second	Third	Fourth	Fifth	Share of total transfers
Social benefits incl. pensions	7.4	18.2	22.2	27.1	25.2	100.0
Social benefits w/o pensions	5.7	13.4	18.1	19.3	43.6	
- pensions	....	....	....	....	....	71.0
- child allowances	15.3	29.6	20.9	10.7	23.6	4.0
- compensation to WWII vets	0.0	0.0	0.5	14.7	84.8	
-compensation for fuel/gas/el.	4.5	11.5	25.2	19.6	39.2	16.0
- non-monetary soc assistance	4.7	6.6	10.2	16.8	61.7	2.0

Source: Government of Moldova, PPMU (2003).

3.2 Inequality and prospects for future poverty alleviation

How much faster would poverty incidence fall if Moldavian policy makers managed to introduce policies improving the distribution of income with the result of lowering the Gini coefficient? The answer may be illustrated by a simple arithmetical exercise showing the impact of different growth rates and income inequality levels on poverty incidence by the year 2007. Three alternative growth rates are considered: 4 per cent (the average rate recorded during the recovery of 2000-2; an Asian Tiger-like growth of 8 per cent a year; and a slow growth of 2 per cent (assuming adverse external conditions and the inability to remove some of the main obstacles to growth). Also assumed are two alternative levels of inequality of the distribution of net disposable income: the current medium-high level (equal to a Gini value of .42), and a reasonably lower level (equal to a Gini level of .35). The latter level is very close to those observed in other successful transition economies such as Poland, Hungary and Vietnam, as well as those in fairly unequal Western market economies such as the UK, US and Italy. It is higher than those of egalitarian developed market economies such as Sweden (where redistribution plays an important role), or of developing economies such as South Korea and Taiwan where the distribution of assets, access to human capital formation have traditionally been egalitarian, credit markets efficient and the labour force fully employed.

Table 13 presents the level of poverty incidence over 2003–2007 for various combinations of GDP growth and income inequality. The results of this simulation show that the fastest way to halve the poverty rate by 2007 (see columns 2 and 3 of Table 13) consists in generating a sustained and fast growth of GDP in the range of 8 per cent without – at the same time – experiencing a further deterioration in the distribution of income.¹³ Though not impossible, this objective might be difficult to achieve because of the imbalances it may generate in the balance of payments, investment financing, inflation and institutional development. Almost similar levels of poverty incidence (26.8 versus 25.6 per cent) would be achieved, however, in case Moldova grew at a more reachable but very egalitarian 4 per cent a year. This would require rapid, labour-intensive and broad-based growth in rural areas and small mono-industrial cities, as well as further progress in the two urban areas of the country. Poverty incidence would fall by almost 40 per cent from the 2002 level (fourth column) if the 4 per cent growth of GDP was achieved in a sufficiently equitable way, i.e. with levels of inequality similar to those of the UK and Italy, an objective that will be implicitly requested from Moldova as part of the *acquis communautaires* to be satisfied for a possible application to and eventual entry into the EU towards the end of this decade. Under this scenario poverty incidence would fall to 30.6 per cent by 2007.

Poverty incidence by 2007, in contrast, would remain relatively high in the low growth scenario (2%) and in this case even a move to a medium level of inequality will add not much in terms of poverty alleviation. This shows that the beneficial effects of lower inequality would be significantly amplified in the presence of robust growth, while they would remain modest in case of slow growth. This means that both growth and inequality are essential for poverty reduction and that any policy seriously aiming at this objective must ‘walk on two legs’.

¹³ Even more impressive results could be achieved if this ‘Asian tiger’ rate of growth could be combined with a decline of the Gini coefficient from 0.42 to 0.35, i.e. from rather high to medium levels of inequality.

Table 13: Poverty incidence under different assumptions about growth and inequality levels

2002	48.5	48.5	48.5	48.5	48.5	48.5	48.5
	Fast growth 8%	Fast growth 8%	Hist growth 4%	Hist growth 4%	Hist growth 4%	Slow growth 2%	Slow growth 2%
	High ineq. 0.42	Medium ineq 0.35	High ineq. 0.42	Medium ineq 0.35	Low ineq. 0.30	High ineq. 0.42	Medium ineq. 0.35
Paeg*	1.5	2.2	1.5	2.2	2.8	1.5	2.2
2003	42.7	40.0	45.6	44.2	43.1	47.0	46.3
2004	37.5	32.9	42.8	40.3	38.2	45.6	44.3
2005	33.0	27.1	40.3	36.8	34.0	44.3	42.3
2006	29.0	22.3	37.8	33.5	30.1	42.9	40.4
2007	25.6	18.4	35.6	30.6	26.8	41.6	38.6

Source: author's calculations, using poverty alleviation elasticities of growth taken from Kakwani et al (2003). Notes: stands for poverty alleviation elasticity of growth. In the table, such elasticity is kept constant, though – with growth – the ratio (z/μ) of the poverty line (kept constant) to the average income per capita should fall, leading to an increase in paeg. This effect may be negligible for growth rates of 2 and 4% and over a few years, but not so much in the case of a growth of 8 per cent over 5 years. In this specific case (columns 1 and 2) – that has been neglected for simplicity – one would expect paeg to rise by about a third in relation to the value indicated in the third line of the table.

4. TRENDS AND FEATURES OF HUMAN POVERTY

4.1 Approaches and problems in the measurement of human poverty in Moldova

During periods of structural transformation, when the composition, structure and meaning of income radically change, conclusions about shifts in human well-being reached on the basis of income-based or consumption-based welfare measures rest on shaky ground for several reasons. First, income is only one, though an important one, of the inputs into the production of well-being. Other relevant factors include: household assets; the 'human capital' of family members and of parents in particular; leisure; family structure, stability and reproductive behaviour; social and health practices (often referred to as 'knowledge, attitudes and practices', or 'KAP'); and the level of public expenditure on 'public goods' such as health, education, social protection, public housing and food subsidies. The meaning of income, furthermore, changes considerably when moving from an economy affected by 'shortage-flation' and queuing to one where market prices prevail but, at the same time, non-monetary income rises with the spread of subsistence agriculture and direct production of services (e.g. child care) by the households, as observed in rural Moldova.

In addition, a decline in income normally triggers a series of household and collective responses, including the search for greater efficiency in expenditure, shifts in consumption structure, substitution of more expensive with cheaper sources of nutrition, and so forth). These can to some extent cushion households, though not those at greater risk, from the negative effects of income reductions. Indeed, it is not uncommon to even observe improvements in some social indicators concomitantly with declines in household incomes. Finally, contrary to an erroneous but common perception, income is not easily observable and measurable, especially during periods of hyperinflation, radical fluctuations in relative

prices and rapid changes in the structure of the economy (such as growing informalization or retreat into subsistence).

A careful analysis of poverty therefore requires that the conclusions drawn on the basis of income-based welfare criteria be integrated with an analysis of changes in other aspects of well-being such as those linked to demography, health, education, social cohesion and child abandonment.

4.2 A drastic demographic adjustment

The most dramatic indication of the stress borne by households during the transformational crisis, and in particular to the large recessions and instability of 1992-4 and 1998-2000 is provided by the abrupt and radical changes recorded in the field of family formation and stability, reproductive behaviour, mortality and, since 1998, migration. These changes have led to a net natural decrease of the resident population, which was exacerbated by a very high rate of emigration. They have also led to a series of undesirable and apparently irreversible demographic developments that – unless they are controlled in the immediate future – will negatively affect current and future levels of poverty and economic growth.

1. An abrupt contraction in marriage rates. The number of marriages fell abruptly from around 40.000 over 1992-1994 to about 21.000 in 2002, and has slightly recovered since then. The fall in the net marriage rate (per 1,000 women of over 15 years of age) confirms this decline and the significant departure from the trend projected on the basis of the 1980s and early 1990s data. While demographic factors, such as the drop in the size of the cohorts reaching the age of marriage since 1998 may partly explain this phenomenon, such an acute drop in marriages is mainly attributable to economic insecurity. While no regression analysis was carried out in this case, it appears that the rise in unemployment (including among the 16-24 years old), and negative expectations about the future discourage many people from creating new families. Second, migration may have also contributed to the decline in marriage rate, as the migrant population is generally gender and age selected.

2. A broadly constant, then rising, divorce rate. The crude divorce rate has shown a stable or declining trend until 1999, after which it increased by some 20 per cent (Table 15). Economic theory suggests that in periods of mounting poverty the propensity to divorce should decline as the 'consumption efficiency' of a united family is far greater than that of its members taken individually.¹⁴ Under such circumstances, divorce or separation, therefore, remains an option only for the rich. At the same time, several studies have shown that growing unemployment and slumps in family incomes of the dimensions observed in Moldova affect negatively family organization, stability and emotional life. In the presence of growing economic difficulties, loss of self-esteem, alcoholism, family conflicts and domestic violence tend to rise which may lead to separation or divorce, as well as to the institutionalization or abandonment of children. Large income contractions and growing disillusionment about future employment prospects at home may also increase the propensity of young adults to migrate in search of employment opportunities leaving their spouse and

¹⁴ Economies of scale in consumption are most obvious in the case of housing, heating charges and consumer durables, but can be considerable also in food preparation and consumption as well as in child supervision.

children behind, a fact that has been shown to raise the risk of separation or divorce. This seems to be confirmed by the survey of Genchea and Gudumac (2004) of 4000 families, of which about a third had at least one migrant member who migrated in 2003.

Table 14: Migrants' marital status before and after migration

Marital status of migrant prior to migration	Marital status of migrant after migration					<i>Total</i>
	Single	Married	Divorced	Widowed	Dead	
Single	19.1	4.7			0.1	23.9
Married		61.1	6.4	0.6	0.1	68.4
Divorced		1.0	5.6			6.6
Widowed		0.1		1.0		1.1
<i>Total</i>	<i>19.1</i>	<i>66.9</i>	<i>12.0</i>	<i>1.6</i>	<i>0.2</i>	<i>100.0</i>

Source: Genchea and Gudumac (2004).

3. Changes in reproductive behaviour. The above trends in marriage and divorce have led to an unprecedented decline in the crude birth rate (CBR). While the latter had started to fall slowly from a fairly high level during the immediate pre-transition years, the decline accelerated over 1992-6 and continued unabated until 2002. As a result, the number of yearly births dropped from some 82.000 in 1989 to 35.000 in 2002. In 2003, however, the number of births has picked up, if imperceptibly for the first time since 1989. Such phenomenon is captured more accurately by the changes in the total fertility rate (TFR) that was literally halved between 1989 and 2002 reaching 1.2 (Table 15), 1.2, i.e. a value observed in mature market economies such as Italy and Germany. In these countries, however, such decline was spread over a longer period of time and occurred at a much higher level of per capita GDP.

Growing unemployment, falling wages, continuing drops in standards of living and a general sense of insecurity explain why the contraction in female employment does not appear to have moderated the decline in fertility.

The fall in TFR appears to have been accompanied by decline in the 'quality' of births, as a rising proportions (as well as absolute number) of the latter have been to very young, often unmarried and less educated mothers (Table 15). Indeed, the proportion of births to mothers below 20 years (which correlates closely with that of births to unmarried mothers) rose from 11.1 per cent in 1989, to 19.8 per cent in 1995, to decline slowly since then – though remaining higher than the pre-transition levels. In addition, while births to mothers with upper secondary or university education constituted 90.7 per cent of all births in 1989, this proportion fell to 68.0 per cent by 2003. The fall was particularly marked among the women with upper secondary education. Meanwhile the proportion of births to mother with primary or lower secondary education rose from 7.4 per cent in 1989 to 31.3 per cent in 2003.

Table 15: Trend in the principal trends in family formation, births and population size

Variable	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
Crude marriage rate	9.20	9.41	9.10	9.00	9.10	7.80	7.50	6.00	6.10	6.00	6.50	6.00	5.80	6.00	6.90
Crude divorce rate	2.86	3.01	3.18	3.40	3.33	3.17	3.36	3.10	2.35	2.78	2.44	2.67	2.98	3.51	4.10
Divorces per marriage	0.31	0.32	0.35	0.37	0.37	0.41	0.45	0.51	0.46	0.47	0.38	0.45	0.51	0.59	0.59
Crude Birth Rate (000)	18.9	17.7	16.5	16.0	15.2	14.3	13.0	12.0	12.5	11.3	10.6	10.1	10.0	9.9	10.1
Crude Death Rate (000)	9.2	9.7	10.5	10.2	10.7	11.8	12.2	11.5	11.8	10.9	11.3	11.3	11.0	11.6	11.9
Natural pop growth (000)	9.7	8.0	6.0	5.8	4.5	2.5	0.8	0.5	0.7	0.4	-0.7	-1.2	-1.0	-1.7	-1.8
TFR	2.46	2.39	2.26	2.21	2.10	1.95	1.76	1.67	1.60	1.50	1.40	1.30	1.30	1.20	1.20
% births to mothers with:															
- ≤ primary education	0.3						0.5					2.6	2.5	2.5	2.5
- lower secondary	7.1						14.0					23.4	25.8	27.6	28.8
- upper secondary	80.2						76.7					59.7	56.6	53.4	51.7
- tertiary	10.5						9.4					12.1	13.1	15.1	16.3
- unknown	1.9						2.3					2.1	1.9	1.6	0.9
% births to mothers <20yr	11.1	12.8	15.1	15.9	17.7	18.9	19.8	18.6	17.9	17.4	17.2	16.9	16.3	15.2	14.4
Legal migration (000)	....	16.8	18.2	7.1	6.4	6.5	5.4	4.7	5.5	4.8	6.3	9.1	6.4	6.6	7.4
Present population* (000)		4338				4362	4348	4334	4320	4308	4293	4281	4264	4247	4229
Resident populat.** (000)	4335	4359	4364	4356	4345	4350	4345	4331	4317	3650	3649	3644	3635	3627	3607
% Pop > 60 years of age	....	12.8	....	....	....	....	13.1	13.1	13.3	13.5	13.6	13.6	13.6	13.9	...

Source: TransMONEE Database and DSS (2003).

Notes: * refers to the population for the whole country ** from 1998 onward the data refer do not include Transdnistria

This trend might be the harbinger of considerable problems for both the child and the mother. Very young, particularly single, mothers are generally neither economically independent nor psychologically mature enough to raise and educate a child. Thus, the relaxation of social mores and controls that seem to have occurred during the transition may have important longer term poverty effects. In many cases, the advent of a child prevents young women from furthering their professional or educational life. The child, often unwanted, runs a far greater risk of abandonment, institutionalization, poverty and psychological maladjustment than the children of older and better educated parents. Meanwhile, other things being equal, the lower level of education of the mother and (because of assortative mating) of the father are likely to reduce the family support to reach higher levels of education, a sure path out of poverty. Thus, a growing proportion of the newborns may grow up facing a higher risk of falling into poverty because of lower levels of parental maturity, family stability and likelihood to receive a good education.

4. A marked increase in the crude death rate (CDR). As shown above, the CDR has risen by twenty percent, from about 10 per thousand people in the pre-transition years to 12.2 in 1995. It then declined with the stabilisation of the economy over 1996-7, to rise again since 1999. At the moment, the CDR is still some 15 per cent higher than in the immediate pre-transition years. The increase is in part due to the aging of the population, but most of it is due to an increase in age specific death rates.

5. A natural decline in the size of the population. As a corollary of the above trends in birth and death rates, the resident population first stabilized while since 1999 it started declining. By 2003, the population declined by 0.2 per cent (i.e. by some 8.000) persons. The main factor behind the absolute decrease of the population is the acceleration of the decline in births. While over 1991-5, the increase in the CDR explained about 1/3 of the decline in the decline in the natural increment of the population, since 1996 the natural increment was driven almost exclusively by the fall in the birth rate.

6. Emigration. The current population trends have been exacerbated by an increase in emigration that started slowly in the initial years of the transition, and then accelerated sharply in the aftermath of the 1998 crisis. Official statistics in this field are particularly deficient, as about half of the emigration that takes place is unregistered and/or /undocumented. The data on registered emigration (DSS 2003) suggest yearly outflows between 1992 and 2002 ranging between 5000 and 9.000 with no detectable increase over time. In 2000 the Department of Statistics and Sociology estimated that were 234,000 Moldavians working abroad registered and unregistered. A very close estimate was obtained by the Labour Force Survey of 2003. This number corresponded roughly to 11.4 per cent of the active population, with men accounting for 68.3 per cent and rural residents for 69.6 per cent of the total.

However, unofficial expert estimations suggest that the true number of people living abroad is around 600.000-800.000 equal to roughly 35-40 per cent of the labour force. As noted by the World Bank (2004a) while the sharpest increase in emigration took place following the 1998-9 crisis, there is no evidence that the resumption of growth at home reversed or slowed down this outflow.

Quite apart from the positive and negative economic and social effects of migration (discussed in other parts of this paper), its demographic impact must also be noted. As some 70 per cent of the emigrants are young people (roughly 2/3 men and 1/3 women, 70 per cent of them coming from the rural areas), the age and sex structure of the population is affected in a significant way, especially in rural areas. This has the effect of increasing the dependency ratio (especially the old age one), reducing the reproductive potential of the population and increasing family tensions and divorce.

7. Undesirable effects on poverty of the recent demographic adjustments. Leaving aside more questionable, long-term, economic issues, the demographic changes observed over the 1989-2003 period carry some generally adverse short- to medium-term implications for the well-being of the Moldavian population and for the vulnerable groups in particular. The first, already mentioned, is that an absolute decline of the population, particularly when driven by a contraction of births, leads to an average aging of the population, a deterioration of the dependency ratio and an expected impoverishment of the pensioners. In Moldova, this phenomenon is exacerbated by the age-selected structure of emigration. Foreign employment among Moldavians is a source of valuable remittances, but it also weakens the ratio of pension contributions to outlays, while reducing tax yields as migrant incomes go basically untaxed. Second, migration, might lead to a major 'brain-drain' of human capital and intellectual resources needed for the recovery of the Moldavian economy.

Third, the shift in the sex ratio of the cohorts of reproductive age caused by higher mortality among men in the central age brackets (see later) and sex-selective emigration make the formation of new families more difficult, even leaving aside the direct effects of economic insecurity on the propensity to marry. In turn, these factors cause a weakening of the fertility potential of a country in the short term, while the subsequent drop in birth rates will have the same effect over the long term. Fourth, the large drop in birth rates observed in Moldova has also brought about an increase in the number of one-child families (52 per cent of the births recorded in 2002 were the first one). In view of the recent decline in the coverage of pre-school education (see below), a growing share of children, particularly from younger couples, poor families and rural areas risks facing a peer socialization gap.

Finally, the increase in the proportion of births to under-age and/or unmarried mothers increases the share and/or the number of children at risk of abandonment, institutionalization and poverty. Such risks, as well as the risks of orphan hood, are obviously exacerbated by the rapidly rising mortality rates (see below) among men in the 30-49 age bracket.

4.3 Health poverty trends and health sector problems

No doubt, the most important indicator of human poverty is the health status of the population as measured for example by the life expectancy at birth, the standardized death rate of specific population groups and the incidence of various diseases. Health status is the outcome of a complex process that depends on several factors such as material deprivation (caused by lack of income, subsidized health care and high prices for drugs and non-subsidized health services), lifestyles, stress and environmental risks.

1. Trends in health status. The population's health status deteriorated markedly since the beginning of the transition in 1991-2 and again – if less prominently – in the aftermath of the Russian crisis of August 1998. However, the distribution of such health deterioration by age group, location and income strata has differed considerably. For instance, the infant mortality rate (IMR), under-5 mortality rate (U5MR)¹⁵ and the maternal mortality rate (MMR) stagnated or recorded some limited improvements, and have shown a clear improvement since 2001. This trend is – of course – no reason for rejoicing, especially when compared with the gains recorded in other economies in transition, but it signals lack of retrogression. In contrast, the mortality trends for the elderly and the male adult population of 40-55 years show a clear deterioration.

As shown in Table 16, the mortality rate for males in the 40-45, 45-50 and 50-55 age groups increased respectively by about 25, 45 and 45 per cent between 1989-1991 and 1994-5, improved visibly over 1996 and 1997 but rose again by 5-10 per cent in the aftermath of the Russian crisis. In view of this complex dynamic, which clearly correlates with the two major economic setbacks suffered by the Moldavian economy over the last decade, the 2002 age-specific mortality rates of these three population groups were still 10-20 per cent higher than in the pre-transition years. A similar trend is observed for the over 60 (both men and

¹⁵ The small increase in both IMR and U5MR over 1992-1995 depends to a considerable extent on the gradual adoption of the standard (more comprehensive) WHO concept of live birth, that has the effect of raising the IMR and UMR.

women), whose death rate rose by some 25-30 per cent during the first 4-5 years of transition, to recover a bit thereafter but to surge again since 1999.

Table 16: Health indicators, 1989–2003

Variable	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
A. Outcome indicators															
IMR	20.4	19.0	19.8	18.4	21.5	22.6	21.2	20.2	19.8	17.5	18.2	18.3	16.3	14.7	14.4
U5MR	27.1	25.2	25.0	24.5	27.6	28.8	27.4	26.4	26.5	22.2	23.9	23.3	20.3	18.1	18.5
MMR	34.1	44.1	26.4	37.3	33.2	17.7	12.4	40.5	48.3	36.3	28.6	27.1	43.9	36.6	21.9
LEB m	65.5	65.0	64.3	63.9	64.3	62.3	61.8	62.9	62.9	64.0	63.7	63.9	64.5	64.4	64.5
LEB f	72.3	71.8	71.0	71.9	71.1	69.8	69.7	70.4	70.3	71.4	71.0	71.2	71.7	71.7	71.6
Age specific death rates (per 1000 of the relevant population groups)															
Male 40-5	6.8	7.0	7.4	7.3	7.4	8.8	9.3	8.9	7.1	7.4	7.9	7.2	7.7	7.8	7.6
Males 45-50	9.2	9.8	10.5	9.8	10.9	13.6	14.7	13.1	10.4	11.4	11.2	11.4	11.5	11.4	11.9
Males 50-55	13.3	15.0	16.0	14.1	14.9	17.7	19.1	16.8	19.7	18.0	17.7	18.3	16.5	16.7	17.6
All 60+	47.1	50.5	55.0	52.8	56.5	61.4	63.3	59.6	56.4	56.8	58.9	59.0	56.9	60.0	62.3
B. Output indicators															
Outpatients contacts/c	8.60	8.46	8.41	8.24	8.44	8.48	8.42	8.10	8.38	9.78	8.49	7.65	5.60	6.70	...
Inpatients adm. p/c	0.24	0.23	0.22	0.21	0.22	0.22	0.22	0.18	0.18	0.20	0.18	0.15	0.14	0.16	...
Average length of stay in acute hospitals, days									15.8	15.4	14.0	11.9	10.3		
Immunization rate DPT	84.3	81.0	80.7	83.5	69.5	85.7	95.5	96.8	97.1	96.9	97.0	94.5	95.6	98.1	98.3
% women receiving pregnancy consultation	93.0	97.0	98.0	98.0	99.7	99.0	98.0	97.0	97.0	96.0	98.0	97.0	99.0	99.3	98.6
C. Input Indicators															
Total health expenditure										31.4	19.7	10.2	9.4	12.0	
Per capita, US\$															
Doctors per 100.000										358	363	325	318	271	
Nurses per 100.000										931	905	807	769	629	
Hospital beds/100.000	1276	1315	1306	1247	1220	1221	1219	1211	1162	1123	819	759	589	...	...

Source: TransMONEE database, DFID (2003) on Ministry of Health data, DSS (2003)

Most of the additional male deaths were due to stress-related causes such as heart and circulatory diseases, cirrhosis of the liver and some external causes (homicide). This rise in stress-related male deaths affected other economies in transition of the former Soviet Union (particularly those with a high proportion of Slavonic population, such as Russia, Ukraine, Belarus and Kazakhstan) and has been shown to be closely related to sudden increases in uncertainty, unemployment, inequality and marginalisation. As such, any attempt at reducing them requires not only better and earlier medical care (see later) but also a broader public health approach aiming at reducing the occurrence of ‘stressors’ such unemployment, uncertainty and marginalisation that affect in particular the poor and low income families. Indeed, though no direct evidence about the groups affected by rising stress related mortality is available for Moldova, evidence from other countries in transition (e.g., Russia and Latvia) consistently shows that those most affected were urban middle-aged men, possibly unemployed, with lower levels of education (Shkolnikov and Cornia 2000) and from minority or migrant backgrounds and incomplete families.

As a result of stagnating or minimal improvements in most age specific death rates, life expectancy at birth (LEB) fell markedly for women and – especially – men over 1990-1995 and again – if less pronouncedly – over 1998-2000. Life expectancy stabilized during the last four years but at a level that is still below the transition baseline. At the moment, the main causes of morbidity and mortality are stress related, non-communicable diseases, especially cardiovascular diseases. Mortality from stroke, cancers and diabetes is high even in young population groups while mortality from chronic liver diseases and cirrhosis exceed the average for the European Union by a factor of six (DFID 2003).

Thus, a major form of worsening in health poverty has been a significant and permanent decline in life expectancy for certain population groups, while for infants, children and the youth the rate of improvement was well below that recorded in the past or experienced by other countries in transition (such as those of Central Europe) during the last 15 years.

Data on disease incidence (new cases per year) confirm the picture based on mortality data. While respiratory, digestive diseases and tumours show stagnant or slightly declining trends, infectious and especially cardiovascular problems show a sharp upward trend (Table 17). The increase in infectious diseases results from mutually offsetting tendencies. As a result of diphtheria outbreaks in 1994 and 1995, the immunisation programme in Moldova was strengthened with the help of external donors and since then the vaccination coverage has remained at a very high 95-98 per cent. As a result, the incidence of several infectious diseases such as diphtheria, measles and viral hepatitis decreased from about 1998 onwards (DFID March 2003). An epidemic of sexually transmitted disease that peaked in 1996 (after a twenty-fold rise in relation to the late-1980s levels) and decreased during the following years. In contrast, the incidence of tuberculosis, HIV/AIDS and drug addiction has been on the rise especially among marginal groups (see below).

Table 17: Number of new cases per year (per 1000 inhabitants) of major groups of diseases

	1995	1996	1997	1998	1999	2000	2001	2002
Infectious	35.3	43.1	49.1	43.9	38.0	36.7	35.9	37.8
Respiratory	171.0	118.1	144.9	135.3	131.1	130.7	107.4	111.9
Tumors	3.5	3.8	3.9	3.9	3.4	3.6	3.0	3.2
Digestive	22.6	20.8	21.9	21.5	16.9	15.9	20.9	19.4
Cardiovascular	7.0	6.9	8.0	8.9	7.6	10.0	13.0	12.5

Source: DSS (2003) Statistical Yearbook of the Republic of Moldova.

2. Health services organization, health policy and access to health services. The health system in Moldova still shares several common features with the Semashko health care model of the Soviet Union, though the transition has already induced important changes in this area. While during the initial part of the transition the number of health facilities, doctor, nurses and beds per 100.000 people declined slowly from a high level, the profound fiscal crisis that followed the 1998 recession led to a dramatic consolidation of the health care system that entailed huge reductions in the number of hospital beds, activity levels and personnel (Table 16, Panel B). While the Soviet approach to health care was excessively hospital based, and although some consolidation and reallocation of funds to outpatient and preventive care was overdue, the decline in staff, hospital beds and so on observed since

1998 was driven more by fiscal reasons than by a rational plan. For instance, the total number of hospital beds has decreased by almost 60 per cent since 1989-91. However, this was mostly achieved by closing rural hospitals rather than a general rationalisation of the entire infrastructure. As a result, while there are significant shortages of generalists in many rural communities, a duplication of hospital services persists in Chisinau.

The decline in service availability in some rural areas, the fall in expenditure on drugs and other consumables, the rise in the share of formal and informal health costs transferred onto the households and the decline in family incomes have all lead to a fall in the utilisation of health care facilities, as signalled by the decline in inpatient and outpatients contacts per 1000 people and the duration of hospitalisation and occupancy rate in acute wards (Table 16, panel B, see also DFID 2003). This decline seems to have been partially reversed since 2001, but HBS-based evidence shows that a recovery in contacts was mainly driven by better-off households (World Bank 2004, Figure 5). Thus, being poor means dramatically lower access to health facilities (Government of Moldova 2003). For instance, the duration of hospitalisation of the poor is eleven times shorter than that of the non-poor, while the average length of hospitalization of the poor is 9 to 13.5 times shorter than that of the non-poor. Exclusion from health care services is more pronounced in rural areas, for larger households and for households whose head has lower educational achievements. Especially acute is the problem faced by elderly people with chronic diseases and low pensions in comparison with the cost of the medication they require.

Any poverty-reduction strategy needs crucially, therefore, to increase the level of health subsidies to the poor. Some aggregate increase in health expenditure has already materialized in 2002 and 2003 – as the share of GDP allocated to public expenditure on health rose from 2.9 to 3.3-3.4 of an expanding GDP between 2002 and 2003 (Table 2).¹⁶ However, available public resources for health (that represent a non negligible proportion of GDP when considered in relation to other countries in the same income group) are not used in the most rational way. Hospitals continue to consume 40-50 per cent of the public resources allocated to health care, although many of them operate at half or less of their operational capacity. Better targeting of public health resources among levels of care, by region and rural urban population and by type of expenditure would allow to improve the efficiency of overall health expenditure.

It must be noted, however, that some essential health activities have been protected or even improved, as shown by the high coverage of hospital-based deliveries and vaccination programs against the 6 main immuno-preventable diseases. These public health measures are well known for their considerable impact and high efficiency that permitted to preserve a decent health status among children despite the difficulties faced by their families and health institutions during the transition. As a result, the infant mortality rate fluctuated around 20 per thousand over 1989-2000, and started showing a clear improvement in 2001 and 2002.

The problem of the rising private cost of medical care and of the inability of the low income people to seek treatment, if not in extreme cases, is mentioned repeatedly in the interviews taken as part of the HBS. Indeed the data in Table 14 show that in the face of rising death rates and worsening health conditions, the number of hospitalization and outpatient visits per

¹⁶ However the projected value for 2004 is projected to fall to 2.6 per cent of GDP.

capita declined steadily as part of the population now seeks medical attention only in extreme cases.

3. Health financing and the situation of the poor. The health sector has traditionally been financed through general taxation. Health care institutions and providers are paid from the local budgets, made up by taxes levied at the local level while the republican health funded republican hospitals and other central institutions, preventive medicine services, national programmes, teaching institutions and the administration of the sector. This model of financing has been severely affected by the difficulties induced by the recessions of 1991-95 and August 1998 that entailed a sharp decline in public health expenditure over GDP. As a result, by 2002, real public health expenditure per capita fell US\$12 per capita or to 52 per cent of its 1997 level and less than 20 per cent of its pre-transition level. These fiscal difficulties led to the introduction of user fees in the health sector and to the facto transfer of the cost of drugs to the household sector.

Out-of-pocket payments at the point of delivery have become therefore sizeable and represent a critical concern for the Moldavian health system because of the exclusionary effect they have on the demand for health services by the poor and the middle class. For instance, patients' payments for hospital services (bed-day, laboratory tests, X-rays, etc.) accounted for 19 per cent of total health spending in 2002 (DFID 2003). However, the biggest out-of-pocket health expenditure is incurred by patients for the purchase of drugs. These expenditures are difficult to trace and they are not included in the aggregated figures of health spending but they are estimated to account for about three quarters of the total private expenditure. Informal payments for services meant to be free are also absorbing a share of private resources.¹⁷ Estimates by the World Bank (2004a) indicate that out of pocket payments rose from 27 per cent of total health expenditure in 1997 to almost half in 2001-2002.

Prospects for the future depend on the ability of the health care system to increase the resources allocated to health activities benefiting most the poor. The health financing reform introduced in January 2004 – shifting from tax finance to health insurance – may represent an additional constraint on access to public health care by the poor. The poor are chiefly employed in the informal sector and will not be able to pay the required health insurance premia, and could therefore be excluded from health services. While the state will contribute the health insurance premium for children and the elderly, so far no solution has been found on how to ensure the access to health care by the poor working in the informal sector and small-scale agriculture (World Bank 2004b). In several other countries, e.g. Vietnam, similar experiments have led to a regressive effect.

4.4 Trends in education poverty

Trends in this area were mixed though – all together – deteriorations in this field were much more contained than in the field of poverty or health. Yet, here too there is evidence that

¹⁷ Health professionals receive very low salaries ranging between US \$20-40. As a result, they often charge patients 'under the table'.

rural populations, dwellers of small towns, the poor and marginal groups have been affected disproportionately.

1. Pre-school education. The most pronounced change in education poverty has concerned the slump in the kindergarten attendance rate (Table 18). Although the cognitive, developmental and psychosocial benefits of pre-school education have long been recognized, and though the last year (5-6 years of age) of pre-primary education is compulsory, pre-primary enrolment rates (for the 3-6 age group) fell from 61 to 32 per cent over 1989-2000. Despite the encouraging recovery of the last two years, in 2003 the enrolment rate was still below its pre-transition level. This slump in enrolment took place despite a sharp contraction in birth rates and the subsequent reduction in the cohorts of children of pre-school age. It is a major cause for concern, particularly for children in the 5-6 age group. Considerable damage may in fact result in terms of child socialization, peer interaction and school preparedness. These are all areas in which family substitutes can only be of limited relevance, particularly in the growing number of one-child and incomplete families, for children in problem families, and for children of poor families where parents have less time to stimulate their children who will in this way begin elementary school from a less favourable position.

The decline in enrolments resulted from a variety of factors. First, the overall supply of kindergarten places was affected by the closure of kindergartens managed by state enterprises striving to improve their balance sheets. As of the early 2000s, 99 per cent of pre-school institutions were run by state institutions (DSS 2003). While the new policy on pre-school education was aimed at transferring these services to municipal authorities, this decentralization was characterized by considerable administrative and financial problems, as several local authorities were forced to close some of their kindergartens due to budgetary problems, rationalization of expenditure and cost-saving efforts that diluted the quality of the services provided. There is evidence that the contraction in the supply of kindergarten places was particularly marked in urban areas (DSS 2003).

Cultural factors also contributed to the decline in pre-school enrolments. Rising unemployment among women and the desire to attribute a bigger role in child rearing to the family may have contributed to reducing the demand for these services. Yet demand factors seem to have dominated the contraction in kindergarten enrolment rates, as suggested by the decline in occupancy rates until 2000. This indicates that the demand for services fell more quickly than its supply (Table 18), especially in rural areas where incomes are much lower – and poverty rates higher – than in urban areas. Confronted with a mounting financial crisis, municipalities introduced or raised fees for school meals, uniforms, heating and bus services that have come to represent a substantial share of the average wage thus triggering a contraction in the demand for kindergarten services (*ibid.*).

The conclusion that demand factors tend to predominate – especially for poor households and in rural areas – entails that public policy should reduce drastically the private costs for attending kindergarten, increase complementary programs (such as child feeding whose value may be more directly appreciated by the families), removing any cultural bias against pre-school education or an inadequate understanding of the benefits of school preparedness,

and stimulate the increase of part-time jobs for mothers.¹⁸

¹⁸ The World Bank (2004b) argues that the decline in kindergarten enrolment is mostly due to supply factors but this seems hard to reconcile with the decline and very low level of the occupancy rate, especially in rural areas.

Table 18: Supply of Places, Occupancy and Enrolment Rates in Kindergartens, 1989-2002

Variable	89	90	91	92	93	94	95	96	97	98	99	00	01	02
Children in kindergarten (000)	353	336	311	213	202	182	161	147	138	126	101	94	97	104
N. of places in kindergarten (000)	294	268	270	218	216	205	194	182	177	166	152	143	145	150
- urban	...	...	...	...	...	...	...	...	83	80	74	65	64	64
- rural	...	...	...	...	...	...	...	...	94	86	78	78	81	86
Occupancy rate (%)	120	125	115	98	93	89	82	81	78	76	66	65	66	69
- urban	...	...	...	...	...	...	...	...	85	81	72	73	74	78
- rural	...	...	...	...	...	...	...	...	73	71	61	58	60	63
Enrolment rate (net)	61	62	59	42	40	37	34	33	39	38	34	38	42	51
Enrolm. rate (gross)									50	49	44	44	47	54
-males (gross) *	...		...	...	...	...	...	...	73	66	53	49	50	54
-females (gross) *	...		...	...	...	...	...	...	66	60	48	45	46	50

Source: Elaboration on TransMONEE Database (for the data 1989-1996), and DSS (2003a). Notes: * These data are not consistent with the overall gross enrolment rate (line above) as they come from different sources. They nevertheless provide an idea of the trends in differential enrolments by gender

2. Primary and lower secondary education. Trends in basic education, i.e. primary education (for children of 7-10 years of age) and lower secondary education (for 11-15 years old children) suggest that public policy managed to broadly sustain enrolments in primary and lower secondary education at high levels during the difficult initial years of transition, (1991-5) and in the aftermath of the 1998 crisis, i.e. periods during which indicators of income, health and social marginalisation showed marked deteriorations. Indeed, except for a (likely insignificant) 5-6 point decline between 2000 and 2002 (Table 19), over the entire transition period the primary enrolment rate oscillated around 94-95 per cent despite huge strains on family incomes and massive cuts in public expenditure per capita that declined by 2001 to only 54.7 per cent of its 1997 level and 20 per cent of its pre-transition level. In turn, enrolments in lower secondary education (11-15 years of age) oscillated at around 90-95 per cent throughout the entire period. Also in this case, the resilience shown by the Moldavian educational system was remarkable.

To a considerable extent, the success achieved in sustaining enrolment rates in basic education was due to the series of policy changes introduced in the educational sector. First, although the share of (a fast shrinking) GDP assigned to public education declined sharply since the pre-transition years, it still remained at a level (5.5% of GDP in 2002, Table 2) higher than most countries with similar GDP per capita or facing a similarly dramatic transitions characterized by an overall fall of up to 70 per cent in relation to the 1989 benchmark.

Table 19: Enrolment rates in primary and secondary education, and absolute number of students enrolled in tertiary education

	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
A. Output indicators															
Primary															
- net rate	...	...	95	95	96	96	95	95	96	95	94	93	92	88	
- gross rate	...	...	...	...	...	...	...	...	99	100	100	99	99	95	
Lower Secondary															
- net rate									...	...	87	87	87	84	
- gross rate	98	95	94	97	93	93	92	93	89	88	91	90	91	88	
Upper 2ary, (gross rate)	...	...	...	...	...	46	46	47	47	48	40	42	44	48	
-general educat ('000)	78	76	65	50	50	51	53	57	57	62	59	65	72	80	82
-vocational educ (000)	61	59	55	41	37	35	34	34	34	32	23	23	23	23	23
3ary (gross rate)									40.4	41.8	41.2	38.9	39.6	42.4	
- college ('000)	...	...	...	...	...	...	...	...	32.7	29.6	25.4	19.9	17.0	15.2	18.7
- university ('000)	55.4	54.7	52.5	47.2	46.8	49.3	54.7	58.3	65.5	72.7	77.3	79.0	86.4	95.0	104
of which private	....	...	....	...	....	....	4.2	6.4	9.4	12.4	16.8	19.6	22.8	23.8	23.1
% children receiving after school care	31	28	23	14	14	12	10	10	8	7	4	4	5	7	7
B. Input indicators															
Total education expendit. % of GDP				7.8	6.0	8.7	7.6	10.3	10.0	7.0	4.7	4.5	4.8	5.5	4.8

Source: elaboration on Trans MONEE Database.

Second, the principle of free provision of basic compulsory education (for pupils of 6-15 years of age) and secondary non-compulsory education (for the 16-18 year olds, whether in mainstream education or vocational training) was not abandoned, although tuition fees were introduced for children of better-off families attending non-compulsory classes. While private expenditure on education rose (see below), this policy avoided an outright collapse in enrolments among the children of the poor, as was observed in other economies in transition that introduced steep fees in secondary education. Third, the large expenditure cuts mentioned above were translated into an almost complete stop in the construction of educational facilities (a policy facilitated by the fall of the cohorts of new students), a downward adjustment in the number of teachers following the decline in the student population¹⁹ and – especially – a cut in the real wages of teachers and school personnel. While this policy has likely contributed to a deterioration in the quality of education, its impact on enrolments was less severe than had the cuts been translated in a proportional reduction in the number of teachers. Fourth, educational reforms allowed the opening up of private schools, the reform of the rigid pre-reform curricula and other positive changes such as the reallocation of students from professional to grammar and vocational schools. While the latter policy may have benefited mostly the children of the middle class, it contributed to a recovery of upper secondary enrolments.

3. Trends in upper secondary education. In contrast, the enrolment rate in non-compulsory upper secondary education catering to pupils of 15-18 years of age, which is essential for long term poverty alleviation, declined steadily and sharply until 1999-2000,

¹⁹ For instance, the number of students enrolled in basic education fell from about 650,000 in 1989-91 to 518,000 in 2002.

though they staged a rapid recovery since 2000 (Table 19). This trend is the result of two mutually offsetting tendencies. The enrolment decline was very marked among the pupils of vocational schools, whose number fell from 59 to 23 thousand between 1990 to 2002, although, also in this case, the decline stabilized around 2000. This decline likely affected the children of low and middle income groups, especially from rural areas²⁰ who generally enrol in these schools. In contrast, after a marked 35 per cent fall between 1989-91 and 1994-5, the number of students enrolled in general secondary education (that mainly leads to the university) has been rising steadily and has already exceeded its pre-transition levels (ibid.).

While supply conditions (i.e. the deteriorating quality of educational institutions) also played a role, the drop in enrolment rates in upper secondary education can primarily be attributed to three demand factors. First of all, the sharp fall in real household incomes in many families raised more than proportionally the opportunity cost of the time of adolescents. In fact, the 'opportunity cost' of the child and adolescent's time grows with lowered family income, particularly in families where the child or adolescent can be easily employed, i.e. farming families and families with small businesses. In rural areas, part of this decline and the increase in drop-out rates might be explained by the redistribution of land to farmers and the proliferation of small family shops. Second, private expenditure on education increased considerably, including because of the introduction of school fees that, for instance, in 2002 were paid by some 15 per cent of the students enrolled in vocational education (DSS 2003). This double pressure proved particularly devastating for the families of the lowest deciles, especially those with two or more children in school-going age. In 2002, for instance, expenditure on education was almost 9 per cent of the total consumption of the poorest households, while it was only 4 per cent of that of the richest 20 per cent (World Bank 2004b).

Thirdly, the perceived loss of relevance of vocational education and short term colleges contributed to the decline in enrolments, as labour market returns to such investment in education diminished under the new market conditions which place a greater premium on new skills. With soaring unemployment among school leavers with vocational school diplomas, these branches of the educational system providing industrial and vocational training suffered a considerable decline in enrolments. Most of these problems have been dealt with through educational reforms but the problem of the relevance of education remains significant, particularly for adolescents in rural areas and in small towns suffering from a rapid industrial decline and high levels of income poverty. As noted in section 2, a lower secondary school diploma is no guarantee of reducing the risk of poverty.

4. Trends in tertiary education. Tertiary enrolment rates show a trend similar to that of general upper secondary. Also in this case, there was a decline in the total number of university enrolments between 1989-91 and 1993-4, but their number has since risen steadily – including in the aftermath of the 1998 crisis – and reached in 2002-3 a number almost double that of the pre-transition era. Interestingly close to half of the increase in university enrolments is due to an expansion in (comparatively costly) private universities where tuition is not state subsidized and is affordable only to well off families. Lower tuition fees were

²⁰ The World Bank (2004b) indicates that 73% of the youth not enrolled in upper secondary education in 2001-2 came from the rural areas.

introduced also in public universities and the proportion of students paying them rose from 27 to 66 per cent between 1997 and 2002 (DSS 2003). Also in this case, the increase in fees does not seem to have discouraged enrolments, pointing therefore to the emergence of a social class with a considerable level of income.

In contrast, enrolment in short-term colleges (which offer to the graduates of vocational schools the possibility of completing a non-university type of tertiary education) declined abruptly both in the first part of the transition and – even more so – between 1997 and 2002 (Table 19). Here too, the decline in enrolment was mostly due to demand factors. The proportion of students paying fees in colleges rose from 16 per cent in 1997 (and even less before then) to 27 per cent in 2002, with the likely effect of excluding potential low-middle income applicants. The limited labour market returns to this type of investment in education was probably an additional factor in the decline in college enrolment rates.

5. Quality of education. The positive considerations made above about the resilience of basic education in the face of severe macro shocks need to be moderated by the observation that the quality of education appears to have deteriorated in many respects – a point often made in qualitative poverty assessments – at the same time as costs have increased for secondary and higher education. The budgetary restrictions of the early years of the transition sharply reduced educational inputs while recent years have resulted in high fees for non-basic activities (for books, meals and teaching materials) and, as a result, in a deterioration of the quality of education.

The quality of education is closely associated to the remuneration of teachers. In this regard, also in Moldova it is possible to observe that though the teachers have a human capital higher than that of workers in most other sectors, their average wage (already below the national average also during the socialist era) lost further ground. Indeed, while in 1995 the average wage in education was 83.4 per cent of the national average, it declined to 60.7 by 2000, though it recovered to 67.0 in 2002. Of all main sectors, only agriculture has lower wages than education. This situation generated a variety of negative effects, such as the resignation of some of the best and younger teachers who have greater chance of starting a new career, greater absenteeism (as teachers engage in second jobs to compensate for part of their income loss) and low morale.

It is notoriously difficult to measure the quality of education. As few long-term data (going back to the pre-transition era) on student performance are available before 1997, it is therefore impossible to quantify the deterioration in school performance in relation to the pre-transition era. Recent data suggest that the educational reforms introduced since 1996 (that, as mentioned, focused on the modernization of the curriculum and improvement in the flow of resources to the schools) have improved the literacy and numeracy scores of pupils in basic education (World Bank 2004a). However, the recent upswing did not allow recovery to pre-transition literacy and numeracy scores nor did it raise the comparatively low performance of Moldavian pupils in relation to those in other countries.

In conclusion, raising the quality of education, particularly in poor and remote rural locations and small towns is a central policy priority. Such a measure would have a large effect on long term inequality and poverty. Households with fewer years of education and an education

of lower quality have a higher likelihood to be poor – contributing in this way to perpetuation of the ‘vicious circle’ of low income-low school achievements – low income.

6. Changes in the financing of education and in equity of access to non-compulsory education. In the past, education was freely provided by the state and the income bias in accessing education was limited. However, the massive decline in public expenditure per capita observed since the onset of the transition, the introduction of school fees for non-compulsory education and the transfer of part of the costs of compulsory education (e.g. for optional activities) to families has led to a situation in which a considerable share of the educational costs had to be borne by the families of the pupils. In 2002, for instance, private expenditures on education accounted for 1.8 per cent of GDP, up from close to nothing during the pre-transition years (World Bank 2004b). About half of this expenditure is incurred for basic education that – as noted – is meant to be free – reflecting costs borne by the parents for contributions to parents-teachers associations, school supplies, school meals, textbooks and optional activities. Another 40 per cent of private expenditure on education is on upper secondary and tertiary education, for which a policy of formal fee payment was introduced in public institutions in recent years. In addition, in private universities fees are higher than in the public institutions. Substantial ‘informal payments’ are also observed, particularly in connection with the process of admission to universities. Private costs for upper secondary education (for fees, textbooks, private tutoring) are even higher,²¹ discouraging poor families from enrolling their children in upper secondary and tertiary education. All of these factors reduce the proportion of pupils from low income families in general upper secondary and university education.

As a result, the World Bank (2004a, Figure 7) indicates that, as a result, the marked inequality in the access to upper secondary education by the poor and the non-poor remained about the same over 1997-8 to 2001-2, while inequality in access to tertiary education increased by 50 per cent during the same period. This conclusion is confirmed by the trend shown in Table 19 of rising general secondary and university enrolments and falling enrolments in upper vocational secondary and college education, pointing to growing polarisation in access to higher education. Thus, though the principle of equal access to education was maintained, in Moldova children from poor families have considerably lower access to higher education; their gross enrolment rate is 3.5 times lower than that of children of non-poor households. The problem of access to tertiary education is particularly severe for children from rural areas whose gross enrolment rate is only 10 per cent compared to 44 in urban areas. This difference is even more striking amongst the poor, as young people from poor rural households have an 8 times lower probability to enrol in tertiary education than young people from poor urban households. Thus overall, while public spending on primary and secondary education tends to be progressive, suggesting that access to basic education is a continued concern of the government, the distributive impact of spending on tertiary education is found to be regressive.

It is necessary therefore to introduce measures to break this vicious circle. On the one side, labour market and industrial policies should increase the demand for (and returns to) labour with secondary education (in many other countries few families of workers with 10-12 years

²¹ The World Bank (2004b) estimates that monthly expenditure per student/month at the university level in 2002 were 250 lei per month, i.e. higher than the poverty line (202 lei).

of education are in poverty). On the other side, public policy must reduce the direct costs borne by the poor and widen their free access to upper general secondary and university education by means of a more generous system of fee waivers and fellowships.

Another possibility for reducing the class bias in education is to better target existing public spending. The incidence of public expenditure on education has been weakly progressive or proportional, although the incidence of benefits is different for each educational level (Table 20). Given this, one could try to render the incidence of general upper secondary and tertiary education more progressive by reducing/eliminating tuition fees and increasing the fellowships for meritorious students of poor families. As of the early 2000s only a small proportion of poor students received public funding and fee waivers to attend school. If needed, such additional costs could be financed by an increase in the tuition paid by students from the upper quintile, or by reallocation of other expenditures.

Table 20: Estimated incidence of public expenditure on education by income quintiles and levels of education, 2002

Quintiles	Pre-school	Basic	Upper secondary	VET	Colleges & Universities	Total
1 st quintile	38.0	23.8	13.1	20.9	12.0	21.1
2 nd quintile	27.3	22.3	18.9	18.0	13.7	19.8
3 rd quintile	15.2	21.0	13.4	23.4	21.7	20.1
4 th quintile	5.2	19.0	19.4	14.8	25.9	19.3
5 th quintile	14.3	13.9	35.2	22.9	26.7	19.7
Concentration Ratio	-0.279	-0.092	0.179	0.003	0.166	-0.013

Source: World Bank (2004b).

4.5 Social exclusion and rising marginality

Another facet of the changing well-being of the Moldovan concerns the marginalisation of several population groups. In this case, loss of well-being does not necessarily entail material deprivation (though this can be an associated factor), but rather the inability to participate in the life of society from which the individuals affected are excluded or exclude themselves.

One of the often ignored symptoms of the difficulties since 1990 is precisely the emergence of a series of deviant social behaviours that cannot be ascribed only to erroneous or unethical individual choices. Though these deviant behaviours take various forms and are caused by different factors, they all originate in the cultural and institutional vacuum caused by the sudden collapse of the socialist ethic and the disappearance of the communist party organization before Western liberal values and forms of social organisation and control had been put into place. These factors contributed to moral disorientation, a weakening of social fabric, rising social stratification, the collapse of youth and social organizations and an upsurge in crime rates and other forms of deviance. The following are key trends in some of these phenomena that, as underscored by the literature on social exclusion, cannot be improved through higher incomes or the provision of better services alone.

1. Health and social marginalisation. Recent years of the transition have witnessed a sharp increase in diseases that signal – directly or indirectly – the erosion of social fabric, the spread of deviant behaviour and the diffusion of pathologies related to social marginality.

A first indication is constituted by the steady progression in the number of yearly cases of tuberculosis (first diagnosis). Indeed, tuberculosis has become one of the major public health problems in Moldova. Its incidence rose from about 1900 reported cases over 1989-91 to about 3000 (or 83.6 cases per 100,000 people) in 2002 (Table 21). However, the experts estimate that – given the rise in mortality from tuberculosis- the real incidence is at least 2-2.5 times higher (DFID 2003). This phenomenon is observed in countries experiencing growing marginalisation, as the spread of this disease (and other infectious and parasitic diseases) depends upon particular social conditions (e.g., circulation of paupers and vagrants, increased homelessness, a rise in incarceration and the spread of substandard living arrangements) which facilitate the transmission of infectious diseases. Tuberculosis is in fact is most commonly found among marginal groups such as vagrants, homeless, drug addicts, destitutes and jail inmates. Particularly dramatic is the situation in prisons, where in 2002 the new cases of tuberculosis were 30 times more frequent than in the general population.²²

Table 21: Indicators of social marginalization, Moldova, 1989-2002

Variable	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
New cases of TBC	1976	172	1910	1876	1938	2209	2753	2922	2908	2921	2648	2561	3018	3028	...
		8													
New cases STD (000)	5.6	5.1	4.8	6.6	8.5	10.1	11.9	12.1	11.6	10.0	7.6	6.3	5.1	4.9	...
New cases of HIV(000)	0	0	1	0	2	3	4	40	47	404	408	155	210	165	...
Registered	71	82	120	165	269	267	309	414	963	1346	1465	1404	918	1228	...
Drug addicts															
People sentenced (000)	9.6	10.4	11.9	11.8	13.3	15.2	14.6	13.5	13.9	13.7	14.6	16.0	...	...	...
Homicides	267	290	290	499	383	382	402	391	414	375	391	413	411	401	336
Children w/o parental care															
- yearly number			1584	1284	1196	1312	1601	1604	1591	1383	1362	1362	1578	1726	1809
- rate per 1000						0.93	1.16	1.17	1.19	1.22	1.26	1.30	1.56	1.77	1.93
- stock (at end of the year)	....	.....	.....	.....	.....	1170	1594	1618	1286	1061	1505	2861	4009	5373	....
- number of children for whom a guardianship allowance is paid	....	.....	....	.....	....	....	....	3817	3996	4247	4225	4548	6421	6036	....
Children(< 17) not ** residing with their mother															
- small towns									3.4	3.9	4.8	5.1	8.1	10.0	-
-rural areas									4.1	4.0	4.0	5.1	7.9	10.0	-
% of 'single parent' & 'other' households †*									23.4	22.4	20.1	20.0	19.4	19.6	-
<u>Memo item:</u>															
Orphans in institutional care per thousand children	2.38	2.04	1.92	1.45	1.50	1.86	1.96	2.27	2.24	2.14	2.22	2.18	2.16	2.46	2.38

²² Ministry of Health, 2003.

Source: TransMONEE Database, World Bank (2004).

Notes: information provided by Valeriu Pronitski, computed on the basis of the HBS 1997-2003; ** World Bank (2004b).

Drug addiction increased steadily since 1989-91, with a sharp acceleration since 1997-98. Also in this case, the real number of people affected is likely larger. Data on the consumption of intoxicants such as alcohol and tobacco and the number of alcoholics are unreliable. For instance, while official data show low levels of tobacco and alcohol consumption, and a decline from around 5000 to 3000 over 1991-2002 in the number of people affected by alcohol addiction, the mortality rates from diseases associated with alcohol abuse and smoking are among the highest in Europe.

The increase in the consumption of drugs, alcohol, tobacco and other intoxicants has been facilitated by 'supply factors' such as the relaxation of the norms regulating their sale and accessibility and declining police controls. Yet, most likely demand factors were the most important drivers of the increase. Intoxicants act as stress-relievers, the consumption of which rises in parallel with acute stress, i.e. when individuals are suddenly called upon to adjust to new situations for which the appropriate coping behaviours are unknown, and for which established response mechanisms are no longer effective. Among the unexpected stressing situations that emerged during the last decade in Moldova – especially in the shock years of 1992-5 and 1998-2000 – one can note unemployment, rapid labour turnover, job insecurity, family instability, social stratification, distress migration and personal insecurity.

The spread of HIV (and of sexually transmitted diseases) between 1991 and 1998 offers another indication of the social problems facing now Moldova, though both these epidemics seem to have been controlled since 1998 (Table 21). The infection spread rapidly since 1991 among intravenous drug users. As of 1 January 2003, 1,688 HIV-positive persons were registered (82 per cent of them were intravenous drugs users), and 36 people had died of AIDS.²³

A rise in the number of these diseases requires therefore not only targeted preventive and curative measures aimed at these populations but also broader efforts at containing social marginalisation. Measures to improve employment prospects and retraining, strengthen existing safety nets, reduce uncertainty, improve information and promote community solidarity and integration, can have a favourable effect on reducing this kind of problems.

2. Rising crime rate, trafficking of women and growing personal insecurity. The ability to conduct a life free of fear and aggression is a further essential component of well-being. However, as in other countries, the first years of the transition in Moldova were characterized by an increase in crime rates and growing personal insecurity. Crime reporting has become more erratic and – with few exceptions (such as drugs related crimes) – the Moldavian yearbook (DDS 2003) points to a decline in the number of reported crimes in 1993-94 in relation to 1989-91 and a stable trend since 1995. Yet, at the same time, official data point to an increase in the number of persons sentenced (Table 21), another gauge of the overall crime rate. This indication of rising crime is confirmed by a 70 per cent rise in the number of homicides in the first year of transition (1992), its subsequent (if more limited) 10

²³ Source: Personal communication of Ministry of Health.

per cent increase in the aftermath of the 1998 crisis and its stabilization over recent years at a level around 40 per cent higher than in pre-transition years.

Data do not exist on one of the most problematic developments in Moldova over the last decade, a massive rise in prostitution, pimping and trafficking of women and children for sexual exploitation. Qualitative assessment by sociologists, police reports and other sources (Scanlan 2002) suggest that economic difficulties provoked also an increase in the cases of prostitution, often linked to trafficking abroad. Trafficked women were generally young (with over half of them in the 18-24 age bracket), came mainly from rural areas and have low levels of education. Fifty per cent of them had children (for whom they were often the only source of support), 80-85 per cent declared themselves as poor or very poor, and 80 per cent did not know about the sex trade into which they were forced. Given that the overall migrant population is estimated to range between 600,000 and 800,000, that 70 per cent of it is composed of males, and that about 30 per cent of the female migrant population is estimated to be trafficked into prostitution (Scanlan 2002), it is estimated that between 54 and 72 thousand women are victims of trafficking. The problem concerns also some of the young male migrants who are exploited in construction work and in other jobs, although the percentages involved and the extent of the abuse of this group are even less well documented.

The growth in crime may be traced first to negative developments in the main institutions entrusted with the socialization of adolescents and adults (the family, school, work and associations) and to the weakening of administrative and police controls that have accompanied the tumultuous developments in Moldova of recent years. Furthermore, the major economic difficulties of the transition created growing pressures to seek income from any kind of activity, whether informal, semi-legal, illegal or clearly criminal. Official data show for instance that five-sixths of overall crimes, and especially those motivated by material gain, were committed by unemployed persons (DSS 2003). In addition, with the flourishing of the informal economy, the number of such income-earning opportunities has multiplied. While many of these activities are not necessarily reproachable, the lack of regulation offers innumerable possibilities for abuse, exploitative labour and involvement in criminal activities.

3. Migration and an increasingly difficult child socialisation. One of the most subtle costs of the transitional recession, the 1998 crisis and the survival strategies adopted by households to escape poverty – reducing the number of children per family and emigration – is that a mounting proportion of a (rapidly shrinking) child population grows up in single-child families, in incomplete families in which one or both of the parents are absent, in the care of public institutions (orphanages, boarding schools, other residential educational institutions) or, increasingly, under the tutelage of guardians), or with relatives.

Most of the relevant information points consistently in the above direction. The World Bank (2004) suggests that nearly 50 per cent of children in village schools have one or – less frequently – both parents working abroad. The author met a number of schoolchildren whose parents worked abroad in the comparatively rich village of Ciuciuleni. The World Bank (2004b) indicates also that the number of children living without their mother increased sharply between 1997-2002 to reach 10 per cent of the total in rural areas and small cities in

2002. Likewise, DSS routine data indicate that the annual number of children without parental care placed every year in the care of the state²⁴ has remained relatively constant in absolute terms but showed a marked and steady rise in relative terms (from 0.93 in 1994 to 1.77 per thousand in 2002), in view of the marked contraction of the 0-17 years population (that fell from 1.42 million in 1989 to 0.97 million in 2002). In addition, the number of such children rises even faster, suggesting that the absence of parental care tends to be chronic rather than temporary. Finally, other routine statistics (e.g. on the number of children placed in foster care) point in the same direction, and there is a fear that these data reveal only part of the problem, as suggested but scattered reports of adolescents and children living alone in villages or small towns. The only information that does not support these conclusions comes from the processing of the BHS data on the number of 'single parent' or 'other' households out of the total estimated on the basis of the HBS seems to be fairly stable or even slightly declining (Table 21). However, it is unclear whether this refers to the present or resident population or to de facto or de jure single families. In addition, this data does not indicate the number of children living in these types of families.

What conclusions can be drawn from this picture? In the past, the main socialisation problems of children had to do with being a member of a 'problematic family' or the death of one or both parents. These problems have not gone away, as suggested by trends in divorce, separations and percentage of births to under-age mothers. At the same time the number of orphans (per thousand children in the 0-17 age bracket) likely stagnated because of the marked increase in the death rate of males 40-55, or because of the rise in the number of 'social orphans'. Social orphan hood is a new phenomenon that needs to be examined thoroughly by policy makers so as to develop adequate responses.

The absence of one or both parents can entail long-term problems for the growing child, especially if surrogate arrangements are weak. While migrant remittances provide essential resources for nutrition, school fees and medicines, parental absence introduces risks such as migration-related family instability, decline in parental supervision and the subsequent risk of accidents, deteriorating school performance and, especially in the cities, youth deviance. In turn, the lack of role models entails the risk of a more difficult socialisation and emotional development for the adolescents. In extreme cases, such children end up in the street, as apparently is happening in the larger Moldavian cities. Unless a vigorous solution to these problems is found, many children of migrants will grow up less secure, doing poorly in school and facing higher risks of deviance.

These social costs may be argued as being mainly due to the present pattern of migration – dominated by recourse to illegal channels, asymmetric access to information and credit, and widespread corruption in parts of the public administration – rather than to migration itself. They could be reduced sharply if migration flows were legalized and controlled. This would reduce the 'rents' received by agents/smugglers, offer greater prospects of migrating also to workers who are liquidity-constrained, and make allowance for family reunion, so as to reduce the problems connected with social orphan hood.

²⁴ In this case, state authorities place about 2/3 of these children under the tutelage of some guardians who may receive a small foster grant per month (25 lei per month in 2002), try to have them adopted (about 1/8), or places them in orphanages or residential educational institutions (TransMONEE 2003).

5. WHY ARE THEY SO POOR?

5.1 Structural determinants of poverty and development policy

Structural characteristics of the Moldavian economy are important determinants of the recent poverty trends as they render economic development particularly volatile, costly and difficult to achieve. Long-term poverty reduction thus requires that specific measures are introduced whenever feasible to lessen these constraints.

1. Landlockedness and remoteness. Moldova is a landlocked country without a proper open sea harbour. The road and rail infrastructure linking it to the main global markets is also inadequate. These factors increase transport costs and reduces the returns on exported goods. Its location in Southern-Eastern Europe – an area characterized by an overall comparatively low level of GDP per capita and, until recently, slow growth, investment and technical innovation – is also unfavourable as, at least at present, it does not offer the possibility of benefiting from positive spill over effects.

2. Rich, under-invested but shock-prone agriculture. The *chernozem* soils prevalent in most of the country are highly fertile and can generate high yields if adequate market institutions are put into place. Yet, even if this objective is achieved, Moldavian agriculture will remain subject to highly instable weather conditions that can cause (as in 2003) huge drops in output, a surge in price-inelastic food imports, deterioration in the trade balance and widespread rural impoverishment.

Some of these weather shocks (e.g. droughts) can be moderated by (costly) investment in irrigation and the construction of greenhouses, but other risks cannot be easily prevented or moderated. The possibility of improving crop insurance mechanisms, which remain extremely expensive and beyond reach of most farmers, needs therefore to be explored. Reduction of co-variant risks in this sector would do much to reduce rural poverty.

3. High external vulnerability. Moldova represents a textbook case of a ‘small dependent economy’, with exogenous and highly unstable terms of trade. The country is dependent upon price–inelastic and income-elastic imports of expensive energy, investment goods and a broad range of (price-elastic) consumption goods. Its exports consist mainly of agro-industrial goods and cheap labour. Agro-food exports to the former Soviet Union market are furthermore subject to strong competition from some of the neighbouring countries (e.g. Ukraine) while protection of the EU market (expected to last for several more years) makes the penetration of Moldavian food exports difficult.

The surge in migrant remittances since 1999 has changed this situation substantially and for the better, and indeed the Moldavian growth of the last few years has been to a large extent led by the inflow of remittances. Also in this case, however, there are uncertainties about the medium term sustainability of remittances that depend to a good extent on migration policies in the countries of destination. Even apparently favourable decisions may backfire. For instance, while measures adopted recently in some of destination countries (e.g. Italy) about migrant families’ reunification will have a favourable effect on Moldavian well-being, they might reduce the ‘propensity to remit’ over the medium term and so weaken the balance of payment. Also, it is difficult to predict how many more migrants will be admitted into the

destination countries, although it is likely that, at least in Western Europe, long term migrant policies will continue to be influenced by the huge and rising demographic deficits affecting them.

Migrant remittances also come at some economic and social cost, including the well-known ‘brain drain’, some rise in income inequality, the creation of a culture of dependency among those left behind (manifesting itself in a contraction in domestic labour supply among households receiving remittances), and important social costs affecting children (see above) and other members of the family (Table 22).

Table 22: Social impact of migration of one parent on family members

	Father migrated %	Mother migrated %	Total %
Weakened socio-moral family ties	25,8	40,8	33,1
Family separation	7,9	20,0	13,8
Children’s poor school/university results	10,8	24,2	17,3
Children’s negative behaviour	9,0	16,2	12,5
Family’s adults’ negative behaviour	7,5	16,2	11,8
Migrant’s health deterioration	20,1	23,0	21,5
Exposed to robbery, attacks, thefts and other crimes	2,5	2,6	2,6

Source: Genchea and Gudumac (2004).

At the macroeconomic level, migration induces some highly beneficial first-order effects (e.g. on import and consumption levels, and the balance of payment as a whole) as well as positive general equilibrium effects. But there are some well-known problems too, including, a price rise in the non-trade sector (as shown by the speculative bubble in the real estate sector in Kishinev and the rest of the country), asset price inflation, and appreciation of the exchange rate that affects output and employment in the tradable sector, as well as the volume of exports. All this depends, to a considerable extent on the ability to ‘sterilize’ some of these effects and ‘guide’ these resources towards investment in capital stock, especially for the export sector (see later).

This being the case, a pro-poor development strategy should aim at diversifying the Moldavian export basket towards sectors with export prices that have a low degree of co-variation with those of the agricultural sector. Less is probably doable in the field of import substitution. The country does not seem to have potentially exploitable oil or gas deposits and the same applies to the possibility of producing domestically equipment goods, as the domestic market is too small to permit an efficient production. Things may be different for a range of consumer goods (most of which are consumed by the urban middle and upper class) that use a non negligible amount of foreign exchange, as one may consider a selective and efficient import-substitution policy, leading in time to the creation of a new export sector.

4. Over-dependence on a few economic partners. Because of her recent history, Moldova is still closely integrated with Russia and other former members of the Comecon. While understandable in historical terms, the over-dependence on the business cycle in a

single economy is risky. This makes the Moldavian economy particularly susceptible to the Russian business cycle (as shown by the 1998-9 crisis) as well as by agricultural booms in nearby Ukraine/Russia. While, as noted, the spontaneous migration-led poverty strategy has lessened this over-dependence, and while there are some signs of increasing trade differentiation by area of destination, there is scope for pursuing a far more aggressive policy of export penetration and FDI in this area.

5. A relatively large (though falling) foreign debt. Foreign debt in Moldova is nearly 60 per cent of GDP (half of which is due to the International Financial Institutions [IFIs]) consumes about 5 per cent of GDP (for the service of interest and principal). Such large foreign debt limits the scope for devaluing the exchange rate during adjustment crises or in the context of an export promotion policy aiming at reducing poverty. As in other countries, the foreign debt (especially of combined with an open capital account policy) conditions in a major way the macroeconomic policy and should therefore be reduced to reasonable levels. Policies underway in this field should - in other words – be sustained and encouraged. However, there is a case for restructuring the public debt in agreement with IFIs and reallocating the resources so saved in the short medium term to public investment in infrastructure and human capital formation.

In conclusion, any anti-poverty policy requires the active pursuance of a policy of economic diversification away from that part of agriculture that is climate dependent, a narrow export basket and over-dependence on the Russian economy. It also requires to gradually reduce and restructure the stock of foreign debt as well as measures aiming at controlling the cost of debt servicing. While these macro measures are essential for long term growth and poverty reduction, they need to be combined with meso policies stimulating those sectors that generate the greatest impact on poverty via the market. In this regard, it is quite clear that rural growth reduces poverty the most, but at the moment most growth takes place – because of the institutional weaknesses illustrated below – in the remittances-driven economy, i.e. in the construction, imports and other sectors that have a lower poverty alleviations effect.

5.2 Macroeconomic stance, growth and poverty

By and large, the pursuit of a broad-based, poverty alleviating growth does not seem to be constrained from the macroeconomic perspective, i.e. in terms of the twin deficits and inflation. This would seem to leave some room for expansionary policies, in case there was a need to stimulate growth (this is not the case at the moment, however, as the economy is expanding at 6 per cent a year). In fact, it would seem that during the last 3-4 years the country has over-adjusted, achieving for instance a budget surplus – while the poverty rate was above 50 percent. While the country seem to have achieved broad macro balance, macroeconomic problems continue to affect two key ‘macro-prices’, i.e. the exchange rate and the interest rate, both of which are too high and – as shown by Lance Taylor among others – have perverse distributional and poverty effects.

1. Low budgetary deficit. The budget deficit is considerably lower than the European Union’s average of 3.5 percent. The deficit fell from a sizeable 8.5 per cent of GDP in the crisis year 1998 (other reports give somewhat different values), to 2.5 in 1999 to 1 per cent in 2000 and reached a balanced budget in 2001 and 2002 and sizeable surpluses in 2003 and

2004. Apparently, such a strict fiscal stance has been implemented not at the request of the IMF but – possibly – because of the desire to reduce a high level of external indebtedness.

It must be noted that this considerable fiscal adjustment was achieved in parallel with a retrenchment in the overall tax/GDP ratio that declined from 40 per cent in 1997 to 31.1 per cent in 2003 and to a projected 24.2 per cent in 2004 (Table 2 gives comparable if not identical figures that confirm – however – this point).

One effect of such a strict fiscal stance is that public investments have withered to 1.5 per cent or less of GDP, a fact that is likely to have a retarding effect on private investments in agriculture, machinery and equipment (that remain at a dismally low 10-12% of GDP), overall growth and long term poverty alleviation. Investment in housing seems, in contrast, to continue expanding at fairly high rates despite the fact that its long term effect on poverty alleviation is modest and despite the risk of leading to a glut in the real estate market (especially in rural areas where often the market price of recent houses is lower than their construction cost) that could lead to the puncturing of the speculative bubble underway in this sector, as signalled by the rapid increase in assets price inflation in Kishinev (but less so in rural areas).

There are four possible ways to try to address this investment imbalance:

- ***Reallocation of public expenditures away from debt servicing and current consumption and towards public investment.*** This possibility needs to be explored in detail but given the overall decline in expenditure of the last five years there might not be much room to compress current consumption, except the debt servicing component. Social expenditure represents some 15 per cent of GDP but was already cut drastically and need to be increased to alleviate poverty. Likewise, efficiency and political economic considerations may not allow to compress the outlays on security and general services that absorb some 4-5 per cent of GDP.

- ***Debt rescheduling/cancellation:*** expenditures for interest and the reimbursement of the principal account for some 5 % per cent of GDP but – as noted – half of the debt is multilateral and the rescheduling requires the agreement of the multilateral agencies. But the possibility for rescheduling/forgiving the remaining 50 per cent of public debt should be explored.

- ***An ‘earmarked tax for public investment’*** could yield 2 per cent of GDP for use to implement those public investments essential for ‘crowding in’ private investment. This option seems justifiable at this point in view of the low budget deficit and the medium level of taxation (such principle is generally accepted in the Western budgetary practices, as suggested by the Maastricht parameters or the German budgetary practices).

- ***Project financing:*** with this option, the development of public infrastructure could be subcontracted to the private sector which would then be allowed to charge some agreed fees for its use.

2. Inflation and monetary policy. The official rate of inflation estimated in the 2003 IMF Article IV mission was low, i.e. 8 per cent for 2003 and projected to 4.5 per cent for

2004. The IMF argues, however, that such measure of inflation may not entirely capture the price dynamics and indeed the IMF mission in Kishinev suggests that inflation in early 2004 was running at an annualized 13-15 percent. Clarification of this issue is essential from a poverty alleviation perspective, especially if the higher-than-expected rate of increase in prices concerns the goods and services consumed by the poor. Likewise, one wonders to what extent the strong 'asset price inflation' underway (the cost of housing is apparently skyrocketing) is one of the determinants of the upward shift in the CPI.

Be as it may, and even assuming that the effective rate of inflation is around 10-12 per cent, this remains 'moderate' for developing/transitional countries standards. Stiglitz (1998) argues that inflation rates of less than 40 per cent (and gradually moving downward) are not 'costly' in economic terms, while Moshin Khan of the IMF Research Institute suggests that – in view of the structural rigidities of these countries – a rate of inflation below 10-12 per cent is acceptable for a developing country.

At the same time, the (partial if mostly unsterilized) conversion of foreign assets deriving from a rapid surge in migrant remittances has led to an increase in bank deposits, greater financial intermediation and an expansion of the credit to the economy that has fuelled a surge in imports. Yet, despite such surge in imports and the widening of the 'recorded trade deficit' inflation does not appear to be accelerating – at least on the basis of the official inflation data mentioned above.

In conclusion, if required from a poverty alleviation perspective, the monetary stance could be somewhat relaxed, particularly if such relaxation were due to the greater conversion of euro/\$ denominated assets that, at the moment, are kept 'under the mattress'. It is however desirable that such increase in absorption takes the form of increased imports of capital goods rather than import of consumer goods or housing investment. In this case, the expansion of the monetary mass would be self-sterilizing, as the importers would sell lei to the NBM in exchange of the hard currency needed to import machinery and equipment.

3. 'Dutch disease', exchange rate appreciation and import-driven boom. The need for a more expansionary monetary policy leading to increased imports of capital goods is also justified by the recent trend of the nominal and real exchange rate (r.e.r.). Rather than depreciating – as it would be expected following a rise in the recorded trade deficit – the r.e.r. has actually appreciated substantially. The exchange rate rose from 14.6 lei per lei in early 2003 to 11.8 on 27 March 2004, while the Moldavian-US inflation differential was at least 6-8 points over the last year. This would suggest an appreciation of the r.e.r. of some 20 per cent over the last year or so. During the ten days this author spent in Kishinev in late March 2004 the r.e.r. appreciated by 5 per cent.

Obviously, the appreciation of the r.e.r. will not help achieving the goals of diversifying the real economy and export basket mentioned above, and the creation of those new jobs in high-yielding agriculture and labour-intensive manufacturing that are badly needed to reduce poverty over the long term. In fact, the Moldavian economy – as other economies in similar situations – is going through a kind of import-and-construction boom. As already noted, this trend has limited job creation/poverty alleviation effects in the short term – and even less over the long term as imports of investment goods does not seem to be rising.

Thus, a key challenge for short and long term poverty alleviation consists in creating those egalitarian micro incentives and an appropriate institutional climate that can stimulate the import of investment goods that would permit to expand the production possibility frontier, absorb more labour and increase the output of tradables (both exportables and import-substitutes). I was quite struck by the widespread availability in Kishinev of superfluous consumption goods from Italy and other Western countries, right at a moment in which the import of machinery and investment in manufacturing remains low.

4. Current account deficit. At the time of writing (in 2004), Moldova faces a recorded trade deficit of some \$520 million that is covered by (official) net factor payments (mainly remittances) of some 370 million, leaving a current account deficit of some \$150 million (7% of GDP) that is covered by capital inflows of about 80\$ m and borrowing.

This formal sector picture, however, does not take into account considerable informal transfers that take place on a cash basis and go unrecorded in the current account balance. The NBD estimates these unrecorded remittances at, at least, \$200 million a year, with a rising trend. Perhaps the clearest evidence of an excess supply of hard currency in relation to the supply of Lei is given by the appreciation of the real exchange rate and the 8 per cent rise in currency reserves of NBM.

All this means that the need to control the current account deficit are less real than suggested by official balance of payments statistics, and that growth is unlikely to be constrained from the balance of payments side. Imports could be increased further but, as noted above, the current import composition is problematic as it has a limited medium and long term impact on poverty alleviation. Perhaps, an amnesty (with a small fine) on returning capital and remittances may be required.

5. Real interest rates and the structure of the banking sector. A high interest rate (in both nominal and real terms) constitutes a second major distortion in the Moldavian macroeconomy. As it appear from the recent debate on 'pro-poor macroeconomic' what is needed is a real, moderate and fairly stable interest rate. In this regard, the data provided by the IMF and those recorded from the author's trips and the comments on this topic by the NBM provide – however – a contradictory picture. Interviews with agricultural and industrial producers in Ciuciuleni and Floresti indicate that credit is available to them at lending rates of 27-29 per cent (while inflation in 2003 was 8%) and that the spread was around 14-18 per cent (the 2002 IMF article 4 mission report estimates of the spread at 10-11%). However, information provided by the IMF Office in Kishinev during the UNDP mission (Table 23) offer a slightly less worrisome picture, with borrowing rates at 24 per cent, interest rates on lei deposits of 14.8 per cent and a resulting implicit spread of 9-10 per cent.

This point needs urgent clarification. The possible discrepancies in the measurement of spreads may be the result of the segmentation of the credit market (unrelated to the real risk profile of the borrowers) often observed in developing countries, by which the more favourable rates apply to the 'preferred customers' and the less favourable rates to smaller firms. If this interpretation is correct, it is essential to ascertain the effective credit cost born by the labour-intensive small and medium enterprises that would need to play a key role in creating well paid jobs in both rural and urban areas. No doubt, efficient financial markets will be key to poverty alleviation, and it is not clear that this objective has been already

achieved. A third factor may be that the risk profile of the projects for which finance is requested varies substantially not because of the inherent risks of the projects to be financed but because of the lack of collateral or of insurance.

Table 23: Trends in interest rates and other credit variables

	1997	1998	1999	2000	2001	2002	2003					2004		
	Dec	Dec	Dec	Dec	Dec	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Gross foreign exchange reserves of NBM	366	141	180	222	227	268	273	282	282	285,4	289,6	301,2	309,7	310,6
Interest rate on 91-day T-bills	23,9	37,3	33,9	22,8	7,4	10,5	14,8	12,6	11,8	18,2	20,1	17,3	16,4	12,8
Commercial banks' credit growth (%)	12,8	17,0	-7,1	40,1	35,4	34,3	44,7	46,8	48,5	43,7	43,6	44,0	42,2	35,6
Commercial banks' int. rate on loans in lei (%)	29,9	34,3	35,3	32,4	26,2	19,3	19,1	19,3	18,7	18,9	19,8	19,4	20,5	20,5
Comm. banks' int. rate on lei term deposits (%)	20,4	30,1	27,8	23,9	17,8	12,6	12,2	12,3	12,2	13,2	14,0	14,2	14,8	14,8
Implicit spread	9,5	4,2	7,7	8,5	8,4	6,7	6,9	7,0	6,5	5,7	5,8	5,2	5,7	5,7
Dollarization of banks' deposits, end period (%)	19,3	44,2	50,2	48,8	44,8	47,2	50,1	52,2	53,2	52,5	51,5	50,1	50,4	50,0
Dollarization of banks' credit end period (%)	22,1	41,6	40,3	40,7	40,7	41,9	40,0	41,2	39,7	40,8	42,3	43,1	42,7	41,2

Source: IMF Representative Office, Kishinev.

Second, the high level of the lending rates and of the spreads (subject to the qualifications above) are not due to the upward pressure on interests rate due to the sale of a large amount of Government bonds. Indeed, the interests on the public debt are at around 10-11 per cent. The problem may lay with other factors, including the high degree of concentration and, possibly, oligopolistic nature of the banking sector. The NBM indicated that 4 banks control some 3/4 of the lending, and it is quite possible that – as in other countries – may have entered into a tacit cartel agreement. This hypothesis (lack of competition in the banking sector) is supported by another disturbing feature of the financial sector in Moldova where – according to the NBM – the rates of return on capital in some of the four big banks range between 40 per cent to 50 per cent. Of course all this information needs to be thoroughly investigated, but even if these numbers were twice as large of their real value, they would be a clear sign of lack of competition. It is also true, at the same time, that the banks are also encumbered by tasks imposed on them by various state agencies and that this likely raises their operational costs. For instance, the banks are required to act as tax agents on behalf of the government, or have to exert cumbersome inspections and regulatory functions. The banks may also face problems in lending due to regulatory restrictions and lack of collateral. Yet, rates of returns like those mentioned above seem inordinately high, even if account is taken of all these and other factors.

A third indicator of financial inefficiency and inappropriate kind of intermediation is reflected by the fact that only 10 per cent of the manufacturing investments are funded from bank loans while the remaining 90 per cent is financed with own funds and retained profits.

While deposits and commercial credit have risen rapidly over the last two years, most of the credit provided by the banking sector has gone into the financing of short term activities (consumption, construction, imports) that do not have a long term effect on job creation and poverty alleviation. It is difficult to believe that all medium term projects proposed – or proposable – to the banking sectors have adverse risks profiles

A fourth indicator of the potential problems affecting the banking sector is that while deposits have increased perceptibly in the past 2-3 years, a large part of the remittances are still not captured by the banking sector that might still suffers from a credibility problem, deriving from the 1993 and 1998-9 crises during which the deposits of many persons evaporated. Be as it may, at present the financial sector seems little capable to support the creation of productive jobs in manufacturing and agriculture. Interviews with the majors of Floresti and Ciuciuleni, with agricultural producers and the general manager of a medium-large size bottle factory (Sticla) identified high interest rates and short loan maturities as the main constraint to output expansion.

A solution to this problem may come from the opening (if gradual and selective) to foreign banks. These could increase competition in the loan market, and do not suffer from the credibility problems affecting domestic banks. They could thus play an important role in intermediating the remittances, in developing long-term state-guaranteed pension-fund savings schemes for returning migrants (who will not receive a pension in the countries of emigration) and channel these deposits to the financing of domestic manufacturing activities.

Thus, reform of the financial sector should aim at further increasing deposits (as a large part of the remittances are still kept in cash) and greater competition among the banks leading to a decline of the lending rate and spreads and to a lengthening of maturities. A strong attention needs to be place in particular to the need of extending credit at low transaction costs to a large number of small entrepreneurs and small-medium farmers. As shown by the multilogit regression analysis carried out by Government of Moldova (2003), access to credit is a factor that clearly reduces the incidence of poverty.

5.3 Social policy

Poverty alleviation in Moldova is being visibly affected by the economic recovery and changes underway in income distribution. But it is essential that macroeconomic and development policy focuses even more on a pattern of development that disseminates its benefits broadly, both in the rural and urban areas, as well as among people with different skill levels. It is particularly important to increase the demand for semi-skilled workers (i.e. with lower and upper secondary education) that constitute the largest group in poverty, so as to raise their salaries above the poverty line.

But social policy has an important role to play to, particularly for the inactive population. To start with, social policy must support the formation and maintenance of human capital and – to do so – it must guarantee a broad based access to basic services. In this regard, access to health, education including pre-school has become increasingly selective and segmented, with the poor being rationed out from the services because of a host of legal (and illicit) payments demanded from them. The policy is to remove all fees in basic services, including

secondary education and life-saving hospital care. Subsidized programmes for essential drugs or teaching material can also be introduced. At the same time, fees can be introduced in higher education but these have to be accompanied by an increase in the number of fellowships for poor but meritorious students. Additional initiatives will be needed to ensure that youth from poorer families remain enrolled in general and higher secondary school. Public spending in this area as a share of GDP should also be increased moderately to about 9 per cent (the level reached in 2001 but which has been sliding since then, to reach 7.4 per cent in 2004). As noted above, such measures have strong effects both on current well-being and labour force supply as well as on long term poverty alleviation.

As far as expenditure on transfers is concerned, the main way forward consists in improving its targeting, as the available incidence data suggests much of the social transfers are only mildly progressive if not clearly regressive (Table 12), as in the case of gas subsidies and privileged pensions. In contrast, other transfers (e.g. child allowances, minimum pensions and some social assistance expenditures) are well targeted but are too low to have an impact – and for this reason as currently designed are ineffective in removing people from poverty – and need therefore to be increased.

A third group of programs aiming at the alleviation of poverty among the working-age poor concerns the enlargement of existing public works program targeted at the low-income population. Such programs not only permit the achievement of poverty alleviation objectives in the short run, but also contribute to the growth of productivity and poverty alleviation over the long term by speeding up capital formation. In Moldova, public works could be very useful in the development of rural roads, agricultural markets and the infrastructure needed to support the new agricultural export sector. They would be particularly useful in relatively densely populated rural areas affected by limited off-farm employment opportunities and excess labour supply. In addition, a complementary system of re-training, particularly for those who become unemployed in industry and services could facilitate the reallocation of labour exiting from the declining sectors.

5.4 Institutional problems hampering growth and poverty alleviation

Section 6 has argued that the macro-economic situation is fairly favourable, except for the excessive strength of the exchange rate and interest rate. The fiscal, monetary and external payments situation seems broadly under control, and to offer room for a more expansionary policy should the need arise. In contrast, the situation looks less favourable when examining the institutional aspects of the Moldavian economy. This is a vast topic and only a few institutional constraints on growth and poverty alleviation will be touched upon hereafter, not least because they are discussed at length in the UNDP report.

1. Markets for production factors and for output. A key problem concerns the functioning of the markets for the main inputs and outputs:

- *Access to land.* The land reform implemented over the last several years was very equitable and helped laying the foundations for an egalitarian and efficient small scale agriculture. There remain some equity problems in access to the land (for instance the incidence of poverty is higher among agricultural workers than small farmers) but these

seem – overall – to be modest. The land market however is working only in part, and does not help reallocating the land to the most efficient producers. In addition, the market seems to be biased in favour of the large farms that pay very small rents for leasing the land from poor farmers unable to obtain credit and inputs. One of the main reasons for this may be that – with low returns from the land (for the reasons indicated below) – its price is so low (less than \$1000 per ha, author observation) to discourage the sale of land, that is then held mainly as an asset or for subsistence purposes. But, as notes, the returns on such assets are too low to help reducing poverty.

- *Limited reform of the fertilizers, tractor services and input markets.* As in other cases of ‘incomplete land reform’ (as the mid-1960s reform by Velasco-Alvarado in Peru is a case in point), the potential benefits of the land reform have been so far reduced by the limited re-organization and ensuing poor functioning of the credit, inputs and insurance markets, as well as by the narrowness and lack of competition of the output market (in several sectors, such as sunflower seeds or apples for the production of juice, there are only one or two oligopsonistic firms that impose low prices to the farmers). For all these reasons, greater competition in these markets seems highly desirable.

A major problem arises also in the supply of fertilizers and tractor services. During the socialist era these services were provided at the sovkoz or kolkoz level. With the land reform, the purchase of agricultural machinery at the small farms has become clearly inefficient and similar problem arise for the purchase of fertilizers and other inputs. This has generated calls for the consolidation of land in larger private units or for the return to some kind of collective farming. Both these claims seem unjustified, if efficient markets for tractor services can be developed and if fertilizer and other input purchases can be organized via rural consortia, as happened in many other countries. Spontaneous land consolidation may already be occurring, or will occur in the future, in those areas where the ‘rural labour surplus’ will wither because of migration or if scale economies in production linked to capital/labour substitution will emerge. Until then, if the inputs markets can be helped functioning adequately, small scale agriculture remains preferable on both efficiency and equity grounds.

2. The underdevelopment and segmentation of the financial market. (See also the above discussion of problems due to high interest rates.) Access to credit and its excessively high cost appears as a serious bottleneck to the growth of domestic output and incomes, and to alleviation of poverty among the active population. This applies to both industry and agriculture, where considerable new investments would be required to modernize the remnants of the Soviet production structure. The financial sector is also highly segmented, with most of the economic agents having no access to formal loans and resorting to grossly under-funded credit associations or being pushed into the arms of informal credit institutions that charge very high interest rates for loans extended for very short periods. In many cases, farmers and small and medium enterprises do not receive any credit, of any kind, and therefore are unable to increase their supply.

The high cost and short maturity of loaned funds, the outright exclusion of many small firms from the credit market, and the inability of the financial sector to ‘intermediate’ considerable amounts of remittances (that get invested in unproductive assets as the houses or remain

under the mattress) seem to constitute a major macroeconomic-institutional problem of the Moldavian economy.

3. Emigration, domestic labour supply and growth. Moldova is one of the countries in the world with the highest proportion of labour force abroad. The most credible estimates indicate that out of a labour force of 1.6-1.8 million, 0.6-0.8 people are now working abroad.

The data presented in section 2 and the common opinion of the vast majority of the people interviewed is that the short run impact of emigration is positive from both the macro and poverty alleviation perspective, as it generates substantial remittances and puts an upward pressure on the wage rate of (some of) those remaining home. Yet, the longer implications are more complex and will basically depend on whether emigration will continue in the years ahead. In addition, it will depend on whether the recent emigration will turn out to be permanent or transitory. The Moldavian mass emigration is, in fact, very recent and it is not entirely clear how many migrants will stay for good abroad or will return after having saved some money. A large part of these emigrants are still undocumented and are therefore exposed to changes in immigration rules in the countries of destinations. If most of them will stay, and because of the persistently low fertility rate of the country, mass emigration may lead to tensions and wage increases in the domestic labour market that could be hampering growth. The demand for skilled workers (e.g. carpenters in urban areas) is already outstripping its supply and real urban wages have been rising perceptibly. This is not true for the workers in the budget sector and, especially, in agriculture where the wages of agricultural labourers remain at a low 30 lei/day (\$2.5). Whether this is due to the persistence of a 'labour surplus' or to insufficient labour demand in agriculture due – for instance – to high interest rates appears unclear but the latter explanation seems more plausible.

From a poverty alleviation perspective, the functioning of the rural labour market is fundamental. About 2/3 of all the poor are located in rural areas; it is obvious that a substantial acceleration of rural growth is required. Yet, it is unclear whether such 'agricultural labour surplus' will persist, whether its composition by age/skill is adequate and under what hypotheses it will be able to sustain an acceleration of rural growth. The same problem may arise in specific sub-sectors of the urban labour market.

4. High transaction costs and an uncertain business climate. This is a problem difficult to analyze as empirical information in this regard are limited. But, interviews with domestic and foreign entrepreneurs indicate that the business climate seem to remain unfavourable. For instance, a small foreign entrepreneur interviewed by the author on the flight to Kishinev who planned to establish a manufacturing workshop in Moldova occupying 20-30 persons was unable to clear through customs a box of sample material he brought along to show his counterparts. Likewise, a German entrepreneur who intended to export 200.000 bottles of Moldavian wine was unable to obtain the related licence. While these are only few (possibly non representative examples) it would appear that licensing, tax and banking procedures remain too complex and increase the scope for corruption. Together with widespread corruption, all this, raises transaction costs tends to be high, the certainty of property rights possibly uncertain.

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